Introduction

The Economic Regulation Authority (ERA) has requested the Busselton Water Board (BWB) to provide input into an inquiry into prices for water services in Urban Western Australia. BWB is not a provider of Wastewater services.

The stated purpose of the inquiry is "to inform the Government's decisions on the level and structure of prices, commencing from the 2006-2007 financial year.

ERA has provided BWB with a "*Methodology Paper"* in which the methodology to be used, questions to be addressed, and information required to derive a framework are outlined.

Relative to this inquiry BWB have previously provided the ERA with the following documentation: -

- A response to the Issues Paper, published July 2004
- Initial financial information dated 26 August 2004
- Additional financial information dated 3 November 2004

Members of the Busselton Water Board considered this submission for presentation to the ERA at its Board Meeting held on 22 November 2004.

Following are the Board's comments relative to the questions posed within the *Methodology Paper:*

Are the proposed levels of service provision consistent with required standards and customers' willingness to pay? (4.2)

BWB considers that the levels of service provision now provided for customers are consistent with the standards that they are willing to pay for.

The operating licence, the terms of which are set and assessed by the ERA, sets the minimum levels of service. Compliance is readily verified and it is the Board's aim to continue to comply.

The most recent customer satisfaction survey prepared for the Office of Water Policy (January 2004) found that 'respondents from Busselton were the least likely to indicate they had issues or concerns over water supply within their area (11%). Whether they know about levels of service, or understand the relation of these to price is therefore not an issue.

The same survey found that the great majority of respondents for all suppliers throughout the State knew little or nothing about their water supplier's *existing* minimum standards of service. For BWB, 74% of respondents either knew nothing about their water supplier's standard of service or were aware of the standards but knew very little about them. This suggests that they are taking the matter on trust and don't particularly concern themselves about either standards or price but are content to rely upon their suppliers to 'do the right thing'.

Much is made from the economic perspective about injecting more transparency into the price setting process and allowing more input into the way prices are charged and service standards are set. Again, the Board, comprised of residents from the Busselton area, is only too glad to hear from the community members, which it serves. However, on the evidence, it would be forcing the issue to survey customers on their level of knowledge about standards and the amount, which they would pay for a variation to them. The question is wrongly posed as the community, while vague about standards in the abstract has achieved chemical-free water, an issue which was important to it.

Residents are adamant that they do not desire chlorination or fluoridation of the water supply, preferring the use of Ultra Violet Irradiation as the means of disinfection, and a reliance on the natural fluoride contained in the water provided.

Should chlorination or fluoridation be proposed in the future, the added cost would not be acceptable to customers, but more importantly, the community would reject the added chemicals as a matter of principle.

Is the strategy to balance supply and demand for the next twenty to thirty years appropriate? (4.3)
The *Water Boards Act 1904* is silent on the need for long-term planning by contrast with the explicit requirement for a Statement of Intent and Strategic Development Plan for State-Owned corporations. It could be presumed that therefore it is not an operating requirement.

However, for Risk Management purposes, in October 2001 BWB commissioned a report from Hydrogeological Consultants, Rockwater P/L to study the projected demand to the year 2025 (4 years after the current operating licence expires). Included in the study was an assessment of the pumping capacity of the Leederville and Yarragadee aquifers to help determine the effects of extraction from existing and proposed bores.

The study concluded;

- based on geological evidence, for practical purposes all current bores should be considered to draw water from the Yarragadee aquifer and all future bores should be located east of the Busselton Fault to utilise the Yarragadee aquifer south and east of the current production bores.
- the largest groundwater resources are available from the Yarragadee aquifer, and based on the modelling, 58% more groundwater than listed in the WRC Groundwater Management Plan (at the time), are available in the Busselton-Capel Management Area;
- if the estimated groundwater supplies in the Groundwater Management Plan are not increased there is likely to be competition for the remaining water supplies and increased reservations of groundwater should be obtained for the term of the Busselton Water Operating Licence which expires in 2021, and to meet projected demands to 2025;
- assuming a current allocation of 6GL total reserved groundwater resources from the Yarragadee aquifer should be increased to 18GL/year to meet Busselton water supply projected demand of 24GL in 2025;
- groundwater pumpage at present rates for Busselton water supply plus private allocations are having only a minor effect on water levels in the Yarragadee aquifer; and
- groundwater pumpage of 24GL/year, plus present private allocations, will result in a small lowering of water levels where the aquifer abuts the Busselton Fault and diversion of groundwater flow from the sub-areas to the east.

As a direct result of the study BWB in negotiations with the Department of Environment – Waters and Rivers Commission obtained an allocation of 17GL per annum – with a review each five years, for future requirements.
BWB believes that the outcome ensures that its strategy to balance supply and demand is appropriate.

Are the demand projections robust? (4.3.1.1)
The demand projections are considered to be a reasonable basis for forward planning.

Demand is being driven by;

- land subdivisions,
- increasing population,
- increasing holiday population,
- light industrial demand

BWB via their SCADA system daily monitor bore production rates that supply the Water Plants and delivery rates from each Water Treatment Plant that directly supply consumer demands. The data collected provides a summary of annual source production, annual demand consumptions, peak day demand consumptions and peak draws by customers.

Demand rates vary seasonally and during the past three years there has been a drop in summer peak day demands attributed to the Water Corporation's water restriction media campaign. The special distribution of demands are determined from production rates at each Plant.

The annual forecasts of demands are determined by reviewing historical data that includes service demands. The projected demands are based on historical data, assessing impacts that may effect demands and expected growth in service numbers. The spatially distribution of demands is based on identified areas of growth and a water supply distribution program is used to simulate the demands at each Water Plant.

A ten-year development plan is produced every three years that projects growth in service numbers and peak day demands. Triggers are identified based on system performance parameters that are demand based to plan for upgrading infrastructure.
The triggers include:

- Source production rate requirements that identify and allow planning for new production bores and new or upgrading existing Water Treatment Plants.
- Available reserve storages in tanks to identify when new tanks are required.
- Consumption demands from each Water Plant to identify when additional delivery pumps are required at each Water Plant.
- Reticulation pressures to identify when new distribution mains are required.

The use of system performance triggers based on project demands allows the flexibility to bring forward or defer new infrastructure based on actual system demands and the spatial distribution of demands.

Is the security buffer justified? (4.3.1.2)
The water supply infrastructure has standby capacity, namely:

- Minimum of 12 hours reserve storage under peak demand conditions at each tank.
- Standby production bores for each Water Treatment Plant.
- Standby delivery pumps at each Water Plant.
- Backup diesel delivery pumps at each Water Plant.
- A number of mobile Generators that allow continued operation of selected Water Plants during an extended power outage.
- Looping of distribution mains within the network to allow bi-directional supply to all large areas of demand.

Busselton Water regularly update their Risk Management Plan to identify vulnerable areas and plan infrastructure to minimise the risk of loss of supply to these areas.

Is the source development timetable justified? (4.3.2.1)
The water is obtained solely from groundwater. The bores are located parallel to the coast to maximise interception of groundwater throughflow, and where pumpage will have minimal environmental effects.

The timing of source development depends on the location of new subdivisions and areas of increasing demand.

Most existing bores are relatively new and will serve the Board's purpose for a number of years.

It is tentatively planned to construct a replacement bore and a new production bore over the next 5 years. (Say 1907/08)

The water is aerated and filtered for iron removal and UV disinfected at the Water Treatment Plants.

There are no high elevations in the town to allow gravity supply. The reticulation and distribution piping networks are pressurised by booster pumping with delivery pumps at the Water Plants.

Busselton Water have acquired sites for future production bores and water treatment plants and have identified the location of future sites for potential developments based on the information provided by the Shire of Busselton – of future anticipated growth areas.

Is an economic level of demand management demonstrated? (4.3.2.2)
A ten-year development plan is updated every three years to identify the spatial distribution of system demands and the timing to upgrade infrastructure based on projected system demands. The use of system performance triggers allows the implementation of new infrastructure to be brought forward or deferred, based on actual system demands. The development plan identifies growth beyond the 10-year planning horizon and sites for future Water Plants have been acquired to service developments in non-frontal areas. Busselton Water's practice is to acquire suitable parcels of land for future Water Plants as part of the condition for the release of large developments.
At the micro level, BWB benefits from the advertising campaigns of the Water Corporation for wise water use and water restrictions as well as government subsidies for water efficient appliances. It is probable that the 7% decrease in total water consumption in 2002-2003 (see 'Water Performance Information on 32 Major Western Australian Towns 1999/2003, ERA) resulted from these programs. For all practical purposes they are more or less what BWB would undertake in any event but come at no cost.

Is an economic level of leakage and losses demonstrated? (4.3.2.3)
The unaccounted water use is in the order of 400ML/a or 10% of production.

This is below average for unaccounted water.

The main source of leakage has been identified as failed Asbestos Cement reticulation pipe and leaking valves and fittings. The Asbestos Cement Pipe is being replaced by a recurring annual program or when a section of asbestos pipe has failed. The leaking valves are repaired during an ongoing maintenance program.

The leakage rate can now be assessed by reviewing trends of system consumption demand rates and cumulative daily demand patterns that are available via the SCADA system.

The benchmarking in the report 'Water Performance Information' mentioned previously is consistent with this finding. Between 1999-2001 and 2001-2003 the number of leaks and bursts per 100km of water mains fell by 56% in the BWB area and the number of service interruptions greater than one hour per 1000 properties fell by 96%.

Is the level of required revenue for each year justified? (4.4)
The Water Boards Act *(1904)* was not designed with economic regulation in mind As has been pointed out in Aqwest's submission to the 'Inquiry on Urban Water and Waste Water Pricing', legal advice has shown that the intent of the Act did not envisage normal commercial activities such as profit making, profit sharing, taxation, contracting out, and the normal commercial incentives, of performance related rewards for example, for the staff and Board members. This cannot be stated strongly enough, as there is a thread running through submissions to the current Inquiry that the BWB is some sort of Corporation or shortly will be.

In the economic environment of recent times, contracting out and simulation of competitive pressures in the public sector, and high executive salaries in the private sector, not to mention the spur of profitability as the firm's reason for being, have been extolled as the keys to superior performance.

Despite the absence of these, BWB has independent benchmarks and surveys showing consistent high customer satisfaction and infrastructure efficiency ratings. Clearly, to evaluate its economic performance using them and their surrogates is wide of the mark. This is recognised in some specifics of the 'Methodology Paper' but it is worth spelling it out because the century old operating assumptions of the organisation are inconsistent with those of the evaluation and this is not to be glossed over.

BWB operations for the last 100 years have been based on its accountability to its local residents and their participation in its governance. The residents are not only customers but also agents and shareholders, a situation unlike the corporate model.

The Board is of the understanding that the answer to this question will be resolved as a result of the Economic Regulation Authority Pricing Reference or its consultants reviewing the information and calculations provided by the Board as an attachment to our correspondence of 26 August 2004 and subsequently.

Is the initial value of the regulatory asset base appropriate? (4.4.1)
We believe that the regulatory asset base at the present time (viz. initial value) is appropriate and verified due to the fact that a complete revaluation of non-current assets was conducted just prior to 30 June 2004. The asset base, by segment, following depreciation calculations etc. in respect of the 2003/2004 financial year was as follows: -

Plant & Machinery	4,811,756
Buildings	1,214,066
Mains & Services	5,127,815
Water Meters	272,827
Tools	78,904
Office Furniture/Equipment	36,907
Motor Vehicles	473,786
Land	1,268,582
	13,284,643

Is the capital expenditure program appropriate? (4.4.2)
The Capital Expenditure program for the next five years has been based on an assumption that growth will continue at the same rate as is current.
Decisions of the Board are based at all times, on the recommendations of our Civil Engineering and Hydrogeology Consultants, which are based most importantly on meeting peak demand.

Is the level of depreciation appropriate? (4.4.3)
In accordance with a directive from Treasury, Busselton Water engaged a consultant (AON Valuation Consultants) to value almost all classes of non-current assets as at 30 June 2003, including Plant & Machinery, Meters and Buildings etc.
Asset classes valued at 30 June 2003 were subsequently reflected in Busselton Water's accounting records at Valuation, as at 1 July 2003.
In addition to estimating the value of each asset, the valuation consultants also provided an estimate as to the remaining useful life of each asset.
As of 1 July 2003, assets booked at Valuation are being depreciated over their remaining useful life, as per the consultant's estimate.
As a result of the above, the Board consider the level of depreciation to be appropriate.

Is the value of the regulatory asset base for each of the next five years appropriate? (4.4.4)
See Attachment 1 for calculation of Regulatory Asset Base for the next 5-year period.

Is the requested rate of return appropriate? (4.4.5)
In discussions with the Economic Regulation authority held on 12 October 2004, agreement was reached that since the Busselton Water Board do not make dividend payments to stakeholders, or fund new investments in infrastructure by debt (loan raising) the Rate of Return references need not apply to this submission.

To what extent is operating expenditure at an efficient level and what scope is there for efficiency gains over the next five years? (4.4.6)
BWB believes that in obtaining a 97.96% satisfaction rate from our customers is a fairly good indication that the extent of our operating expenditure is at an efficient level. Our infrastructure is modern, and well maintained, our operational employees are multi-skilled and of course this has an effect towards keeping expenditure to reasonable levels.
Over the next five-year period we would anticipate that expenditure levels could be maintained to levels applicable to inflationary trends. The efficiency gains that have been introduced (eg. off-peak pumping) will continue as before.
The benefit of being a small multi-skilled organisation should not be overlooked in assessing efficiency levels.

What are the implications of the above decisions on the amount of required revenue for each of the next five years? (4.4.7)
We believe that the revenue base that exists currently, plus inflation should enable the BWB to continue to operate at the same level of service over the next five-year period and include the maintaining of reserves to a sufficient level to meet anticipated future infrastructure costs without the need to revert to raising loans and therefore remaining debt-free.
As the Board, through its ancient legislation is unable to act in a commercial manner and therefore it is not appropriate to identify expenditure which BWB would undertake if we were acting commercially.

What level of financial performance is implied by the requested level of required revenue? (4.4.8)
The level of financial performance implied by the requested level of revenue is to continue to serve our customers well, maintain our infrastructure in the excellent order that it now is, and to remain free of debt. There is some comfort however in the knowledge that borrowing money to fund any unexpected or improved infrastructure which is required, though unexpected is always an option available to the BWB.

Are the prices that each service provider would set before taking into account social considerations and externalities appropriate? (4.5)
In the methodology used by BWB the prices have been set whilst taking into account social considerations and externalities. We see no valid reason to do things differently in the future.

How should the base prices be adjusted to take into account social considerations? (4.6.1)
The system of water tariff setting as currently exists in the BWB allows the Board to determine the community needs and then social considerations with regulatory compliance. Once those needs and considerations are established and costed as expenditure items they enter the equation of setting tariffs to balance an annual budget and therefore have an automatic input in price adjustment.

How should prices be adjusted to take into account externalities? (4.6.2)
It is the view of Busselton Water that the cost of externalities such as the expense of compliance with regulatory requirements (operating license, operational and asset management reviews), meeting standards associated with water quality, safety in the workforce etc. represent a portion of the annual operating costs, and therefore should be included and taken into account of supplying services to customers (viz. included in the volumetric price of water).
The methodology that the Board currently use for setting water tariff prices certainly take externalities into account.

As stated in 4.7 below, the Board was prepared to pay for water resource management charges and included and allowance in its operating budget for the relevant year.

Should the gap between the resultant prices and current prices be closed? (4.7)
In anticipation that water resource management charges were going to be introduced in 2003/2004 the BWB incorporated an amount to meet these charges in its operating budget for that year and the cost was absorbed along with all other anticipated expenditure, thus becoming part of the budget deficit (under the local government method of setting charges, as referred in our response to the Issues Paper).
As the expenditure did not occur due to Government decision, the allocated amount was therefore not spent and contributed to the credit balance at 30 June 2004, which in turn had some bearing on setting of water tariff charges for the year 2004/2005 (i.e. an increase, slightly below inflation rises).

Service Providers are asked to clearly summarise their final price recommendations (4.8)
As promoted in the Board's response to the issues paper, we believe that the methodology used currently for assessing charges, by the BWB (a methodology derived from local government) is the preferred option. The structure has, since 1906 when the BWB was formed, served very well, is accountable to the local community which we serve, and has been well received by community and government alike.
Local ownership applies to the BWB and with its governing body of local members appointed from the customer base, will best insure that the long term interests in relation to water tariff pricing, standards of service, accountability will be maintained.
BWB is of the view that prices would be set at two-year regulatory periods, which would allow more scope for adjustment if the need arises.

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Recommendation
Based upon the predictions of financial data supplied earlier, the Water Tariff recommendations herewith submitted by the BWB are based upon:

- A preferred two-year regulatory period
- Pricing adjustments of 2.5% for the periods 2006/2007 and 2007/2008, increasing to 3% from 2008/2009
- A continuation of the "higher charge" brackets for large consumers of water

		Preferred 2-year Regulatory Period			
	2.5% 2005/06	2.5% 2006/07	2.5% 2007/08	3.0% 2008/09	3.0% 2009/10
Standard Supply Charge					
Commercial	46,754	91,240	135,753	180,240	224,733
Residential	828,429	849,140	870,368	896,479	923,373
Concessional	20,497	21,009	21,534	22,180	22,845
Water Consumption					
Commercial	232,992	302,601	350,817	396,322	465,976
Residential	1,563,734	1,602,827	1,642,898	1,692,185	1,742,951
Concessional	255,610	262,000	268,550	276,606	284,904
Abolition of Water Allowance (extra revenue)	0	25,885	26,532	27,196	27,876
Rates					
Commercial	395,066	296,308	190,231	98,768	0
Meter Rental					
Commercial	9,360	9,360	9,360	9,360	9,360
Residential	104,280	104,280	104,280	104,280	104,280
Concessional	2,985	2,985	2,985	2,985	2,985
Fire Service					
Commercial	8,548	8,548	8,548	8,548	8,548
Residential	824	824	824	824	824
Concessional	1,236	1,236	1,236	1,236	1,236
	3,470,315	**3,578,243**	**3,633,916**	**3,717,209**	**3,819,891**
Other	83,668	196,087	374,424	319,191	272,110
	3,553,983	**3,774,330**	**4,008,340**	**4,036,400**	**4,092,001**

Notes

i) The commercial (non-residential) charging regime will change to "user pays" as of 1 July 2005. Rates levied per property are to be based on meter size.

ii) During a proposed 5-year transition period when properties will be charged a rate partially calculated from the old GRV based rate and partially using the new meter size base charge.

For example:

Year	% Rate	% Meter Size
1	80	20
2	60	40
3	40	60
4	20	80
5	0	100

iii) This concept, already approved by State Treasury, has been taken into consideration in preparing the Busselton Water Board Pricing Recommendation

iv) "other" represented by such income as: -

* Backflow Prevention Testing Fees
* Penalties on Outstanding Rates
* New Service Connection Fees
* Meter Reading Charges
* Water Sales from Hydrants
* Water Service Reinstatements

v) Obviously the BWB recommend that in the pricing recommendation submitted, the inflationary figures used should Be flexible to relate to actual per centum of CPI.

Attachment 1

2003/2004	13,284,643	(30/6/04)
2004/2005 (Year 1)	13,284,643	(1/7/04)
Capital Expenditure	1,712,865	
	14,997,508	
Depreciation	720,000	
2005/2006 (Year 2)	**14,277,508**	
Capital Expenditure	1,146,000	
	15,423,508	
Depreciation	-758,880	
2006/2007 (Year 3)	**14,664,628**	
Capital Expenditure	577,000	
	15,241,628	
Depreciation	-800,000	
2007/2008 (Year 4)	**14,441,628**	
Capital Expenditure	875,500	
	15,317,128	
Depreciation	-918,700	
2008/2009 (Year 5)	**14,398,428**	
Capital Expenditure	1,746,500	
	16,144,928	
Depreciation	-968,300	
	15,176,628	