SUBMISSION TO THE ECONOMIC REGULATION AUTHORITY'S INQUIRY INTO DEVELOPER CONTRIBUTIONS TO THE WATER CORPORATION

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1 Executive Summary

The Water Corporation is pleased to submit a response to the Economic Regulation Authority's Issues Paper: *Inquiry into Developer Contributions to the Water Corporation (31 October 2007).*

The Water Corporation recognises its unique position in Western Australia, providing water, wastewater and drainage services to thousands of households, businesses and farms in towns and communities spread across the State. Providing these services requires significant upfront capital infrastructure, with a current day asset cost equivalent of $21 billion dollars. Added to this, the size of the forecast capital program is unprecedented, with major investments in infrastructure required to meet the needs of a growing State in the face of a drying climate.

In meeting these challenges and delivering its world-class services, the Corporation recovers part of the cost of assets invested through upfront contributions from land developers. The remaining costs are recovered annually, partly from rates and charges and partly from the State Government. Importantly, any proposal which results in a decrease in upfront developer contributions will require an increase in future annual revenue. In light of the price increases already anticipated for annual charges, changes as a result of reducing developer charges should be carefully considered.

Developer contribution arrangements were established in 1978, and have continually evolved over the past 30 years. The current arrangements are transparent, well understood and widely accepted by the land development industry.

In the majority of cases, land developers pay a standard charge for water, wastewater and drainage services. This standard charge is applied uniformly state-wide, providing developers with desired certainty of the charges for normal development. Standard headwork contributions are also relatively simple to administer.

In exceptional circumstances, however, non-standard charges may apply. These are usually based on the cost specific to that development. In addition, the Corporation's prefunding arrangements offer land developers the opportunity to pursue out-of-sequence developments. They allow a developer to be innovative and take risks provided they bear the financial risk of their actions.

While the current developer contribution policy has many benefits, the Corporation supports the continued improvement of its pricing policies. As an advocate of change, the Corporation proposes two options for the calculation of standard headwork charges:

- Option 1: A state-wide uniform charge based on the cost of existing state-wide distribution assets for water and wastewater services.

- Option 2: A scheme specific charge based on the total cost of the scheme's existing distribution assets.

The Corporation's preference, Option 1, seeks to build on the virtues of the current structure. It retains the benefits of simplicity, provides certainty for developers and supports the Government's regional development objectives. While a scheme based charge (Option 2) may provide a pricing signal for each scheme, it is more complex to administer and importantly may adversely impact regional development.

Optimal pricing signals are delivered when based on forward looking asset requirements. Future asset requirements are currently used as the basis for the calculation for non-standard charges. However, the availability, accuracy and reliability of that information make it difficult and costly to determine accurately. The Corporation's preference is to limit this approach to non-standard circumstances where the investment of time and expense is warranted. However, for standard charges, using the average cost of existing distribution assets (that tend to be modular in nature) is the best available approximation for the cost of future distribution assets. At the same time, it offers benefits of certainty, simplicity, avoids equity issues of large capacity investments and importantly, the information upon which the calculation is based is known.

The Corporation strongly advocates the retention of standard charges for "normal" development and non-standard charges for exceptional circumstances. Collectively, the combined use of standard and non-standard developer charges meets the pricing objectives of equity and economic efficiency, striking a balance between the competing preferences for accuracy and simplicity. In doing this, they also support the Government's broader social and environmental policies.

There would be significant administrative and contractual implications for any proposal which sought to unravel the complex policy arrangements for non-standard charges that have developed over the years. Having said this, there are two changes proposed by the Water Corporation for non-standard charges, being:

i) The introduction of minor works cost sharing; and

ii) Charging country lots greater than 1 hectare standard developer charges.

This submission also considers the need to introduce adjustments to charges to provide land developers with an incentive to install water sensitive urban design features. This will support the State's desire to find innovative solutions to the challenge of a drying climate.

The ERA's Issues Paper called for comment on a number of specific issues. This submission addresses these in Appendix 1 where it summarises the Corporation's concluding position. The body of this submission considers the various principles that lead to these conclusions.

2 Setting the Scene

This submission represents the Water Corporation's response to the Economic Regulation Authority (ERA) on the issues raised in the Issues Paper: *Inquiry into Developer Contributions to the Water Corporation (31 October 2007).*

The current developer charging structure has been developed over 30 years with the close involvement of the development community. This structure is widely accepted, well understood and relatively simple to administer. This submission by the Water Corporation *("the Corporation")* explains the current structure, examines the issues and principles raised by the ERA in their Issues Paper and considers the merits of alternative arrangements.

2.1 Layout of the Submission

The submission will cover the major areas of:

- Section 3: Current processes for setting developer contributions
- Section 4: Review of principles and objectives of developer contributions
- Section 5: Consideration of possible changes to the current charges

Appendix 1 specifically addresses the issues raised in the ERA's paper. In essence, it summarises the Corporation's concluding position. The body of this submission considers the various principles that led the Corporation to those conclusions.

Furthermore, the sections below provide some background information including the history of developer charges. Much of this was adequately covered by the ERA in the Issues Paper and has been included here for the sake of completeness. Emphasis has been placed on principles considered important by the Corporation.

2.2 Background to the Inquiry

The Corporation's aim is to provide sustainable water services to make Western Australia a great place to live and invest. While we strive to best meet our customers' needs for now, we are also managing our assets and planning for Western Australia's water future. The pricing policies are determined by the Minister for Water Resources and are an important part in meeting the Corporation's overall objectives.

Accurate prices ensure the economic viability of the Corporation, allowing it to continue to provide for future water services. However, it is essential that in meeting economic objectives, price setters also consider their impact on customers – including the development community, commercial customers and residential households.

The Corporation feels that it has been a responsible custodian of the State's scarce water resources, and is keen to see a continuation of many of the practices that have served the numerous stakeholders of the land development industry well over the years.

This inquiry by the ERA is being conducted as part of a series of reviews on the Corporation's charges. It follows on from the ERA's Urban Pricing Inquiry (November 2005) and the Country Pricing Inquiry (July 2006). This inquiry essentially completes the ERA's review of all of the Corporation's major charges to customers. Importantly, it is noted that the inquiry is not being driven by the need to solve any perceived or inherent problems in the current charging structure.

The current suite of developer charges are well understood, widely accepted and relatively simple to administer. Collectively, the combined use of Standard Headwork Charges, non-standard charges, annual service and annual usage charges deliver the broader objectives of equity and economic efficiency whilst supporting the Government's broader social and environmental policies. For these reasons, there are many attributes of the current developer charges that the Corporation believes should be retained. Any potential changes should aim to build on the virtues of the current structure, rather than seeking to completely revise the current policies that determine and manage developer charges.

2.3 History

Headworks Contributions were first introduced in the metropolitan area as a method of funding rapid urban development in 1978 and standardised in 1981. Prior to 1978, major infrastructure capital expenditure was funded solely through borrowings, general revenue and some infrastructure contribution by developers and major mining companies in the country. However, with government restrictions on borrowings and limitations on increases to rates and charges, a new method for funding capital works was sought.

A standardised charge for each service was introduced in 1981 and is referred to as a Standard Headwork Contribution (SHC). The level of these contributions was initially negotiated with government with a view to recovering a proportion of the ten-year capital works program. This was progressively revised so that by 1992 they reflected 40% of the total state-wide Modern Equivalent Asset Value of the existing system.

The triennial review model for determining the capital cost per Single Residential Equivalent (SRE) was developed during the late 1980's and adopted in 1990.

A more detailed history of the SHC is presented in the ERA's Issues Paper as Appendix 3. While, there is little need to repeat that information here, key points are worth reemphasising.

Throughout the history of the development of SHC, several attributes were introduced and still remain because of their importance:

i) The land development industry has been closely consulted and actively involved in the evolution of the SHC.

ii) State-wide uniform charges have always been the approach endorsed by Government and are generally preferred by developers.

iii) Developer contributions have been based on the cost of existing assets, with the contribution seen as a method of partly funding the upfront cost of the State's capital requirements.

iv) The need for regular (for example, triennial) reviews of the value of the SHC and the method of calculation is a generally accepted practice.

2.4 UDAC

In 1994 the Urban Development Advisory Committee (UDAC) was established as an advisory committee to the Board of the then Water Authority of Western Australia. With the creation of the Water Corporation, the new Board reviewed the need for the Committee and resolved that the Committee fulfilled an important role and should be continued. The role and objectives of the committee were confirmed to be:

- Provide representative input to reviews of policies, processes, standards, practices and Corporation performance particularly as these practices etc. impact on land development activities state-wide, undertaken and/or administered by private and public entities.

- Provide advice on improving processes associated with the Corporation's involvement in the land development activity

- Provide advice on performance indicators that the Corporation should adopt and how the development industry could be better served by the Corporation and

The membership of the UDAC includes the Consulting Surveyors Western Australia (Inc), Association of Consulting Engineers Australia, Civil Contractors Federation, Landcorp, Housing Industry Association, Urban Development Institute of Australia, Master Builders Association, Western Australian Local Government Association and Water Corporation.

Industry input and endorsement of the developer charging structure has proved beneficial in refining methods of calculation, and providing transparency to the process.

3 Current Processes

The Corporation's land development charges can be divided into those based on the standard contributions that apply across the State, and those calculated for specific projects or areas. In addition, developers are required to hand over reticulation assets to the Corporation, and are sometimes required to prefund headworks assets if their development causes the accelerated construction of Corporation infrastructure. Finally, alternative arrangements exist for major country customers.

This section discusses the various developer charges divided into:

- Section 3.2: Standard Headwork Contributions
- Section 3.3: Non-Standard Charges
- Section 3.4: Major Country Customers

However before any discussion on developer contributions begins, it is useful to appreciate the context in which developer revenue contributes to the overall financial requirements of the Corporation. This requires an appreciation of the Corporation's total revenue.

3.1 Water Corporations Total Revenue Requirements

As a corporatised State Government owned utility, the Water Corporation is expected to raise revenue sufficient to cover its total cost. This includes both the annual cost of operations plus the cost of capital investments. In achieving this objective, contributions by developers represent a significant source of total revenue received.

The Water Corporation's sources of revenue and their respective contributions over the last 10 years are summarised as follows:

Revenue Item	**% of Total Revenue (1997 – 2007)**
Annual Service Charges	41%
Annual Water Usage Charges	17%
Community Service Obligation (CSO) payments	22%
Developer Charges o cash contributions o asset contributions	 8% 5%
Other	7%
	100%

Understanding the extent to which developer contributions contribute towards the overall revenue requirements is important for two reasons:

(1) Any changes to the current developer charging structure that result in a change to the revenue received by the Corporation, will require equal (and opposite changes) to the annual revenue receipts.

(2) Any pricing principles (for example: efficiency and equity) for developer charges need to be appreciated within the context of all of the pricing signals that are being sent to the Corporation's customers.

Impact on Annual Revenue

The ERA has undertaken three pricing inquiries into the Corporation's regulated charges. The State Government has endorsed a number of the ERA's recommendations from these inquiries, including:

- Price increases necessary to cover the increasing cost of service provision will be phased in by 2013/14; and
- Any required price increases are added to the annual service charges. This therefore makes the annual service charge the balancing revenue item to ensure revenue sufficiency.

For the past few years (and for the foreseeable future) the Corporation faces enormous pressures to meet the needs of a growing State in the face of a drying climate. These pressures require significant capital expenditure for new water sources, new wastewater treatment plants and upgrades/expansion to existing infrastructure. If the Corporation's prices are to reflect the cost of the capital program, price increases will be required. In the ERA's Inquiry on Water Corporation Tariffs (May 2007), it was forecast that water and wastewater prices would increase (in real terms) by an average of 3.9% and 1.7% respectively, each year to 2013/14.

Any proposal which results in a decrease in the amount of revenue from upfront developer contributions will require an increase in the annual service charges. In light of the price increases already anticipated for regulated charges, the customer impact of further rises as a result of reducing developer charges should be carefully considered.

The Terms of Reference requires the ERA to have regard for the Government's social policy objectives. The impact on customers and their relative ability to pay should be considered under this social objective.

Total Customer Charges

Water

In addition to collecting an upfront developer contribution for a water service, customers also pay a meter based annual service charge and a water use charge calculated on actual consumption.

Based on a recommendation by the ERA in their Urban Pricing Inquiry (November 2005), the water usage charge for metropolitan customers is being changed to reflect the long run marginal cost of water sources for the Integrated Water Supply System (IWSS). The water use charge will reflect the cost of new water sources and major distribution infrastructure and therefore provides the appropriate price signal for these assets.

The majority of country residential customers do not pay the full cost of their water until consumption exceeds 950 kL. Accordingly, there is a very weak pricing signal in country regions for annual water use charges.

Wastewater

Charges for wastewater services include an upfront developer contribution and an annual service charge. Residential service charges are based on a property's gross rental value (GRV) with non-residential customer charges based on the number of major fixtures. Some non-residential customers also pay a usage charge. Charges in regional areas are uniform for non-residential customers, but vary for residential customers based on the local cost of the service (this however, is subject to price caps).

It is generally accepted that customers using the wastewater system would not readily respond to price signals. Or rather, that the service is very price inelastic and customers would seldom consider the cost of the service prior to using it. In addition, the cost of accurately measuring wastewater flows is very high.

The ability to send a price signal for wastewater services is limited. An effective pricing signal may only be effectively sent at the initial development stage. If state-wide uniformity for developer charges remains however, the extent to which costs are recovered upfront (as developer charges) or over time (with annual service charges) becomes an arbitrary decision, with revenue sufficiency and customer impact being the primary pricing considerations.

Drainage

Annual drainage charges are based on a property's land use and GRV. As with wastewater services, drainage customers do not readily respond to price signals particularly as customers are seldom even aware that they are receiving this service.

Again, as with wastewater customers, an effective pricing signal may only be able to be sent at the initial development stage. If state-wide uniformity for developer charges remains however, the extent to which costs are recovered upfront or over time is largely a value judgement.

3.2 Standard Headwork Contribution

Under the Corporation's current charging structure, the majority developers are charged one Standard Headwork Contribution (SHC) per water, wastewater and drainage service. SHC's represent approximately two-thirds of the total cash contributions received by the Corporation from developers.

The current (1 Oct 07 to 31 Dec 07) SHC per Single Residential Equivalent (SRE) is:

- $3,278 for water services;
- $1,514 for wastewater services; and
- $427 drainage services.

The policies and procedures for setting the SHC amounts are documented in the Land Servicing Policy. The characteristics of a SHC are summarised as:

- The monetary contribution deemed appropriate for the service demand represented by a SRE,
- In a developed urban locality, and
- Assessed on a state-wide basis.

Setting and confirming the value of SHC's currently takes place within a three year time frame. The value of the SHC is set by distributing the total MEAV (Modern Equivalent Asset Value) of the Corporation's existing assets down to a Single Residential Equivalent (SRE) of service demand. This three year confirmation of contributions towards the Corporations assets is termed the Triennial Review.

3.2.1 Determination of the Charge

Calculation of the SHC is represented by the formula:

$$SHC = \{ MEAV / SRE \} * 40\%$$

Note that:

- The Modern Equivalent Asset Value (MEAV) represents the current replacement cost of existing assets. It is calculated by line of business (water, wastewater and drainage) with

adjustments made to exclude reticulated works gifted to the Corporation and includes a proportion of common costs.

- Currently, the SHC applies to urban lots, defined as lots not exceeding 1 Ha in area.
- In the intervening years between Triennial Reviews, the SHC rates are adjusted quarterly by means of the Corporation's Capital Cost Index (CCI). This index is a combination of 4 different indices determined by the Australian Bureau of Statistics, which collectively approximate the movement in the cost of construction for typical Corporation assets.

Quarterly indexation effectively adjusts the MEAV calculated for the triennial review for movements in the current cost of asset construction. It therefore helps to avoid significant price shocks at the subsequent triennial review as a result of changes in the cost of construction.

Indexation does not reflect changes in modern equivalent construction methods (for example, technological advances). Nor does it capture the impact of new assets constructed since the triennial review. However, the impact to the SHC of any changes in construction methods or new assets is relatively small because of the size of the overall asset base and the total number of SRE's (in excess of 930,000 for both water and wastewater).

3.2.2 Key features of the SHC

There are three key elements to the SHC:

(1) It is a uniform charge applied state-wide;

(2) It is based on 40% of the modern equivalent asset value;

(3) The charge is determined per single residential equivalent based on meter size.

Whilst not a key feature of the SHC per se, another important consideration when understanding the SHC is to appreciate the context of when it applies. Each of these elements is discussed further.

- **When SHC's Apply**

Standard headwork charges are used as the default charging option. That is, unless a new development triggers the need for a non-standard charge, then SHC's apply. The non-standard exceptions cover many instances where efficient price signals can effectively be conveyed.

Provided there are rules for the application of non-standard situations, then the use of a SHC means the benefits of standard charges are delivered (for example, simplicity, equity, certainty) in addition to the benefits of non-standard charges (for example, economic efficiency) as dictated by the circumstances.

- **Uniform State-wide Policy**

Standardised charges were introduced in 1981. The desire for uniform charges has been progressively endorsed by all subsequent parties including the Corporation, State Governments and the development industry.

The merits of uniform charges are discussed further in Section 4.2. In short, they offer benefits of certainty, equity (to the extent that equity may be defined as "everybody pays the same price for the same minimum level of service") and administrative simplicity. Importantly, uniformity when applied state-wide, supports the Government's regional development objectives but does not provide an economically efficient pricing signal to developers.

- **40% of the Total State-wide Modern Equivalent Asset Value**

In calculating the SHC, the current approach:

- Is based on the **Modern Equivalent Asset Value**. Calculating the MEAV requires the regular review of assets to ensure they reflect the current cost of required infrastructure. It takes into account asset obsolescence, technological changes, construction rates and capacity requirements.

  The rationale behind using the existing assets as a basis for calculating the charge is twofold. Firstly, recognises the need for new developments to make an upfront contribution to the cost of existing infrastructure as this infrastructure collectively contributes to providing the new service through spare capacity. And secondly, there is a greater degree of certainty and amount of information available when using the cost of existing assets as opposed to future costs. The Corporation supports the continued use the MEAV as the basis for determining SHC's.

- **40% of the cost of existing assets**. There is no remaining science behind why 40% is an appropriate proportion of costs to collect upfront. This percentage was originally based on balancing the impact of the charge on the development community with the financial requirements of the water utility for raising capital funds. While the rationale behind the 40% has now lost its significance, the percentage has continued to apply as it is generally accepted as a 'good fit' from the Corporation and industry perspective.

The above explanations detail the reasons as to why the current charge is calculated the way it is. The Corporation acknowledges that the proportion of 40% is now difficult to defend and may warrant reconsidering. In addition, using the total asset base may now no longer be appropriate in light of the water usage charge reflecting the cost of new water sources. The Corporation

proposes a possible alternative basis of calculation using 100% of the cost of existing distribution infrastructure. This is discussed in more detail in section 5.2.

- **Use of Single Residential Equivalents (SRE)**

The Single Residential Equivalent (SRE) for water services is deemed to be the basic unit of measure against which consumption of all other properties is compared. An SRE is defined as the basic annual demand for water, wastewater or drainage services for a single residence in a typical urban location. SRE's for water and wastewater are based on the size of the meter servicing the property with a 20mm meter representing one SRE. Meter based charges are considered appropriate as changes in meter size reflect changes in service capacity.

3.3 Non-standard Headwork Charges

There are a range of non-standard charges which apply in place of the SHC, triggered by specific (exceptional) circumstances. Non-standard charges are usually calculated based on the net present value of future cash flows, with the added complexity of calculation justified by the need to provide circumstance specific prices.

3.3.1 Special Development Contribution Areas

Special Development Contribution Areas (SDCA) exist in various locations to meet requirements that are unique to the area concerned. Development issues that require a non-standard developer contribution include:

- Where proposed subdivisions are premature or in advance of Water Corporation's existing development front;
- Where local conditions and requirements are unique, including difficult and expensive construction area;
- Distant developments that "leap frog" planned development;
- Rural Lot development;
- Competitive developments;
- Other, for example: departure from existing service standards or where the developer constructs part of the headworks (e.g. a sewerage pump station).

The charge in such circumstances is typically based on the shortfall between the cost of development and the revenue that will be recovered through annual rates, charges and CSOs. In all of these cases servicing requirements and financial contributions are determined on a case by case basis and specific terms and conditions are incorporated into an agreement binding all parties.

Non-frontal Developments

The Corporation may apply a SDCA charge for areas remote from the current development front, particularly where there are high infrastructure costs for local conditions or specific requirements. These may be applied in lieu of pre-funding (discussed in section 3.2.2).

Rural Lot Development

Rural is defined as land that is developed for rural purposes and includes lots created for residential land use that are equal to, or larger than 1 hectare in area.

Remote Development

Remote developments generally exist where a proposed development requires the construction of water, sewerage or drainage infrastructure and the cost of that infrastructure increases the servicing costs of the lots involved significantly. A significant increase means an increase of 15% or more over the comparable servicing cost of other lots in the scheme concerned. In these situations the development proponent will contribute to the additional capital cost of connecting the new development to the existing scheme, in addition to paying the developer contributions due, at the rate for that particular scheme.

A development is also considered remote if it is not connected to an existing Corporation scheme. In the absence of increasing CSO funding from the State Government, the subdivider will be required to contribute towards the increased cost incurred by the Corporation. For developments that will be connected to existing Corporation schemes, the contribution from the developer will typically be the capital cost of connecting the new development in addition to a SHC payable.

Competitive Developments

Competitive developments occur when more than one organisation is requested to compete for the scheme supply of water, wastewater or drainage services. Unless the Government has explicitly indicated the intention to provide a CSO for the scheme, the Corporation will conduct a commercial evaluation of the proposed scheme including project risk and anticipated future rates and charges. The Corporation will then submit a commercially determined developer charge as part of the tender process.

3.3.2 Out of Sequence Developments

The Water Corporation's current policy for out of sequence developments is to allow any developer intending to subdivide in an area that cannot be supplied by existing headworks (i.e. assets other than reticulation assets) or is out of sequence in terms of the Corporation's Capital Investment Program (CIP) to prefund the needed assets.

When this prefunded area has reached either a predetermined level of development or an agreed time frame has elapsed, the Corporation refunds the cost of the headworks assets to the developer. The terms of the payments, together with all specific requirements, will be contained in a unique "Customer Constructed Works Agreement" (CCWA).

While this policy is intended to encourage "orderly development", the exception allows a developer to be innovative and take risks provided they bear the financial risk of their actions and compensate the Corporation for the additional cost in providing the out of sequence service.

In addition, where it is shown to be more cost effective, smaller temporary works (normally pump stations) may be constructed at the developer's cost.

3.3.3 Major Country Customers

With the exception of major country mining and industrial customers using more than 49 kL per day, the Water Corporation's customers pay State-wide by-law charges and headworks contributions for their water service.

*Mining Cha*rges

Mining customers with a peak day demand of up to 49 kL per day pay the mining by-law charge of 182.7 c/kL plus a headworks charge. The headworks contribution is calculated using the standard rates appropriate to the level of the customer's peak day demand. One standard headworks contribution (currently $3,278) is charged for each three kilolitres of peak demand, e.g. for a peak day demand of 49 kL per day the charge is $53,541 (49/3 = 16.33 x $3,278).

The term of these agreements is 15 years.

Major Consumers

Major mining and industrial customers with a peak day demand of more than 49 kL per day are charged based on the unit cost of augmenting the water supply scheme to their location. These charges replace the standard by-law charges and developer contributions.

Major customers pay a service availability charge for the peak capacity required based on the cost of expanding scheme capacity to their location. They then pay a consumption charge to recover that portion of the operation and maintenance cost of the water supply facilities attributable to their use.

The standard agreement includes an initial capital contribution that secures their water entitlement for 45 years. This term represents the average life of the water supply assets. The

Corporation may negotiate payment terms for this capital contribution for a period of up to 15 years, based on the financial status of the customer and the risk of being left with stranded assets should the customer fail.

Notional Cost Method

The capacity contribution is based on the "notional cost" method for calculating the cost of augmenting capacity. This method has been subject to a number of external reviews and has been judged to be an equitable means of recovering costs.

The notional cost method has been used since the 1970s and replaced a requirement for major customers to pay for the actual cost of augmenting the scheme at the time they were developing their projects. The notional cost method estimates the unit cost of augmenting the scheme by a significant amount. This has the advantage of treating customers equally whether the actual augmentation required for their project is above or below the average cost, and allows the augmentation works to be carried out when they are required, rather than at the time a major project is developed.

Philosophy behind the Charges under the Major Consumer Policy

The philosophy behind the charges for major customers is to charge the incremental costs, therefore leaving existing customers no worse off and no better off.

In order to allow an equitable charging policy the demand increment has to be large enough so that one customer does not receive the benefit of lower cost incremental augmentations over subsequent customers or vice versa.

As a scheme typically has some excess capacity, it follows that individual customers could be charged on the basis of short run marginal cost only, i.e. not required to make a contribution to capital costs. However, the same logic would require that other customers would need to pay the full cost of establishing new capacity at the time when all existing capacity has been utilised. The result would be that some customers would pay significantly higher charges depending upon their place in the development queue. Not only would this mean that "equals" would be treated quite unequally, but as excess capacity is used up it would be a substantial barrier to investment by proponents of new projects that would be classified as major customers.

If no other demand increase can be anticipated, the capital charge is usually based on the works necessary to increase the capacity of all sections of the scheme to meet the demands of the particular customer involved.

The notional cost method is an efficient basis of sharing system costs between existing and new customers. Incremental costs are generally lower than the average cost for a scheme, and major customers benefit from these economies of scale.

In summary, the notional cost method:

- Requires major customers to bear the incremental cost
- Ensures that a major customer does not have to bear the full cost of providing infrastructure to the advantage/disadvantage of subsequent customers, and
- Ensures that the allocation of costs is reflective of the projected costs to be incurred.

From a public policy criteria, the notional cost methodology:

- Is clear in its rationale and objectives
- Sends efficient price signals which reflect variations in the costs of servicing different locations
- Maintains equity between similarly situated customers
- Ensures fair, cost reflective charges from monopoly infrastructure, and
- Is applied consistently to all major customers in country areas.

4 Principles and Objectives of Developer Contributions

In Section 1.2 of the Issues Paper, *Background to the Inquiry*, the Issues Paper notes that the reason the ERA is conducting this inquiry is because they are undertaking a series of pricing inquiries into the Water Corporation's charges, with this inquiry fitting into that pricing review process.

The current developer charges have evolved over the past 30 years with the constant input from a large cross section of the development industry. The structure is well understood, widely accepted and relatively simple to administer. Collectively, the combined use of SHC, non-standard charges, annual service and annual water use charges deliver objectives of equity and economic efficiency whilst still supporting the Government's broader social and environmental policies. For these reasons, there are many attributes of the current developer charges that the Corporation believes should be retained.

This section considers the various principles and objectives raised in the Issues Paper and presents the Corporation's understanding of their relative merit. For ease of presentation, they have been grouped as follows:

(1) General Principles to be Retained

- Continued involvement of the development community;
- Upfront recovery of part of the cost of servicing customers;
- The combination of both Standard Headwork Charges and non-standard charges, with the continuation of all non-standard charges except for country lots greater than 1 ha
- Retain the ability to negotiate charges for major customers separately;
- Developers to continue to fund reticulated works;
- Single Residential Equivalents and meter based charges; and
- Simplicity.

(2) Uniform charges

(3) Asset Base

(4) Water Sensitive Urban Design

However, before these areas are discussed in detail, the Corporation would like to raise one further consideration at the outset – that is, to understand the ability for developer charges to influence development. The Corporation notes that a principle discussed in the Issues Paper is the extent to which developer charges send a signal to developers to encourage them to develop in areas that are more cost effective to develop (in the absence of other compelling environmental or social reasons). In doing this, one needs to appreciate of the cost of the

Corporation's charges to a developer relative to other costs incurred by them when developing land. The average price of metropolitan lots has increased over 240%[1] in the past 3 years (June 2004 to June 2007). With increases in the price of land of this magnitude, the ability for the Corporation's charges to send an effective signal may be very minor.

Furthermore, the cost of development (compared to the anticipated land sales prices) is only part of a range of developer considerations including rate of development, level of fragmentation of undeveloped landholdings, environmental clearances, existing community amenities and major arterial roads.

Appreciating how sensitive development is to the cost of the utility service may help inform the debate over how to balance the (often) conflicting desired outcomes of accuracy and simplicity.

4.1 General Principles to be Retained

Continued involvement of the Development Community

Part of the success of the current charging structure is that the development community has been closely involved with its evolution. More recently (since 1994) this has been through the involvement of the Urban Development Advisory Committee (UDAC).

The involvement by UDAC has contributed towards ensuring the principles of public consultation, independent scrutiny and accountability are upheld. The Corporation supports the need for these principles going forward and believes any future governance model should incorporate UDAC's continued involvement.

Upfront Cost Recovery

A key issue with the developer contributions is determining the degree to which costs are recovered upfront. The Corporation notes that when answering this question, various economic regulators have arrived at different answers. Clearly, answering this question requires value judgements to be made and because of this, the Corporation believes that consideration for intergenerational equity, revenue sufficiency and customer impact are vital. Accordingly, any change in the method for calculating developer charges should aim to deliver a similar amount of upfront revenue as is currently forecast. This position is supported as follows:

(i) The Water Corporation's current capital program is very large. A booming Western Australian economy and high growth in services coupled with the challenges of a drying climate has necessitated a capital program that is unprecedented. It is appropriate that

[1] *Source: Western Australian Economic Summary 2007 (No. 3) – Department of Treasury and Finance*

some of these significant costs are paid for upfront to ensure funding is available and the State's debt levels are partly contained. This was the very reason for the creation of developer charge in 1978 and continues to be an important driver.

(ii) Any reduction in developer contributions will need to be recovered through increases in annual rates and charges. These annual fees are already forecast to increase – any further pressure caused by a change in the pricing structure needs to be carefully considered.

Standard Headwork Charges and Non-Standard Charges

Scheme based standard charges deliver some benefits to both the Water Corporation and the development community including simplicity, administrative ease and certainty for developers. The extension of standard charges state-wide magnifies these benefits of simplicity, administrative ease and certainty in additional to delivering further benefits of equity and encouraging regional development.

Any charging structure that requires the calculation of a development specific charge would be administratively cumbersome and potentially confusing for developers.

However it is acknowledged that locational signals may be lost when standard charges are applied. Accordingly, any structure should allow for non-standard charges where economic efficiency is the primary driver and the benefits of that efficiency are clear.

The combination of both standard and non-standard charges should deliver the benefits of uniformity without substantially sacrificing economic efficiency. This provides some certainty for developers yet still allows for out of sequence development (and the associated transference of risk / reward).

Major Customers

Major country customers (those requiring a service capacity in excess of 49 kL per day) currently have the ability to negotiate the terms of their charges directly with the Corporation. This helps ensure economic efficiency, appropriate allocation of cost and risk, as well as allowing for innovation and commercial opportunities.

These benefits extend to the customers, the Corporation, other customers of the scheme and the state as a whole. The Corporation believes that this arrangement should continue to be made available for major customers.

Reticulated Works

One of the few consistencies in developer contributions across the various Australian states is that developers are responsible for the provision of local reticulation works. This is largely driven by the logistical requirement of having one party responsible for co-ordinating all

development specific infrastructure. It also partly delivers economic efficiency by ensuring developers are completely responsible for the specific locational infrastructure.

The Corporation considers that this requirement should continue.

Single Residential Equivalents and Meter Based Charges

Different customers have different service requirements. Any charge needs to retain the current flexibility of a pay-per-service arrangements. The notion of the Single Residential Equivalent (SRE) as a base for calculating service demands for a typical urban residence is a useful starting position. Changes to the service capacity required (for example, for commercial customers, multi-residential lots etc) should be coupled with commensurate changes in the standard charge. Meter based charges are a good mechanism for achieving this are they are easily measured and provide a maximum flow capacity that can be compared against that of a typical residential household

Simplicity

The principles discussed in the Issues Paper exclude reference to simplicity of calculation. Yet simplicity offers many benefits both in terms of its acceptance by the industry, offers a greater ability to be understood, aids delivery of intended benefits and administrative advantages (including cost savings) to all parties, particularly the utility. These benefits should not be underestimated.

4.2 Uniform Charges

In this context, a uniform charge refers to state-wide uniformity, where (in the absence of non-standard circumstances) customers are charged the same up-front cost for a single residential equivalent service.

Uniform charges have a number of advantages:

i) Encourage regional development, or put more accurately, it does not present a barrier to regional development provided the cost of expanding a scheme is reasonable by comparison to the cost of the existing scheme.

   Regional schemes are typically more expensive (on a per lot basis) to developer due in part to the diseconomies of scale. Any move away from uniform charges is likely to result in an increase in the developer charge in most regional schemes. This could adversely impact the Government's policy of encouraging regional development.

ii) Certainty for developers over the cost of water, wastewater and drainage services.

iii) Equity – in so far as 'equity' may be defined as paying the same price for the same minimum level of service;

iv) Administrative simplicity. One charge applied state-wide is significantly easier to calculate and administer than a separate charge for each of the 230+ water schemes and 110+ wastewater schemes. Furthermore, scheme based charges offer administrative advantages over individual, development specific charges.

   Section 2.4 of the Issues Paper discusses the general principles that could be applied to developer charges. These principles appear to have excluded any reference to the administrative burden of alternative calculations. Yet the administrative requirements of alternative methods may be significant (especially in instances where projections are based on future asset requirements) and needs to be weighed up against the supposed net benefits of that alternative.
   The approach endorsed by the ESC in Victoria may demonstrate this issue of administrative burden. In this instance, to date – every developer charge has defaulted to a standard $500 charge, partly due to the difficulties that arise with an approach that requires complex scheme specific calculations based on future asset requirements.

While the above summarises the advantages of uniform charges, it is acknowledged that the major disadvantage is that scheme specific locational signals can be distorted. However, the extent to which this has a significant impact needs to be appreciated in the context of when standard headworks charges apply (discussed above). Efficiency (as it relates to a pricing signal)

is only really distorted by uniform charges when you have sequential development in an existing scheme and the marginal cost of that development:

- is greater than the SHC; and
- does not result in an increase of more than 15% to the average cost of that scheme.

In this circumstance, the loss in pricing efficiency which might result needs to be weighed against the benefits detailed above.

Finally, it is stated on page 24 of the Issues Paper, that uniform charges means it is not possible to determine whether cross subsidies exist. The Corporation notes that total revenue requirements are determined at a scheme specific level and due to the manner in which the Community Service Obligation (CSO) is calculated, no customer subsidises the cost of another scheme. Different schemes may receive a different level of Government subsidy, but this does not amount to cross subsidisation.

4.2.1 Uniform Pricing Policy

The ERA have chosen to interpret the uniform pricing policy as *"a policy that provides all households in WA irrespective of where they are located with access to an amount of water for their basic needs at an affordable price"*.

It is unclear whether the ERA intends to extend its interpretation to headworks, at least in so far as they apply to residential properties. The Government's position should be explicitly sought to clarify the interpretation of the policy as it applies to developer charges.

4.3 Asset Base

The SHC is currently determined by using 40% of the modern equivalent asset value of all headworks assets. The driver for using 40% no longer exists and therefore 40% of the total asset base may no longer be the appropriate basis for calculating developer charges. When considering the alternatives, the Corporation considered whether the SHC should be based on existing assets or future commitments, as well as considering which assets to include in the asset base.

❖ *Forward Looking Asset Requirements or Existing Asset*

The issues paper notes that different regulators have adopted various approaches when calculating developer contributions. The focus of the ESC is on forward looking expenditure while IPART uses a combination of both existing and future assets. OfWat (the UK water regulator) also uses a combination, however their standard headwork charge (known as the Infrastructure Charge) is based on the cost of existing assets.

When considering the use of future assets, the Corporation confronted the following issues:

i) Future (or marginal) costs would deliver the most efficient price signal for a new scheme. That is, if economic efficiency was the primary objective, then developer charges would need to encompass some proportion of the scheme's marginal cost.

ii) Availability of reliable information.

Existing assets are known, the actual expenditure and values are certain with the Corporation's information system are able to track and assign these to schemes with relative accuracy. Future predictions however, are less certain.

The Corporation's capital program can be fairly confident in its one year forecast, and can even provide a reasonable prediction of the 5 year position however, estimates beyond that can rarely be considered accurate, especially when trying to break the program down to an individual scheme level.

Climate conditions are uncertain, economic prosperity and growth fluctuate, environmental regulations are evolving constantly and social/political pressures are in a constant state of flux.

Calculating charges based on uncertainty presents a risk of under or over charging, may create a significant administrative cost burden and creates expectations within the community of service commitments which may not eventuate for reasons beyond the Corporation's control. The issue of uncertainty is not limited to the Water Corporation – other agencies (for example, the Department for Planning and

Infrastructure), land developers and local governments all need to have completed their scheme development plans (accurately) prior to formulating a reliable forecast of future infrastructure requirements.

The North West Corridor (NWC) SDCA charge for the development of Perth's north west provides a useful case study demonstration of the difficulties associated with charges based on forecast expenditure. Details are available should the ERA wish to review them, but as a summary, a NWC-SDCA charge was calculated based on the planning estimates of the infrastructure required to meet the accelerated development of this region. Actual development and asset construction varied significantly from the initial planning estimates which raised the question of whether it was equitable to charge developers for assets that weren't actually constructed to service them. The NWC-SDCA charges have now ceased.

iii) Future capital expenditure may be significant, especially when the assets are built with excess capacity for future customers. This excess capacity is often constructed in significant step changes as part of an efficient delivery of the capital program.

If (for example) the initial development of Perth's far northern suburbs necessitates the construction of a treatment plant and large distribution infrastructure, should that entire cost be assigned to those initial lots? Clearly, this is not a desired outcome due to the significant financial burden this would create. A more equitable outcome would be to apportion the cost of the new assets over all the customers that they will ultimately serve. Taking this point to its conclusion, this would suggest that new customers should also partly pay for the cost of existing assets that have been put in with future customers in mind.

New customers in an existing scheme not only necessitate the development of new infrastructure, but are usually connected to a large integrated scheme using existing assets that would have included excess capacity for future expansion.

iv) Technical, social and environmental standards are constantly changing. The effect of increased regulation usually means the cost of new construction is significantly higher than the cost of previous equivalents. If new customers necessitate an upgrade to a scheme, and that scheme results in significant expenditure because of new regulatory standards, should all of that cost be paid for by those new customers? This is a very real issue, particularly for country wastewater schemes.

As the Corporation considers the relative strengths and weaknesses of charges based on future (or marginal) costs, it seems that the benefit of efficient price signals carries with it the burden of a number of logistical difficulties. In the interests of equity, it is only appropriate that new customers contribute to the cost of existing assets that have been

constructed with future customers in mind. Furthermore, the availability of reliable information (and the administrative costs of generating this information) is a significant issue in the face of uncertainties inherent in future predictions.

❖ *Asset Types*

The Corporation's lines of business have (for the purposes of this discussion) been split into the following asset categories:

Water	Source assets (dams, bores, desalination plants) Treatment plants Distribution mains Intermediate distribution pipe work Reticulated works Pump stations and intermediate storage
Wastewater	Sewer mains Intermediate distribution pipe work Reticulated works Pump stations and intermittent storage Wastewater treatment plants Treated wastewater disposal
Drainage	Main Drains Branch Drains Pump stations Compensating Basins

In all instances, it is assumed that reticulated works are constructed by developers and therefore are excluded when determining any charges, be they developer contributions or annual charges.

Water: Future water sources and upgrades to major distribution infrastructure (trunk mains, transfer mains) form the basis of the water usage charge. Accordingly, it is appropriate that these assets are excluded from the standard headworks calculation. Some treatment plants (to the extent that they are connected to the source assets) are also included in the water usage charge. For the sake of simplicity it may then be appropriate to exclude all treatment plants.

The remaining assets – distribution pipes, pump stations and intermediate storages – collectively form the distribution networks. Unlike water sources, distribution networks are typically sized for ultimate capacity and are therefore upgraded far less frequently. Including the distribution network in

the developer charge sends an upfront signal to an informed customer (the developer) of the cost of servicing a lot. This cost of distribution extends beyond the smaller distribution assets, as should include larger assets sized to service future growth.

Wastewater: With the exception of commercial customers, annual wastewater charges are a GRV based annual service charge. The reason for this is that wastewater customers typically do not (or cannot) respond to consumption pricing signals – with customer impact, social policies and revenue sufficiency being the predominant pricing considerations.

Accordingly, if charges are not used to provide a locational signal then streams from both developer charges and annual rates are merely required to recover the total cost of providing the service. There is no one right answer as to which wastewater assets to include (or exclude) from developer charges. Developer revenue could theoretically be based on all assets, and hence 100% of the asset cost is recovered upfront. Likewise, the entire amount could be recovered in annual fees.

However, as some commercial customers do pay a volumetric charge and for the sake of consistency with water charges, it is recommended that the developer charge is also based on 100% of the distribution assets.

Drainage: Annual drainage charges are based on land use and a property's GRV. In many instances, the residential drainage charge is fixed at the minimum charge.

Again, as with wastewater charges – there may be no one correct answer as to what amount should be recovered upfront.

The current focus of the drainage system is to manage water quantity. The infrastructure is essentially all conveyance assets. Therefore, unlike water and wastewater, it is probably not appropriate that 100% of the distribution assets are used in determining headwork charges as this would effectively mean the entire cost is recovered upfront.

If the focus of drainage infrastructure changes to also target water quality, then this may necessitate a change to the method of calculating both drainage headwork contributions and annual charges. These potential changes are currently being considered by the State, led by the Department of Water.

4.4 Water Sensitive Urban Design

As the State encourages the sustainable development of land and the sustainable construction of houses, an emerging trend is for both developers and water utilities to consider providing a range of service options which fall under the collective title of Water Sensitive Urban Design (WSUD). Examples of this include:

- Providing fit-for-purpose water supply
- Wastewater and/or stormwater reuse systems
- Improvement in drainage water quality

With many of the potential initiatives, the cost is borne by the land developer (or individual constructing the house) and in some instances, results in savings to the utility. Under the current charging structure, the Corporation passes on water cost savings back to the property's occupant in the form of lower usage charges but does not currently have a mechanism for passing on savings in the water distribution, wastewater or stormwater systems. Where developer initiatives result in savings to the Corporation – it may be appropriate that these savings are passed back to developers as a reduction to the SHC.

The Corporation proposes developing a system to allow WSUD to be appropriately reflected in developer contributions, and encourages the ERA to consider this evolving State issue as part of the developer contribution inquiry. In doing so, a number of issues are raised which may require consideration:

i) Whether developer charges are an appropriate mechanism for encouraging water sensitive design and if so, in what circumstances? In some situations it may be more appropriate that regulation or a rebate scheme is a better mechanism.

ii) On what basis should the reduction be calculated?

iii) If it is considered that altering developer charges to encourage WSUD is appropriate, should the SHC be sufficiently large in order to be able to provide savings significant enough to encourage such initiatives?

iv) To what extent should externalities be factored into any change to the SHC? These may be either positive or negative externalities – for example, environmental benefits or changes in public amenity.

5 Possible Changes to Developer Charges

The current developer contribution arrangements have many attributes which the Corporation believes should be maintained under any proposed alternative. The current structure is well understood, widely accepted and relatively simple to administer. Collectively, the combined use of SHC, non-standard charges, annual service and annual water use charges meet the objectives of equity and economic efficiency whilst still supporting the Government's broader social and environmental policies.

However, in considering the principles raised in this submission and the Issues Paper, there are several areas under the current structure that could be considered further:

i) The introduction of **minor works cost sharing**;

ii) Modify the **basis of the SHC so that it is no longer based on 40% of the total cost of all existing assets;**

iii) Charging **country lots greater than 1 hectare** under the uniform meter based SHC structure rather than separately calculating the charges using the net present value approach;

Currently, country services for lots greater than 1 hectare based on the present value of the marginal costs associated with the development. This was introduced because it was thought that large country lots placed a significant cost imposition on the Water Corporation for the additional pipe work required. However, in practice the majority of the additional piping required is the reticulated works which are provided by developers. The marginal cost impact to the Corporation is minimal.

Accordingly, lots greater than 1 hectare pay the full cost of providing the service. Smaller lots which may still cost the same to service are provided at the SHC which in country regions is usually subsidised. This disparity between small and large lots should be removed.

iv) Introduce the potential for charges to be adjusted to **encourage the development of water sensitive urban design.**

This submission has already dealt with items (iii) and (iv) adequately. Further discussion on minor works cost sharing and modifying the basis of standard headworks charges is still required.

5.1 Minor Works Cost Sharing

The Corporation proposes to introduce a new policy to respond to regular complaints when water or sewerage reticulation is extended, either to service subdivisions or simply to connect properties. This policy will be known as the *"minor works cost sharing"* policy.

Background

Under current land servicing policies, initial subdividers pay the full cost of a reticulation extension plus service connection charges and headworks contribution in respect of their lots serviced. The Corporation will, however, offer a certain amount of joint funding equal to ten year's equivalent of annual rates for all other properties able to be serviced from the reticulation extension. Other properties fronting the extension can then connect at a later stage, without contributing to the cost of the reticulation extension. This gives other subdividers an unfair advantage. In addition, there could be instances where reticulation costs are higher than normal because pipes are upsized or sewers installed deeper than required, to cater for all future developments in the area.

Proposed system

The land development industry, through UDAC, and the Corporation have agreed on a proposed standard charge approach for sharing the cost of minor works. The main advantages foreseen are the new system would be simpler, allows for self assessment, and addresses equity issues promptly, although not precisely.

A fund would be created, administered by the Corporation, into which monies from a standard charge levied on all developments would be paid. Refunds would be paid to initial developers refunding a portion of their actual cost of reticulation extension. The key cost components refunded would be:

- A portion of the actual cost of connecting to the existing scheme,
- A full refund of the cost of upsizing pipes,
- An allowance for restoration costs,
- An allowance for upgrading existing reticulation,
- A full refund of cost of deeper sewers in normal conditions, and
- A portion of temporary works, built in lieu of minor works.

Principles applied

- Costs should be shared between those who provide the reticulation extension and those who benefit.
- The method used to measure incremental changes in service demand for headworks will also apply for incremental changes to service demand for minor works.
- Those that benefit from minor works benefactors contribute when they connect.
- All services that potentially increase the demand on Corporation's infrastructure will be assessed for a contribution towards infrastructure costs

Implementation issues

The main impediment to implementing *minor works cost sharing* is that changes to existing legislation are needed to allow the Corporation to raise charges for potential services.

Policy Benefits

For the **Development Industry,** the policy will:

(i) Equitably distribute the cost of minor works amongst all those who benefit.

(ii) Reduce development risk by increasing reimbursement rates for the higher cost minor works items.

(iii) For larger developments, improve cash flow due to the reimbursement of some of the initial minor works costs needed to service a new development area.

(iv) Reduces complexities associated with infill developments where upgrading of reticulation is needed.

(v) Better facilitates redevelopment projects where upgrading of existing mains is needed.

(vi) Allows smaller developments to compete more effectively with larger developments.

For the **Corporation,** the policy will:

(i) Remove the existing mains extension subsidy.

(ii) Allows for more effective and better streamlined minor works policies and procedures.

5.2 Calculating SHC Charges

The Corporation considers that using the entire asset base for the calculation of developer charges may no longer be appropriate, especially for water charges. Furthermore, the basing charges on 40% of the total asset base should also be reconsidered. The Corporation proposes two options for determining standard developer charges:

- Option 1: A **state-wide SHC** for water and wastewater services based on 100% of the existing cost of the state-wide distribution assets;

- Option 2: A **scheme based standard charge** also calculated using 100% of the existing cost of the scheme's distribution assets for water and wastewater services.

The Corporation's preference is for Option 1 which essentially retains the nature of the existing developer contribution policies, while refining the method of calculation.

The proposals build on nearly 30 years of sound policy development. The Corporation strongly advocates the retention of the existing arrangements between the combined use of standard charges for "normal" development and non-standard charges for exceptional circumstances. There would be significant administrative and contractual implications for any proposal which seeks to unravel the complex policy arrangements for non-standard charges that have developed over the years.

In arriving at the final options, the following summarises the Corporation's thinking as to which asset base to use:

The Corporation proposes an alternative charge based on 100% of the modern equivalent value of the existing distribution assets for water and wastewater services as (over time) the expansion of the distribution infrastructure is an upfront cost that is directly linked to the added demand caused by new lot development. The use of distribution assets also allows the potential to vary the charge to reflect locational costs, presented as Option 2.

Drainage services are essentially all distribution assets. If 100% of the cost of distribution assets was used in the SHC, land developers would pay the entire cost upfront. In consideration of this impact to them, the Corporation recommends that the existing proportion of 40% remains. Change may be warranted if drainage services start focusing more on improving drainage water quality.

Economic regulators have typically argued that for a developer to be made aware of the cost of their actions – then the focus needs to be on the future costs caused by those actions. However, as discussed in Section 4.3, any charge based on future cost estimates is problematic. The availability, accuracy and reliability of that information may be difficult

to ascertain. This is especially the case for country schemes. Existing costs however, are known. Using existing assets may weaken the forward looking pricing signal. However, due to the information constraints existing assets represent the next best proxy for forward looking asset costs – particularly in the case of distribution assets which tend to be relatively modular in nature.

The reduced availability of water sources and increasing regulatory requirements means developing new water sources, water treatment, wastewater treatment and wastewater disposal costs typically increase over time. However, distribution assets comprising of pipes, pump stations and intermediate storages do not usually vary as significantly over time. The modern equivalent value of existing assets is the best available approximation for the cost of future distribution infrastructure.

Using the entire asset base (either of a scheme or of the state) also means that the burden of step changes from large capacity investments is not borne by the developer who is first to develop near the time that the upgrade is required. Charges are therefore based on the average cost of development.

5.2.2 Options for Standard Headworks Charges

The Corporation has proposed two options for determining standard charges, with its preference for a state-wide uniform charge (Option 1). The decision however, ultimately rests with the State Government who has previously supported uniform developer charges state-wide.

The following articulates key issues with each alternative:

- **State-wide Standard Charge**

Under a state-wide uniform charge, the calculation would be based on 100% of the modern equivalent cost of total state-wide existing distribution assets divided by the total state-wide number of single residential units.

Cost reflective pricing for any specific development is reduced when a charge is based on the average state-wide costs. This loss of economic efficiency needs to be considered against:

- The Government's regional development objectives which appear to be reluctant to disadvantage those schemes where the cost of development is high. In essence, under a state-wide charge, the subsidies that have historically been allowed for high cost schemes continue.
- The advantages of the current SHC of certainty, simplicity, administrative ease and transparency.
- Cost reflectivity is still maintained when non-standard charges apply.

The Corporation has estimated the water and wastewater SHC under this alternative to be:

- **Water:** A range in the state-wide SHC between $2,700 and $4,800 per SRE. This range is due to difficulties in determining a definitive cut-off between source assets and distribution assets in country schemes. The lower end of the range assumes all trunk, supply and distribution mains are excluded from the calculation despite the fact that some country customers are connected directly to these assets. Refining the definition of distribution assets as it applies to country schemes requires further consideration.

- **Wastewater:** A state-wide SHC of $2,400 per SRE.

Depending on the definition adopted for country water assets, total revenue from developer contributions generated under this method will be equal to or higher than existing developer contributions. Therefore a change to this option for standard charges will not adversely impact annual customer charges.

o **Scheme Based Standard Charge**

An alternative to a state-wide SHC is to calculate a standard charge on a scheme by scheme basis.

Again, the Corporation proposes that any scheme based charge would be calculated using 100% of the modern equivalent cost of a scheme's existing distribution assets, divided by the number of SRE's in the scheme. It is also proposed that the entire metropolitan region is treated as one scheme.

Although charges under this approach will reflect the average cost of scheme development, this comes with an added administrative burden on the Corporation and less certainty for developers. For these reasons it is suggested that any scheme based standard charge is calculated at a minimum of every 5 years.

Furthermore, and most significantly – as has previously been discussed, a scheme based charge may present a significant barrier to development in high cost schemes that have a low return on land. This will disadvantage a number of country schemes.

Scheme based charges have been estimated as:

- Water: Metropolitan charge: $2,400 per SRE

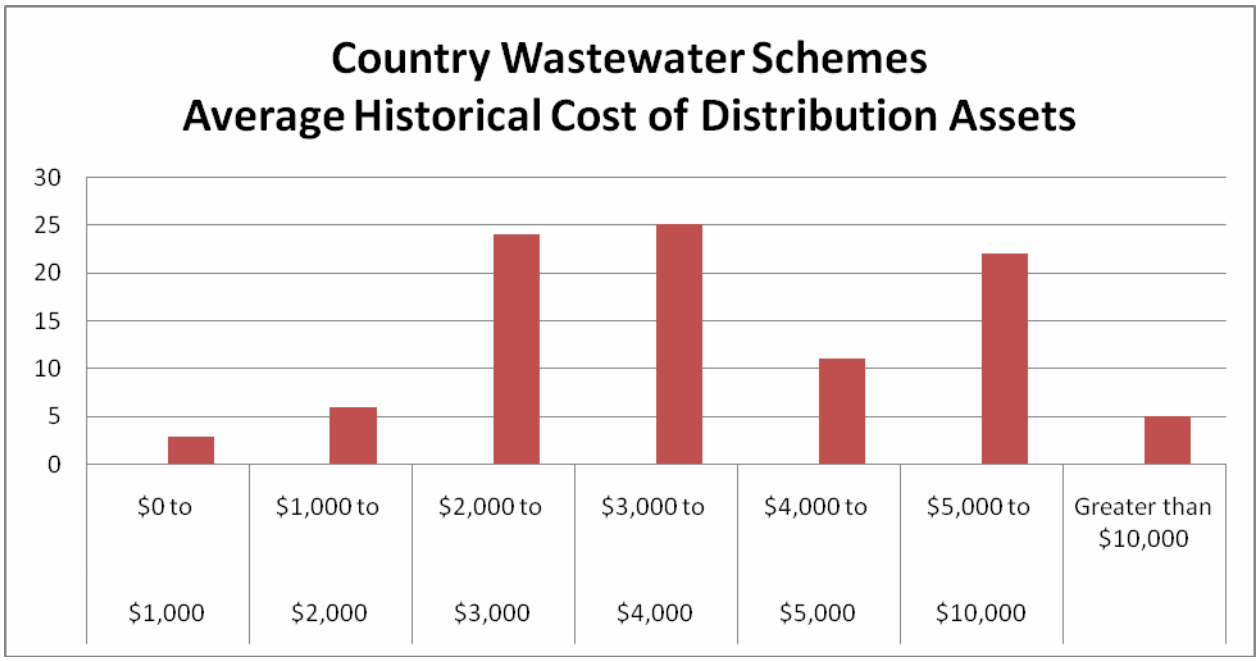
  Average Country scheme charge: ranges between $3,300 and $10,900 per SRE. As noted with the state-wide SHC, the range in the average country charge reflects the issue of determining which assets are considered source assets and which are distribution assets.

  While the above figures represent the average country scheme costs, the range between schemes is significant. There are several schemes whose distribution assets cost less than $1,000 per SRE yet more than twenty schemes cost over $50,000 per SRE to service.

- Wastewater: Metropolitan charge: $2,400 per SRE

  Average country scheme charge: $2,500 per SRE

  Again, while the distribution assets for the average country wastewater scheme cost $2,500 per SRE, the range between the schemes is significant. While this variation is not as pronounced as with water services, it is demonstrated in the graph below:



Some scheme costs are very high. It is almost certain that charging the full cost of the distribution assets will prevent the development of some country schemes. Should the ERA recommend a scheme specific charge, a cap to the total developer charge should be considered. There may be several options for determining this cap, which will need to address issues of:

(i) Whether it is appropriate to apply a cap in all circumstances?

(ii) On what bases should the cap be calculated – for example, should it be a fixed amount, or based (for example) on the value of the service to the land being developed? This therefore, may mean a different cap applies to high valued land.

(iii) Whether the cap applies at the discretion of the Minister, such that the State determines the cap based on specific regional development objectives?

A price cap will partly negate the main objective of setting a scheme based charge: to provide a locational signal. The cap essentially represents a compromise between the desire for cost reflective prices and consideration of the impact on development in high cost schemes.

Under a scheme specific charge, consideration could also be given to variations where forward looking costs are known to be much higher or lower than the existing average. For example, the charge may be reduced where schemes have significant existing capacity in the distribution system. This discount would need to consider the total capacity (where applicable) for interconnected schemes and equity issues between developers where a scheme's situation changes. Defining appropriate triggers for variations may be problematic.

- **Common Elements of Both Options**

Common to both options for either a state-wide SHC or a scheme wide standard charge, it is proposed that:

(i) The suite of Land Servicing Policies that pertain to the standard and non-standard charges would remain as undisturbed as possible, with the addition of:

- Introducing minor works cost sharing once the appropriate legislative impediments are removed;
- Abolishing the non-standard exception for country lots greater than 1 hectare.

(ii) Retention of the existing institutional arrangements for setting and reviewing headwork charges. That is, the standard headwork charge(s) to be determined by the Water Corporation with the collaborative involvement of UDAC. It may also be appropriate that an independent regulator (possibly the ERA) conduct an independent review of the results.

(iii) Periodic review of the SHC (s) every 3 – 5 years with quarterly indexation for the intervening years.

(iv) Provision of reticulated works to continue to be provided by developers

(v) Retention of the current definition of an SRE and for charges to vary from this standardised unit based on meter size.

6 Governance Models

The process of Corporate Governance in operation at the Corporation includes the full set of responsibilities and practices exercised by the Board and Executive with the objective of providing strategic direction, ascertaining that all risks are managed appropriately, ensuring that objectives are achieved and verifying that the Corporation's resources are used responsibly.

These responsibilities and practices include both internal and external resources, and can be demonstrated in the role and responsibilities exercised by the Urban Development Advisory Committee (UDAC) in relation to the Corporation's Developer Contributions system. In particular, UDAC fulfils the responsibilities to provide:

- External representative input to review policies, processes, standards, practices and Corporation performance particularly where these impact on land development activities state-wide
- Advice on improving processes associated with the Corporation's involvement in land development activity and
- Advice on performance indicators the Corporation should adopt and how the development industry could be better served by the Corporation.

To date, the governance role exercised by UDAC has been highly successful as confirmed by regular independent polling of members of the land development industry (currently carried out by Synovate).

A major reason put forward by proponents of a formal external regulatory environment is to ensure equity and efficiency in the provision of service infrastructure. The Corporation's "Triennial Review" conducted to review the process of setting future developer contribution charges, under the oversight of UDAC has satisfied this need for independent external input.

The Corporation proposes to retain the current active role for UDAC, as the blend of industry representatives has successfully resulted in a robust body which has met the expectations of the Corporation and the land development industry to date.

Should the Government deem it necessary, there could also be a role for an independent review of the pricing setting process which oversees the Water Corporation's current arrangements with UDAC. This external oversight may be undertaken by an organisation such as the ERA. In this instance, the current arrangements with UDAC may need to be revisited to ensure no inefficient duplication of effort occurs.

Appendix 1 – Summary of Issues for Consideration

The following pages specifically address the issues raised by the ERA in their Issues Paper, including references to areas in the Water Corporation's submission where these issues are considered.

The issues raised by the ERA are in italics, with the Corporation's response in normal font.

Principles for Setting Developer Charges

To what extent should each of the principles discussed in this chapter be applied to the process of setting developer charges to government businesses in WA?

Sections 3, 4 and 5 of this submission extensively discuss the various principles and how they might apply to developer contributions. As a summary, the various principles of efficiency and equity can be achieved through a combination of standard headwork charges (state-wide or scheme based), non-standard headwork charges, annual rates and annual water usage charges. No one charge achieves all objectives, with different charges required depending on the specific circumstances.

For the purposes of completeness, the principles raised in the issues paper have been briefly addressed here.

EFFICIENCY

- *The need for the infrastructure should be necessary and clearly demonstrated.*

  The Corporation Capital Investment Program (CIP) is developed through a rigorous internal process with the need clearly addressed. Changes to the capital program require the approval of the Department of Treasury & Finance and the Economic Review Committee and are reviewed in the ERAs price inquiry process.

- *Decision makers should only pay for costs that are directly attributed to their actions.*

  This principle needs to be viewed in the context of the integrated nature of the water Corporation's services. An important practical aspect of this principle is to be able to clearly identify those costs that are related to a developer's decision, and balance the cost of getting this information against the benefits that may result.

- *Developers should be permitted to progress out-of-sequence developments if they are prepared to take the risk.*

  The Water Corporation agrees with this principle. In these situations, Special Development Contribution Area or Prefunding Policy arrangements are available to ensure the equitable transference of cost and risk.

- *Total revenue from developer charges, service charges and usage charges should be no greater than the efficient cost of providing the service.*

  Water Corporation agrees with this principle and meets this objective through the annual pricing and budgeting process. The ERA provides and independent review of this process.

- *Provision of Location Signals?*

  Non-standard developer charges typically provide location signals in circumstances where it is considered appropriate. In all other instances, SHC apply. These do not currently provide a location signal, but do recognise other principles of equity, certainty, revenue sufficiency, simplicity and contributes to meeting Government's broader social objectives.

EQUITY

- *Is a "uniform developer charge as applied by the Water Corporation consistent with the Government's Uniform Tariff Policy?*

  As custodians of the "policy", this is a question that only the Government can answer. The Government has demonstrated its application of this policy by developing policy consistent with uniformity for standard headwork charges in addition to uniform charges for residential water consumption below 300 kL, non-residential water service charges and non-residential wastewater charges.

- *Does the developer charge result in a fair allocation of shared costs, as between new and existing customers?*

  The Corporation is mindful of the customer impact of their charges with the current approach resulting in charges that are (generally) acceptable to all parties.

  Review of other developer charges (both interstate and across different utilities) has indicated that there may be no "right" answer as to what is fair in allocating costs between existing and new customers. This is a value based judgement.

- *What steps would be implemented to mitigate any impacts of pricing reforms on low income customers?*

  Water Corporation regards a transition period in implementing any change to be an essential element in any planned change. As to 'what is a reasonable time period' is dependent on the degree of impact.

  The current triennial review with quarterly indexing has proved a successful approach of transitioning the cost of new construction onto the developer charges.

- *What level of Public Consultation has been undertaken in setting developer charges?*

  Water Corporation, since mid 1994, has worked closely with the Urban Development Advisory Committee (UDAC) to receive land development industry input to reviews of policies, processes and practices. UDAC involvement is particularly important in undertaking the Triennial Review of developer charges.

- *Does independent scrutiny take place regarding the principles applied to setting developer charges and the methods used in calculating these charges?*

  Refer discussion on page 43 (below).

- *Does an Appeals mechanism exist to facilitate appeals on the amounts charged for developer charges or their coverage?*

  Refer discussion on page 43 (below).

- *Is the Water Corporation accountable for how money raised from developers is spent?*

  The Corporation is accountable to the Government for its financial performance, particularly the Department of Treasury and Finance and the Minister for Water Resources. While there may be no specific nexus between a developer contribution and the cost of assets servicing that new development, there is an overall accountability for the total revenue and the total cost for providing the service.

  Furthermore, the current developer contribution arrangement means that when a developer pays a contribution, the Corporation is obligated to provide them with a future service.

Are there other principles that should influence the setting of developer charges?

In addition to the principles raised the Issues Paper, the Corporation considers the following to be important:

(i) Customer impact – this includes the impact to developers as well as the impact to existing customer's annual rates and fees.

(ii) Extent to which charges are able to send intended price signals. This includes customer responsiveness and ability to pay.

(iii) Sustainability – under the Terms of Reference, when determining developer charges due regard should be had for the Government's social, environmental and economic policy. The extent to which charges encourage water sensitive urban design should therefore be considered.

(iv) Simplicity of the calculation for determining developer charges. Simplicity aids transparency, acceptance and may reduce administrative burden.

(v) Administrative burden: the administrative costs of alternative arrangements need to be weighed against the intended benefits that change may bring. This burden may extend beyond the impact on the developer or the Corporation (for example, local government, Department of Planning & Infrastructure) and may be significant if focusing on future costs or scheme specific calculations.

Headworks Charges

Should headworks charges more closely reflect the cost of providing water, wastewater and drainage services to new developments?

There are many principles to be considered when setting developer charges – cost reflectivity is one of them. Revenue sufficiency, intergenerational equity, customer impact, impact on developers and the Government's broader social and environmental policies are additional considerations.

The current arrangements for standard and non-standard charges, in conjunction with the annual rates and fees seek to balance these various objectives including (where appropriate) cost reflectivity.

If cost reflectivity was considered the primary objective, this may require significant increases to the developer charges for a number of country schemes. In consideration for the Government's regional development objectives, the Corporation would encourage the implementation of a cap for high cost country schemes.

Finally, the Corporation note that the Issues Paper discusses a number of alternative calculations for developer charges that have been endorsed by the various economic regulators across the water, electricity and gas industries both in Australia and overseas. That there are so many approaches is evidence to the fact that there may be no "right" answer to some situations. The various regulators have had to pass their own value judgements to such questions as:

- To what extent are costs of development recovered upfront or over time?
- To what extent are existing assets included?

Given that there may be no right or wrong answer to these questions, and given that the ERA will have to take its own position over where to draw the line, the Corporation hopes that the ERA clearly identify where those value judgements are made.

Should headworks charges cover any of the costs of major source infrastructure investments, particularly given that water usage prices (at least in the metropolitan area) are set in relation to long run marginal cost?

Refer section 4.3 of this submission for discussion on which assets to be included.

The Corporation's preferred position is summarised in section 5.2 as follows:

"The Corporation proposes an alternative charge based on 100% of the modern equivalent value of the distribution assets for water and wastewater services as (over time) the expansion of the distribution infrastructure is an upfront cost that is directly linked to the added demand caused by new lot development.

Drainage services are essentially all distribution assets. If 100% of the cost of distribution assets was used in the SHC, land developers would pay the entire cost upfront. In consideration of this impact to them, –, the Corporation recommends that the existing proportion of 40% remains."

Should headworks charges be set on the basis of forward looking costs or should they include sunk costs such as existing surplus capacity?

Refer section 4.3 of this submission for discussion on forward looking or existing assets.

The Corporation's preferred position is summarised in section 5.2 as follows:

"... any charge based on future cost estimates is problematic. The availability, accuracy and reliability of that information may be difficult to ascertain. This is especially the case for country schemes. Existing costs however, are known. Using existing assets may weaken the forward

looking pricing signal. However, due to the information constraints existing assets represent the next best proxy for forward looking asset costs – particularly in the case of distribution assets which tend to be relatively modular in nature.

The reduced availability of water sources and increasing regulatory requirements means developing new water sources, water treatment, wastewater treatment and wastewater disposal costs typically increase over time. However, distribution assets comprising of pipes, pump stations and intermediate storages do not usually vary as significantly over time. The modern equivalent value of existing assets is the best available approximation for the cost of future distribution infrastructure.

Using the entire asset base (either of a scheme or of the state) also means that the burden of step changes from large capacity investments is not borne by developers who are unfortunate enough to develop near the time that the upgrade is required. Charges are therefore based on the average cost of development."

Are the current review processes for headworks charges appropriate?

The current headwork charges have been developed over 30 years with the continual involvement and review of the development community, currently represented by the Urban Development Advisory Committee (UDAC).

In particular, UDAC fulfils the responsibilities to provide:

- External representative input to review policies, processes, standards, practices and Corporation performance particularly where these impact on land development activities state-wide
- Advice on improving processes associated with the Corporation's involvement in land development activity and
- Advice on performance indicators the Corporation should adopt and how the development industry could be better served by the Corporation.

To date, the governance role exercised by UDAC has been highly successful.

Are the appeals mechanisms for decisions on headworks charges adequate?

Currently, there is no appeals mechanism in WA for the Water Corporation's developer charges. Under the current governance model, the charges are set by the Corporation with the close involvement of UDAC.

There has been little call for an appeals mechanism as the blend of industry representatives (through UDAC) has successfully resulted in a robust body which has met the expectations of the Corporation and the land development industry to date.

Out of Sequence Developments

Do you support or have any concerns about the Corporation's policies for charging for frontal and out of sequence developments?

Currently, most developer charges are based on a Standard Headwork Contribution (SHC). SHC's are used as the default charging option. That is, unless a new development triggers the need for a non-standard charge, then SHCs apply. Typically, frontal developments are charged a SHC while non frontal developments are either pre-funded by developers or they attract a Special Development Contribution Area charge based on the incremental cost to the Corporation of accelerating the development front.

The use of both standard and non-standard charges means that in combination, the State receives the benefits of standard charges (for example, simplicity, equity, certainty) as well as the benefits of non-standard charges (for example, economic efficiency). Furthermore, allowance of out of sequence developments provides developers the opportunity for risk taking and innovation, provided they assume the financial responsibilities for that risk.

The Corporation supports the current arrangements for frontal and out of sequence developments.

Do you support the Corporation's proposal to introduce a minor works contribution policy, whereby developers are reimbursed at a later stage for the proportion of the main that will be used by future customers?

The main benefit of minor works cost sharing is that is will equitably distribute the cost of minor works amongst all those who benefit. In doing this however, there are some implementation issues (including changes to the legislation) that will need to be overcome.

See section 5.1 (page 29) for further discussion.

Major Customers

What are the advantages and disadvantages of the Corporation's approach to charging high volume customers in country areas?

The Corporation's approach is for high volume customers in country to pay the incremental costs. These charges are the minimum prices which can be charged without requiring a cross-subsidy from the Corporation's other customers or an increase in the CSO (Community Service Obligation).

Lower prices than incremental costs would not comply with the objectives of the COAG (Council of Australian Governments) water reform.

Section 3.3.3 discusses how from a public policy criteria charges to major consumers send efficient price signals which reflect variations in the costs of servicing different locations, maintains equity between similar customers and ensures fair, cost reflective charges from monopoly infrastructure and is applied consistently to all major customers in country areas.

What are the advantages and disadvantages of moving towards more cost reflective pricing for major customers?

The Water Corporation's charges for major mining and industrial customers are currently cost reflective (i.e. reflective of the incremental cost of supply).

Because of the costs (labour and time intensive) in preparing notional schemes, location specific major consumer charges are currently limited to the G&AWS and generally major mining centres.

The administrative cost of developing cost reflective charges can be substantial and must be considered in any move to toward a more cost-reflective pricing for state-wide major consumers.

Is 49 kL an appropriate threshold for the Corporation's Major Consumer Policy?

It is understood that the origin of the 49 kL per day threshold was in context of the G&AWS Main Conduit being able to supply this quantity without the need for major upgrades. However, the Major Consumers Policy does have discretion to deal with schemes (or pipeline extensions) where there is insufficient capacity to supply amounts less than 50 kL per day.

Typically, mining customers requiring up to 49 kL per day are small operations with a short mine life. There is a question as to whether these small operations could sustain the normal major consumer charges.

Is the notional cost approach which underpins the Corporation's Major Consumer Policy sufficiently flexible to deal with different projects?

Section 3.3.3 discusses how the notional cost methodology sends efficient price signals which reflect variations in the costs of servicing different locations, maintains equity between similar customers and ensures fair, cost reflective charges from monopoly infrastructure.

Some mining customers may assess the financial feasibility of their mine over a project life that is not more than 20 years and therefore may consider a 45-year agreement not appropriate for them. These customers are seeking to avoid making a long term commitment that matches the life of the infrastructure providing the service.

It should be noted that the customer has the opportunity to transfer or sell its water entitlement at any time to another major consumer at that location or to any other location on that scheme (subject to paying for any differential costs).

Appendix 2 – Glossary of Terms

CCI	- Capital Cost Index
The Corporation	- The Water Corporation
CSO	- Community Service Obligation
ERA	- Economic Regulation Authority
ESC	- Essential Services Commission
GRV	- Gross Rental Value
IPART	- The Independent Pricing and Regulatory Tribunal
IWSS	- Integrated Water Supply System
kL	- Kilolitre (1,000 litres)
MEAV	- Modern Equivalent Asset
NPV	- Net Present Value
SDCA	- Special Development Contribution Area
SHC	- Standard Headwork Contribution
SRE	- Single Residential Equivalent
UDAC	- Urban Development Advisory Committee
WSUD	- Water Sensitive Urban Design