

CWMS

Accounting

Principles

**The Costing and Pricing of
CWMS**

December 2016

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This document was prepared by David Hope, Principal Consultant, Skilmar Systems Pty Ltd with guidance and editing from John Comrie, JAC Comrie Pty Ltd and Richard Gayler, Principal Engineer, Gayler Professional Services

0. Purpose and Introduction

The purpose of this document is to provide guidance to staff and elected members who have, or will have, responsibility for planning, constructing, operating and maintaining community waste water management schemes (CWMS), with particular reference to the costing and charging regimes for such schemes.

CWMS schemes are now subject to a regulatory regime under the auspices of the Essential Services Commission of South Australia (ESCOSA) and it is important that Councils are familiar with the regulatory and reporting regime imposed by ESCOSA.

There are four main parts to the document:

- A broad 'how to' guide that steps through the process that needs to be followed to cost and price a CWMS.
- Accounting and Pricing Issues: This part provides guidance and pragmatic explanation of how the legislation, ESCOSA and other material is to be applied.
- Other Issues: This part provides guidance and pragmatic explanation on the application of non-legislated sound business principles.
- CWMS Framework – Legislative and Other: This part provides an outline of the relevant legislation, ESCOSA and other material that Councils should have knowledge of in relation to CWMS.

The four main parts of the document are supplemented by Appendices which provide access to relevant legislation, ESCOSA and other material.

1. How to Cost and Price a CWMS

1.1 An example of the application of CWMS Accounting Principles

1.1.1 Introduction

The following example (see next page) is based on a single year's revenue and expenses for simplicity. In reality, pricing decisions should be based on regularly reviewed estimates of full long-run (whole-of-life) costs as determined in accordance with ESCOSA guidelines and should have regard to future forecast CWMS outlays in a Council's long-term financial plan and infrastructure and asset management plan. (In considering the 'whole-of-life' costs this might encompass a time frame greater than ten years because of the long-lived nature of the assets and/or where the growth in the number of customers might give rise to consideration of the impact of growth on pipe, pumping station and lagoon capacities.)

1.1.2 Calculating the Cost of Capital

Note that the example has used the 'Legacy Date' for assessing the cost of capital. Councils are reminded that where they "... have appropriate records, or have a reasonable basis for estimating assets gifted from other spheres of government, either directly or through grants, or contributed by developers or third parties then that information should be used to ensure that the cost of capital applied to the CWMS is as fair and reasonable as possible."¹

1.1.3 Connection Fees and Developer Headworks Charges

CWMS schemes often charge developers and individual users a connection fee for the right to access the scheme. In the case of developers this is commonly called a developer headworks charge. The purpose of the connection fee is for the developer or individual to make a contribution to the cost of the scheme infrastructure.

In calculating the cost of capital developer headworks charges should be treated as a capital contribution, reducing the quantum on which the cost of capital is determined.² Note that in the Statement of Comprehensive Income connection fees need to be shown as Income in the category 'Grants, Subsidies and Contributions' as the income is not specifically for new or upgraded assets.³

There needs to be a defensible basis for calculating connection fees. It is likely to be based on the net present value of the earlier replacement of scheme assets, as a result of a greater number of users, offset by any expected 'net revenue' generated. (See Section 2.11)

¹ Local Government Association of South Australia (2015), *Costing Principles for Local Government*, p. 10

² See the discussion at the foot of page 19 of the LGA's *Costing Principles for Local Government*

³ Refer to the current set of Model Financial Statements published by the LGA

It may be difficult to justify a significant level of fee where the existing CWMS scheme is operating well below its capacity. In this case the fee would be restricted to a reasonable estimate of the cost of dealing with the application for connection.

DC Anytown - 20xx/xy Financials				
	Township A	Township B	Township C	Total
	<i>\$000's</i>	<i>\$000's</i>	<i>\$000's</i>	<i>\$000's</i>
Operating Revenue				
CWMS service charges	743	173	98	1,014
Interest received	50	1	-	51
Sale of treated water	26	-	-	26
Other income	-	-	-	-
<i>Total Operating Revenue</i>	819	174	98	1,091
Operating Expenses				
Contractual expenses	37	19	19	75
Plant, materials and maintenance	137	54	15	206
Infrastructure maintenance	87	23	26	136
Insurance	3	1	1	5
Depreciation	183	48	37	268
Other expenditure	4	2	2	8
Support costs allocated	37	18	18	73
<i>Total Operating Expenses</i>	488	165	118	771
Operating Surplus/(Deficit)	331	9	(20)	320
Cost of Capital				
Cost of capital - 4% real interest rate of Legacy Date assets - all subsequent assets contributed by developers	180	40	26	246
Cost of capital - 2% for unspecified and residual risk on WDV of all assets	130	42	27	199
Total Cost of Capital	310	82	53	445
Net Operating Surplus/(Deficit)	21	(73)	(73)	(125)
Connection fees	10		5	
Current WDV of infrastructure	5,971	2,005	1,337	9,313
Current value of Land	532	110	12	654
	6,503	2,115	1,349	9,967
Current WDV of infrastructure held at Legacy Date	4,074	974	650	5,698
Current Value of Land held at Legacy Date	420	18	10	448
	4,494	992	660	6,146
CWMS Reserve balance	2,743	72	(168)	2,647
No. of units serviced	1,920	457	257	2,634
Unit Charge				\$ 380
Average operating cost per unit (excluding cost of capital)	254.17	361.05	459.14	292.71
Average operating cost per unit, including cost of capital	415.53	540.44	666.85	461.72

Table 1 – DC Anytown Example – Calculating the Service Charge

The connection fee paid by individual property owners should be treated as a service charge as should any fee charged by Council to make the physical connection to the CWMS, i.e. plumbing the property to the scheme.

1.1.4 Allowance for Risk

The risks associated with wastewater and recycled water businesses are significant. Typical risks are:

- a. Unforeseen events that have not been covered by mitigation strategies (e.g. insurance);
- b. Residual risk assumed by the scheme from the CWMS risk management plan;
- c. Under/over achievement of growth targets;
- d. Under/over capitalisation in infrastructure;
- e. The potential impact of competition;
- f. Uncertainty about construction costs;
- g. Future demand for recycled water;
- h. Additional regulation and compliance costs;
- i. Asset valuations and asset lives; and
- j. Technical and commercial obsolescence.

Council is permitted to recover in its return on investment any allowance for risk where the cost of the risk has not been included in operating expenses. The most appropriate manner to recover such an allowance for risk is to apply a percentage to the current WDV of the total asset base.

It is difficult to prescribe what allowance should be made for risk. In the case of residual risk, if the scheme has been operating for some time there may be sufficient experience from the manifestation of residual risk to make a reasonable estimate of expected costs. For unforeseen events the calculation of an allowance for risk is more challenging and will need a level of judgement. Potentially, the assessment could be based on the likelihood of some event (say once every thirty years) and the magnitude of the impact (say affecting 25% of the asset base). Where a Council has a significant CWMS reserve, with the capacity to finance the recovery from an unforeseen event (and rebuild the reserve in future years), then this should be taken into consideration in establishing the allowance for risk, keeping in mind that the reserve is not necessarily backed by cash and that there may be some cost to council to rebuild the reserve.

It is considered that that the most likely range for an allowance for risk would be 0.5% to 2% of the current WDV of the total asset base. Schemes with low risk should have a low allowance for risk and schemes with higher risk should have a higher level of risk applied. Complexity of the scheme is an indicator of the level of risk. This allowance should be reviewed regularly.

1.1.5 Service Charge Setting

Provided that the single financial year information is typical of the long run revenue and cost structure then we see from the example that the current uniform service charge made across the three schemes (\$380) more than recovers the operating cost per unit of the scheme (\$293), ignoring the cost of capital. However, when the cost of capital (plus an allowance for unspecified risks) is included then the full cost per unit of the scheme is \$462 and the under recovery is \$82 per unit representing a deficit of \$216,000 on the full cost of the scheme.

It is assumed that ESCOSA would encourage DC Anytown to increase the service charge to cover the full cost of the service. DC Anytown may continue with its current charging regime with little impact on CWMS operations in the short to medium term. However, in the long run, it is likely to have insufficient cash reserves to finance asset renewal and will likely need to resort to borrowings for this purpose.

1.1.6 What's in the Reserve?

The balance in the reserve represents the accumulated surpluses and deficits of **cash flows** over the life of the scheme, as discussed in the section below entitled “Is a CWMS Reserve Account Necessary?”. It is not a representation of the accumulated surpluses and deficits of the scheme as it:

- includes cash inflows and outflows that are not revenues and expenses in accrual accounting terms – proceeds of borrowings, principal repayments, cost of infrastructure;
- includes cash outflows that are not treated as costs for ESCOSA purposes – interest expense; and
- excludes costs that are recognised by ESCOSA – cost of capital, allowance for risk.

1.1.7 Common versus individual scheme pricing issues

The three schemes of DC Anytown have a uniform service charge and it is clear from the net operating surplus/deficit of each of the three schemes that the larger the scheme the greater the opportunities to achieve economies of scale. If each scheme was required to ‘stand-alone’ then full cost recovery of the relevant costs of each scheme would result in service charges as follows (based on this single year):

Township A - \$416

Township B - \$541

Township C - \$667

Clearly, the service charges for Townships B and C, schemes with 457 and 257 units serviced respectively, are significantly greater than for Township A which services 1,920 units. This

reinforces the discussion in the main body of this paper of the equity issues relating to using a single service charge across multiple schemes in a Council area.

Note that Councils should have regard to the following LGA publications in costing and pricing CWMS schemes:

**“Costing Principles for Local Government – Guidelines for Council Staff”; and
“Guidelines for the Costing and Pricing of Retail Water Services Provided by South Australian Councils”**

1.2 The Framework for Costing and Pricing a CWMS Scheme

The following table sets out the issues to be considered in determining the full cost of a CWMS. The process is cyclical in nature although not every element of the process needs to receive detailed consideration in each cycle of the process.

While this document focuses largely on accounting issues it will involve wide-ranging participation from staff to provide information and the Council to provide policy guidance to ensure that the CWMS is properly costed and that the price charged ensures the long-run sustainability of the CWMS .

The left-hand side of the table sets out the steps in the process and the right-hand side provides comments on the processes and reference to material in this document and other sources of information.

<i>Step</i>	<i>Comments and references</i>
<p>1. Maintain a strategic focus using:</p> <ul style="list-style-type: none"> a. Strategic plan; b. Long-term financial plan; c. Infrastructure asset management plan; and d. Key performance indicators. 	<p>A CWMS is an essential service provided to the community on a long-term basis. The majority of the costs associated with a CWMS relate to the acquisition, maintenance and renewal of the scheme infrastructure. It is important to keep a focus on the long run through:</p> <ul style="list-style-type: none"> • The regular (annual) review of asset valuations and assumptions related to useful life, including issues relating to technological change and obsolescence. This is in accordance with accounting standards AASB 13 – Fair Value and AASB 116 – Property, Plant and Equipment. Additional information on the application of those accounting standards is included in the Model Financial Statements published by the LGA. • A careful analysis and assessment of the peaks and troughs associated with major maintenance and asset renewal. This is important to ensure that funding will be available to cater for maintenance and renewal peaks. See also Section 2.8 of this document.

	<ul style="list-style-type: none"> • The likely costs of expanding the scheme to new customers and the potential impact of new customers on economies of scale and future long-run costs to operate the scheme. This needs to be factored into strategic plans, the long term financial plan and the infrastructure asset management plan. • Any potential issues relating to the funding and financing of the CWMS. Financial Sustainability Information Paper No 15 – Treasury Management has a good discussion on these issues. • Expected long-run operating revenues and expenses including depreciation, cost of capital and cost of risk. These need to be factored into the long term financial plan. Sections 2.3 to 2.10 of this document provide guidance on these issues and this is further supplemented by Section 1.5 and Appendix 1 of ‘Costing Principles for Local Government’ published by the LGA. • The setting and monitoring of key performance indicators, both financial and non-financial is required by Section 122(1)(d) of the LG Act. While Financial Sustainability Information Paper No 9 – Financial Indicators sets out standard financial indicators that apply across whole of council the discussion in the paper may assist in formulating appropriate financial indicators for a CWMS as will Financial Sustainability Information Paper No 26 – Service Range and Levels in relation to non-financial performance indicators.
<p>2. Ensure there is an appropriate financial policy framework:</p> <ol style="list-style-type: none"> Treasury management; Financial sustainability; Asset management; Risk management; and Updating strategic plans, long-term financial plan and infrastructure asset management plan 	<p>Financial Sustainability Information Paper No 18 – Financial Policies and Procedures provides an overview of the need for financial policies and a listing of policies for consideration by Councils.</p> <p>Financial Sustainability Information Paper No 15 – Treasury Management provides guidance on issues to be considered in developing a treasury management policy.</p> <p>Financial Sustainability Information Paper No 1 – Financial Sustainability provides a broad history and outline of financial sustainability issues for local government.</p> <p>Financial Sustainability Information Paper No 6 – Infrastructure and Asset Management discusses a range of issues relating to infrastructure asset management, including the need for a policy framework in relation to the overall management of assets with reference to service levels. Note that Financial Sustainability Information Paper No 26 – Service Range and Levels will also be of use and any asset management policy needs to be consistent with any service level policy established by the Council. Further guidance is available from the three international standards on asset management – IOS 55000, ISO 55001 and ISO 55002.</p>

	<p>Financial Sustainability Information Paper No 22 – Understanding Risk Management provides guidance on the risk management process. In particular, it provides a clear explanation of the application of the Australian Standard on Risk Management AS/NZS ISO 31000.</p> <p>Section 122(4) of the LG Act requires the annual review of a Council’s long-term financial plan. Given the interrelated nature of the long-term financial plan and the infrastructure asset management plan, especially in relation to future operating, maintenance and renewal cost for the Council’s assets a Council should have a policy on the review of strategic management plans.</p>
<p>3. Ensure there are appropriate financial procedures in place:</p> <ol style="list-style-type: none"> a. Chart of accounts; b. Budget preparation, approval and amendment; and c. Management and financial reporting. 	<p>The chart of accounts is critical to ensuring the accurate collection, recording, aggregation and reporting of a Council’s costs and revenues. Section 2.1 of ‘Costing Principles for Local Government’ published by the LGA provide further guidance on the importance and principles for establishment of the chart of accounts. These principles provide guidance on the development of procedures relating to the establishment and maintenance of a comprehensive chart of accounts.</p> <p>The preparation, approval and amendment of budgets is a key activity of Council. Section 44 of the LG Act makes it clear that the adoption and amendment of the budget may not be delegated by Council (see also Financial Sustainability Information Paper No 25 – Monitoring Council Budget Performance). Council should have clear procedures and instructions on the development of budgets which ensure as far as possible, that budget proposals are robust, well scrutinised, consistent with the long-term financial plan and supported by appropriate documentation and evidence (see also Financial Sustainability Information Paper No 23 – Financial Governance).</p> <p>Management reporting is the provision of relevant financial information to Council, executive management, managers and team leaders which enables the effective and efficient management of Council resources. Financial reporting is the provision of statutory financial information as required by Australian Accounting standards. Management reports need to be timely and relevant. They should be provided so that decision-making based on the management reports can be undertaken in a timely manner. Relevant reports contain only the information that</p>

	<p>is relevant to the recipient (see also Financial Sustainability Information Paper No 23 – Financial Governance and Section 1.2 of ‘Costing Principles for Local Government’ published by the LGA). Statutory financial reports need to be accurate. Effective procedures need to be in place to facilitate the preparation of management and financial reports.</p>
<p>4. Ensure there are formal approval processes for CWMS plans, budgets and service charges in place.</p>	<p>A CWMS (whether a single scheme or multiple schemes in a Council area) is effectively a business unit of Council, however operated. The formal approval of Council’s budget will encompass CWMS. However, the emergence of a regulatory framework under the auspices of ESCOSA which requires the development by Council of a pricing schedule, a pricing policy statement and the reporting of those matters to ESCOSA and the prospect of the monitoring of prices charged for CWMS means that more scrutiny will be brought to bear on CWMS operations and it is important that formal approval of plans, budgets and service charges takes place based on accurate and relevant information provided by Council staff (see also Sections 2.10 and 4.2 of this document).</p> <p>See below for a discussion on setting the service charge.</p>
<p>5. Ensure there are appropriate monitoring and review procedures in place:</p> <ol style="list-style-type: none"> a. Analysis of variances; b. Budget review; c. Management and financial reporting; and d. Key performance indicators. 	<p>Formal procedures and timelines need to be developed that ensure that the regular monitoring and review of the range of information available to decision-makers in relation to CWMS occurs and that corrective action is taken wherever possible. Careful analysis needs to be made to identify whether variations to budgets, plans and key performance indicators are trends, timing or aberrations (see also Financial Sustainability Information Paper No 23 – Financial Governance).</p> <p>These procedures should include:</p> <ul style="list-style-type: none"> • the identification of the surplus or deficit on operations for the financial year, based on accrual accounting principles (and consistent with ESCOSA pricing principles) and the cumulative surplus/deficit of the CWMS; and • the cash balance of the CWMS reserve (if such reserve is maintained) at the end of each financial year. (Note: See Section 2.9 of this document). <p>Both of these balances may have implications for current and future pricing decisions and the cash available for asset renewal.</p>

Table 2 – Steps in the costing and pricing of a CWMS

1.3 Setting the Service Charge

The process for setting the service charge is not dissimilar to the rates setting process, with the constraint that the upper limit for the revenue from a service charge is the estimated full long-run average cost, on a whole of life basis, of providing the service. And just like the rates setting process there may be a need to phase in significant increases in the service charge to achieve full cost recovery over time (see **Section 2.1 of this document**).

Most of the information needed to calculate the service charge will be derived from the information about the CWMS that has been provided for the long-term financial plan (or for a CWMS long-term financial plan).

The service charge for a particular year should be set based on the medium to long run expected expenses and revenues with a view to ensuring that, over time, the full cost (whole-of-life) of the CWMS will be recovered and that where increases in the service charge are needed to recover the full cost that sharp increases will be avoided as far as possible.

1. In making the assessments and calculations discussed below it is important to:
 - a. Include the impact of additional customers;
 - b. Include the impact of likely new connection fees; and
 - c. Exclude the cost of expenditure on new infrastructure, but assess the impact of acquiring new assets on depreciation and cost of capital
2. Assess the likely expenses, with specific consideration of peaks and troughs of major maintenance costs, in the medium to long-term (see **Sections 2.3 to 2.5 of this document** and also **Appendix 1 of the LGA's 'Costing Guidelines for Local Government'**).
3. Calculate the cost of capital over the same time frame (see **Section 2.6 of this document** and **Section 1.5.4 of the LGA's 'Costing Guidelines for Local Government'**).
4. Calculate the cost of risk specifically for unspecified risks and residual risk over the same time frame (see **Section 1.1.4 of this document**).
5. Assess the requirements for capital renewal and upgrade over the same time frame – this information should be available from the infrastructure asset management plan.
6. Determine the extent to which capital renewal⁴ financing will be met from CWMS accumulated funds or grants and whether borrowings will be necessary. Note this will require an analysis of likely movements in the cash position of the CWMS reserve (if maintained) (see **Sections 2.7 to 2.9 of this document**).

⁴The term 'capital renewal' includes that portion of a capital upgrade that reflects the value of replacing the asset with the same or a similar asset without upgrading it. For example, if a 150cm pipe is being replaced with a 200cm pipe to cater for system expansion then the capital renewal portion is the cost to replace a 150cm pipe. See **Note 7 to the LGA's Model Financial Statements** for a more detailed discussion on capital renewal and capital upgrade.

7. Assess the likely revenue from other CWMS related sources over the same time frame (e.g. sale of water).
8. Based on items 1-7 determine the revenue requirement to recover the estimated full long-run cost of the CWMS.
9. Calculate the required service charges based on the likely number of units in each category where differential service charges are applied or, if no differential service charges are applied, the service charge as a function of the number of units (see the **CWMS property units code**).

Important Note: Council must include its own property in calculating the service charge, allocating units as per the CWMS Property Units Code. It must actually bill itself and pay for its use of the CWMS. Failure to do so would mean that other CWMS users alone would be paying for Council's use of the CWMS. This is inequitable as every ratepayer should contribute to the Council's costs, not just a group of ratepayers.

The broad approach to determining the service charge, using accrual accounting NOT cash, is:

- Determine the operating expenses of the CWMS.
- Determine the cost of capital for each operating year.
- Determine the allowance for risk.
- Calculate any income applicable to the CWMS.
- The surplus of expenses over income is the amount needed to be raised by the service charge which can be calculated based on the number of units determined through the application of the CWMS Property Units Code.

The following table provides a somewhat combined flowchart/checklist summary of the steps necessary to set a service charge.

<i>Service charge calculation</i>	<i>Comprising</i>	<i>Based on</i>
Operating expenses	Staff, material, contractors and other costs	Direct costs and associated overheads
	Depreciation	Current useful lives of assets
	Overheads and support costs attributable to CWMS	Up-to-date asset valuations
		Supervision
	Billing and collection costs	
	Other overheads	
plus		
Cost of Capital	Real interest rate applied to Council financed assets	Current value of assets NOT financed either through grants or e.g. by developers
	Allowance for risk applied against <u>all</u> CWMS assets	Residual risk and unspecified CWMS risks
		Current value of all CWMS assets
less		
Income	Sale of water	Sale of recycled water from CWMS
	Other income	Any other income attributable to the CWMS
gives a balance of the total amount to be raised by the service charge		
Service Charge	Annual charge for each unit	Amount to be raised
		No. of units
		Differential rating policy for CWMS

Table 3 – Determining the Service Charge

A template to assist councils to determine the service charge is a companion to this document.

2. Accounting and Pricing Issues

2.1 Service rates and charges

The cost of most of the goods and services provided by governments are met from taxation revenue. This relates to the distinction between ‘public goods’ and ‘private goods’. Generally, ‘public goods’ are provided by governments communally and it is usually not possible to exclude consumers from using them. ‘Private goods’ are those goods supplied by the market at a price. However, some goods and services provided by governments have similar characteristics to private goods and it is possible for them to be provided at a fee as the users of the goods or service can be readily identified and charged.⁵

A CWMS is an ideal candidate for the application of a user charge to recover the cost of providing the service. User charges reduce the burden of rates on ratepayers and where the full cost of the service is recovered from a user charge, only the users of the service meet the costs of the service. The LG Act makes it clear that Councils are entitled to recover the full cost of providing a CWMS from the users of the service. The full cost of the service equates to a ‘whole-of-life’ approach to determining costs and includes:

- Operating and maintenance costs;
- Capital renewal and upgrade;
- Cost of capital; and
- Cost of risk.

Any medium to long term under recovery of the full cost could mean that

- Non-cash expenses such as depreciation and cost of capital are not being recovered
- General ratepayers are subsidising the CWMS, i.e. general rates revenue is being used to support the service
- That funds raised are not sufficient to effectively operate and maintain CWMS service levels.

As such this is potentially likely to mean that the Council may struggle to be able to accommodate renewal and replacement of CWMS infrastructure as required over the long run.

⁵ For a fuller discussion of these concepts see the LGA’s **Financial Sustainability Information Paper No. 20** available at:
<http://www.lga.sa.gov.au/webdata/resources/files/20%20-%20Rating%20and%20Other%20Funding%20Policy%20Options%202015.pdf>

Councils should ensure, as far as possible, that only those persons who have, or have access to, the service meet the full costs of the service and that service charges each year are sufficient to recover the full long-run whole-of-life cost of the service over time.

2.2 Accounting for a CWMS

Full cost, in an accounting sense, includes all of the direct costs and those indirect costs that can be reasonably attributed to the service. Those costs must be accumulated on an accrual accounting basis. Accrual accounting matches costs and revenues with the time period in which they were incurred or earned thus ensuring that all of the financial transactions that relate to a particular financial year (or other accounting period) are gathered together in the relevant time frame. This facilitates the correct calculation of the full cost of the service to be compared with the revenues earned from service charges. Some of the other benefits of an accrual accounting approach to identifying the costs and revenues of a CWMS are:

- Complete financial information – recognising non-cash expenses and all assets and liabilities.
- Full cost information for pricing decisions.
- Consistency of information – accrual accounting principles enable meaningful comparison of financial information over accounting periods for both decision-makers and other stakeholders.

It is not possible to accurately calculate total costs and revenues using the cash basis of accounting. Cash accounting paints a misleading picture. Some typical issues with cash accounting include, but are not limited to:

- Revenues calculated on a cash basis will be overstated by revenues received relating to a previous (or future) time period and understated by revenues earned but not yet received for the current time period.
- Similarly, costs relating to goods and services will be overstated by cash payments for goods and services relating to a previous (or future) time period and understated by payments not yet made for goods and services received in the current time period.
- The non-recognition of depreciation means that the consumption of the asset base of the CWMS, which is a cost of operating the CWMS, will not be included.
- The inclusion of cash payments for new and replacement assets seriously overstate costs in any particular accounting period.
- Failure to include the non-cash elements of employee costs (provisions for long service leave, untaken annual and sick leave) understates the costs of the CWMS.

Full cost, in an economic sense, recognises the return on investment from capital invested in the CWMS and should also include an allowance for unquantifiable risks associated with the CWMS. ESCOSA recognises full cost in this economic sense.

Failure to recognise the 'cost of capital' where the Council has provided from its own resources, whether from corporate borrowing or the use of surplus cash, the funds for new or replacement capital expenditure understates the full economic cost of the CWMS.

Most risks associated with a CWMS should be readily quantifiable, particularly insurance costs and the costs of responding to adverse events the potential for which have been accepted as a residual risk. However, there may be other risks associated with the operation of a CWMS that are difficult to quantify and it is entirely appropriate to make an allowance for the potential response to such risks, even if it is difficult to quantify their likely impact in financial terms. The regular monitoring and review of the cost of risk is important to ensure that any under or over recovery of the allowance for risk is adjusted in future years, taking the long-run perspective.

2.3 Direct and Indirect Costs

Direct costs are those costs (including direct on-costs) that can be directly attributed, in a cost-effective way, to the CWMS. Typically, they include direct labour (plus direct labour on-costs), cost of materials, contractual expenses, plant hire, electricity and depreciation of CWMS assets.

Indirect costs are those costs, sometimes called support costs, that cannot be directly attributed to the CWMS in a cost-effective manner. Typically they include billing and collection, information technology and communications, personnel and human resources, insurance, occupancy, purchasing and other administrative charges.

To some extent the distinction between direct and indirect costs is one based around the cost to obtain the information. It is often more cost-effective to aggregate costs into cost pools and then allocate those costs using an appropriate driver or methodology. However, the increasing use and sophistication of financial and costing systems is providing the opportunity for more costs to be directly allocated to services as an integral part of the system. These benefits can be derived within a Council's financial and costing system or as a benefit from improved invoicing information from suppliers.

2.4 Attribution of Indirect Costs

For an indirect cost to be reasonably attributed to the service there must be some causal basis for the CWMS using the activity for which the CWMS will receive a cost attribution.

For example, it is likely that CWMS charges will be raised and collected through the same system used to create, charge and collect general rates and it would be appropriate that a proportion of the costs of the operation and maintenance of the property and rating

elements of the financial information system would be attributable to a CWMS. Typically those costs could include, among others, updating and maintenance of the property database; invoicing costs and collection costs.

2.5 How can indirect costs be allocated to a CWMS?

Traditional methods of indirect cost allocation have focused on creating a single pool of indirect costs and then allocating them on some basis. Allocation bases have included:

- Direct labour hours (or FTEs)
- Direct labour dollars
- Direct material costs
- Total budget dollars
- Machine hours.

Like any method of indirect cost allocation, these allocation bases are arbitrary in nature and, in fact, may bear little resemblance to the actual way in which indirect costs are consumed by a CWMS. It may be more appropriate to aggregate indirect costs into cost pools that are logical to group together and that are capable of having a single ‘driver’ that can be used to allocate the indirect costs on a causal basis, or, alternatively, to allocate each separate indirect cost using a unique driver for each one. The following table lists the indirect costs that were used along with suggested drivers, in the appendix to the Costing Guidelines paper.⁶ Some further comments are provided to assist in better understanding of the indirect cost pool and how the driver should be used, as well as some alternative approaches to allocating the costs.

<i>Indirect Cost</i>	<i>Driver</i>	<i>Comments</i>
Billing and Collection	Allocation based on no. of invoices processed	<p>This indirect cost pool includes the licence and maintenance costs for software associated with the property and rating systems; printing and postage costs; cost of collecting outstanding debts.</p> <p>A potential allocation of this indirect cost on the basis of invoices processed for an accounting period – the number of CWMS invoices printed/reprinted as a proportion of total invoices printed, noting that each quarterly invoice for rates counts as one invoice. If the same system is used for the production of other Council invoices, <u>all</u> invoices must be included in the count.</p>

⁶ Local Government Association of South Australia, (2015), *Costing Principles for Local Government*, Appendix 1, p. 22

		<p>If postage costs for CWMS can be separately identified then they should be include as a direct cost and postage costs excluded from the cost pool. Any other costs that can be separately identified should be treated similarly.</p>
ITC	Allocation based on no. of PC's	<p>This indirect cost pool includes the operating and maintenance cost of hardware associated with the property and rating systems and the cost of telecommunications, including depreciation costs.</p> <p>Some telecommunications costs for the CWMS, such as telemetry, may be able to be separately identified and treated as a direct cost. Any other costs that can be separately identified should be treated similarly.</p> <p>An allocation basis based on the number of PC's (or terminals) used for CWMS is appropriate, but an alternative basis for allocation could be the dollar cost of CWMS hardware as a proportion of total hardware costs.</p>
Records	Allocation based on no. of file accesses	<p>This allocation method will only be possible where a modern records system is in place which records file accesses. Alternatively, some reasonable assessment will need to be made of that portion of the records activity that relates to CWMS.</p>
Occupancy	Allocation based on floor space occupied	<p>It is likely that a number of structures will be dedicated to CWMS operations and their maintenance and operating costs should be considered direct costs.</p> <p>Where there is shared occupancy of buildings then the ratio of CWMS occupied floor space to total space occupied can be used to allocate the operating and maintenance costs of buildings. (Note that shared facilities such as toilets, reception areas and the like should be excluded from the total floor space in such calculations).</p> <p>Similarly, where a portion of an employee's time is allocated to CWMS then that portion of the employee's occupancy costs will be allocated to CWMS.</p>

Insurance	Allocation based on \$ value of assets insured	If the CWMS assets are not separately insured then the value of the CWMS assets as a proportion of the total asset pool should be used to calculate the allocation to CWMS costs. A similar approach may be taken for other insurances.
Purchasing	Allocation based on no. of requisitions processed	The total cost of the purchasing function should be apportioned on the basis of the number of requisitions processed for CWMS as a proportion of the total number of requisitions processed.
Payroll and HR	Allocation based on no. of FTEs	The total cost of the payroll and HR activity should be apportioned on the basis of the number of FTEs working on CWMS activities as a proportion of total FTEs. Note that this will not necessarily be the same from year to year as there may be times when there is more intense activity associated with CWMS for major extension or renewal projects that may consume more FTEs.

Table 4 – Allocating Indirect Costs

It is important to consider the costs and benefits of any method of cost allocation. The simpler the allocation method the lower the cost of allocation. It may be necessary to use a less accurate method of cost allocation because the cost of more accurate methods outweighs the benefits of the greater accuracy.

Where indirect costs are being allocated it is important that a full cost regime has been applied to the indirect cost before it is allocated. For example, where a proportion of an employee is being allocated the total cost being allocated should include all relevant on-costs (workers compensation insurance, superannuation, etc.) and the non-cash elements of the employee's costs (provisions for long service leave, untaken annual and sick leave).

2.6 Cost of Capital

The cost of capital needs to be recognised in the calculation of the full cost of providing the service. There are fundamentally three sources of capital for asset acquisition for a CWMS:

1. Council funds (whether from cash surpluses or corporate borrowings⁷)
2. Capital contributions from developers and users
3. Grant funds from other levels of government

⁷ Corporate borrowings includes borrowings specifically for CWMS infrastructure

As there is no cost to Council for capital acquisitions made from 2 and 3 above calculations of the cost of capital should exclude assets purchased/constructed from those sources. However, in some situations, through agreements with developers, developer contributions may not be received until long after the infrastructure is constructed. In this case Council will have funded the construction of infrastructure assets in the first instance and such assets will be included in calculating the cost of capital until such time as the developer contribution is received.

It is recognised that Council records may not be able to identify older asset transactions where assets were purchased from such sources and the National Water Initiative Pricing Principles⁸ provide that where Council records cannot distinguish between funding sources for those assets acquired before January 1 2007 (the 'legacy date') then all such assets may be included in the calculation of cost of capital. **Section 1.5.4 to the Costing Guidelines** provides an example of how the cost of capital may be calculated.⁹

In determining the cost of capital Council should consider the long-term perspective rather than trying to adjust the service charge for annual fluctuations in the cost of capital. This provides a more stable base for determining the service charge and avoids unnecessary movements in the service charge from year to year. In the current interest rate climate (2016) the real interest rate may be quite low, but the long-term average real interest rate is likely to be of the order of 4%. As the intent is to recover costs based on the average long-run cost of the scheme it is more appropriate to use the likely long-run average real interest rate.

2.7 Under or Over Recovery of Full Cost

A CWMS is a complex, long-lived activity. The LG Act encourages the recovery of the full cost of operating the system from users of the service but does not state the timeframe over which the recovery is to be made. While it could be assumed that the full cost recovery is to occur over the life of the CWMS defining the life of a CWMS, given the nature of asset renewal and replacement over time, is obviously a difficult task. Pragmatically, provided that sound budgeting and accounting practices are followed, full cost recovery can be based on regularly reviewed estimates of full long-run costs as determined in accordance with ESCOSA guidelines. Any such periodic review should also have regard to future forecast CWMS outlays in a Council's long-term financial plan and infrastructure and asset management plan. Note that the consideration of outlays here will be broader than the accrual accounting definition of 'expenses'. Setting service charges to achieve full cost recovery based on long run costs means that there will always be some under or over recovery on an annual basis and it is important that a 'running tally' of the under or over

⁸ See Appendix 2

⁹ Local Government Association of South Australia, (2015), *Costing Principles for Local Government*, Appendix 1, pp. 8-10

recovery is maintained so that service charges can be adjusted in future years to ensure that the principle of full cost recovery is met over the medium term, say a three to five year period. See the **appendix to the Costing Guidelines** paper for a simple methodology to do this.¹⁰

2.8 Historical Aspects of Full Cost Recovery

The previous Local Government Act also allowed the recovery of the full cost of providing a CWMS.¹¹ Unfortunately, most Councils would have been using cash accounting to calculate the relevant service charges and are most likely to have under recovered the full cost of the service. It is possible to go back and calculate what should have been charged, but both time-consuming and impractical. Further, it is not possible to adjust the previous service charges to recover under charges, so the intergenerational equity issue cannot be resolved.

A more sensible approach is to be prospective in setting service charges, as allowed by the LG Act, and ensure that service charges set each year as far as possible recover the full cost of that year's operations based on sound long term financial management and asset management plans, keeping in mind that the aim is to recover the full cost of the CWMS operation in the long-run and that cost recovery needs to take account of the potential 'smooth out' revenue-raising regardless of maintenance and renewal peaks and troughs.

Similarly, where a Council has not kept a tally of the surpluses or deficits of the full cost of CWMS operations over the years there is no necessity to go back and recreate such a record. Again, be prospective and ensure that such a record is maintained in the future, based on likely future revenues and expenses. It will be necessary to have such information to show the regulator that the service charges have been properly based.

2.9 Is a CWMS Reserve Account Necessary?

Many Councils have traditionally included CWMS reserve accounts in their financial statements, with the balance of the reserve being included in the Statement of Financial Position and movements in the reserve being recorded in the Statement of Changes in Equity. There is no legal requirement to do so. Where Councils have done so the balance of such reserves has typically been determined based on historic cashflows (and only cashflows) associated with their CWMS activity. LGA guidance material neither encourages nor discourages creation of equity reserves where not specifically required. Some Councils find them useful for some purposes. It is important to stress though that where a Council creates/maintains a CWMS reserve account that there is no need to back this reserve with

¹⁰ Local Government Association of South Australia, (2015), *Costing Principles for Local Government*, Appendix 1, p. 21

¹¹ Local Government Act 1934, Section 177(5)

quarantined cash.¹² LGA treasury management guidance material discourages such practices.¹³

There are arguments for and against keeping of discretionary reserves but it is understandable that some Councils may find it useful to maintain a record of ongoing CWMS cash inflows and outflows. This is so because for many years cash outlays may be less than revenue generated (based on accrual accounting costs inclusive of depreciation) but in some years large capital outlays (e.g. for renewal) may be required. Keeping a record of accumulated past net cash inflows may make it easier for a Council to agree to large periodic renewal outlays. If a Council chooses to recognise this net CWMS cashflow balance in its financial statements it would be important to highlight in supporting notes what this balance represents and in particular that it does not reflect the difference between CWMS service accumulated operating revenues and expenses.

The difference between the opening and closing CWMS cashflow balance in any year should be as follows:

OPENING Cash Balance		\$x,xxx,xxx
PLUS:		
Operating revenue generated (not all which may have been received)	\$x,xxx,xxx	
Depreciation (a non-cash expense)	\$x,xxx,xxx	
Opportunity cost of capital (a non-cash expense)	\$x,xxx,xxx	
Any nominal interest income earned (including from internal lendings) and received during the year	\$x,xxx,xxx	
Any financial injections (not operating revenue) made (e.g. such as grants or additional borrowings to finance CWMS capital works)	\$x,xxx,xxx	
Repayment of any internal borrowings made to the CWMS account	\$x,xxx,xxx	\$x,xxx,xxx
LESS:		
Expenses (actual calculated in accordance with LGA Costing Guidelines)	\$x,xxx,xxx	

¹² See Note 9 of the South Australia (Local Government) Model Financial Statements.

¹³ See LGA Financial Sustainability Information Paper No. 15, Treasury Management.

Any operating revenue generated that has not yet been received	\$x,xxx,xxx	
Nominal interest expenses paid (including from internal borrowings)	\$x,xxx,xxx	
Any associated loan (principal) repayments made	\$x,xxx,xxx	
Any CWMS capital related outlays (these are not an accrual accounting expense)	\$x,xxx,xxx	
Any internal lendings made from the CWMS account for other purposes (such practice is consistent with LGA recommended treasury management approaches)	\$x,xxx,xxx	\$x,xxx,xxx
CLOSING Cash Balance		\$x,xxx,xxx

Table 5 – Reconciling the CWMS cash balance

It should be carefully understood, as mentioned above, that this ‘balance’ IS NOT the balance of the under or over recovery of costs. In fact, it is likely to be significantly different from the long-run surplus or deficit on CWMS operations. The long-run surplus or deficit is based on the full cost of delivering the service, including depreciation of the infrastructure and the cost of capital and the total revenues earned (whether received or not). The closing cash balance simply reflects the balance of cash flows, excluding those cost and revenue elements that are not cash.

Again, the consideration of inflows and outflows here is broader than the accrual accounting definition of ‘expenses’ as it includes inflows from borrowings and outflows for capital transactions and principal repayments.

Note that not every element of the table will necessarily be used in calculating the cash balance of CWMS operations. A simple example is:

DC Anytown

OPENING Cash Balance		\$2,579,653
PLUS:		
Operating revenue generated	\$1,209,792	
Depreciation	\$245,664	
Opportunity cost of capital	\$380,800	
National Water Security Plan grant	\$350,000	\$2,186,256

LESS:		
Expenses	\$973,200	
Operating revenue generated that has not yet been received	\$31,716	
Principal repayments made	\$54,328	
Infrastructure renewal expenditure	\$717,000	\$1,776,244
CLOSING Cash Balance		\$2,989,665

Table 6 – Example cash balance reconciliation

Section 1 of this document provides an example of the application of these principles, plus some further discussion on their application.

2.10 Pricing policy framework

ESCOSA, in its price determination of 23 July 2015, requires Councils to provide a pricing schedule and a pricing policy statement by November 30 each year. Note that the LG Act at Section 170 requires the publication of a service charge within 21 days of the declaration of the charge.

The pricing schedule will be underpinned by the pricing policy framework and the LGA's CWMS Property Units Code.

The pricing policy framework needs to cover the following issues:

- Overview – purpose of policy, what is a CWMS, current and future operations.
- Service provision – connecting to the system, service standards, key performance indicators, complaints and contacts.
- Pricing issues – full cost basis for pricing (summary of budgeted basis for full cost recovery – current and previous year, with reference to the CWMS long term financial plan), application of CWMS property units code, information on discounts and rebates, relief from financial hardship, basis for price changes from previous financial year.
- Current (and previous) pricing schedule.
- Annual review of policy and prices.

There is no specific requirement for this policy framework to be published but it is strongly recommended that it be published on Council's website.

2.11 Augmentation Charges

On occasion it may be necessary to carry out substantial new capital works, which might include increasing the capacity of pipes, pumps, lagoons or other CWMS infrastructure to cater for new users. The fundamental principle on charging for these works is that the beneficiary of the works should pay for the works.

Note that where the augmentation is of a minor capital nature then it is probably more appropriate to recover such costs through the service charge.

2.11.1 Augmentation charges wholly attributable to new users

Where the whole of the capital works is carried out to benefit only new users then the new users should pay.

It is likely that on many occasions the augmentation will be the result of a specific development. If that is the case the developer may be amenable to carrying out the augmentation works as part of the development rather than have the Council carry out the work and there will be no outlays by Council to be recovered. Where Council carries out the works it will need to recover the cost of the works from the developer. Council should recover the augmentation costs as soon as is practically possible.

2.11.2 Augmentation charges attributable to new users and existing users

Where the augmentation work has benefits for new users and existing users then the costs must be apportioned as **equitably** as possible. For example, where an existing pipeline needs to have its capacity increased to cater for a new development then the capital contribution from the new users (developer) can be calculated in at least three different ways.

- i. A tried and true method for calculating the portion of the upgrade that is attributable to new users is to calculate the net present value of the impact of bringing forward the replacement to now. The advantage of this method is that it takes into account not only additional costs but also timing differences in outlays that a council incurs as a result of development. For example, if the cost of the renewal of the existing asset was \$1 million now, but the upgrade would not normally have happened for 20 years then the present value of the renewal, using a 4% discount rate (to cater for the real opportunity cost of an earlier capital outlay) is \$456,400 ($\$1,000,000 \times \text{discount factor of } 0.4564$).¹⁴ If the cost of the upgraded asset is \$1,750,000 then the portion attributable to the developer is \$1,293,600 ($\$1,750,000 \text{ less } \$456,400$).

¹⁴ The discount factor is derived from standard discount tables. It is $1/(1.04)^{20}$

Consideration also needs to be given to whether the augmentation will generate additional revenue for council net of operational outlays. If annual revenue from new service recipients exceeds additional annual outlays then in theory this should be allowed for in determining the developer contribution. For example if the analysis was undertaken on a net present value basis then the Council should calculate the net present value of additional net receipts and deduct this from the otherwise required developer contribution.

- ii. An alternative method of calculation is apportioning the costs between the new users and existing users. This may be more equitable where the upgrade of the pipeline is imminent, thus avoiding issues relating to the timing of the upgrade. First, it is important to carefully establish the exact number of new users, and secure this number by written agreement, which allows for recalculation of the developer contribution if more users eventuate from the development. So, if there will be 100 new users and there are 900 existing users the developer would be charged a fee equivalent to 100/1000 of the upgrade costs. Note that the balance would be recovered through a capital charge. Where the renewal/upgrade of the pipeline is planned into the future then the net present value method outlined in i. above is more equitable.
- iii. A third method, which is relatively simple is to apply the following formula:

Cost of new pipeline less accumulated depreciation of existing pipeline.

Again, where there is a significant time difference between when the renewal/upgrade was planned and the upgrade now, this method is less equitable.

Any amount paid by a developer will be a capital contribution and will not attract a cost of capital charge.

A Council is entitled to recover the full economic cost of the augmentation works, subject to 2.11.2 above. There is no 'standard fee' as each augmentation will have a different cost structure. Where the augmentation costs will be spread over a number of allotments then Council will need to carefully estimate the likely full cost of the augmentation and divide this cost by the number of allotments that will receive an augmentation charge. In calculating the cost per allotment it is important that Council makes a careful appraisal of the likely number of allotments that will become connected to the scheme.

3. Other Issues

3.1 A Uniform Service Charge

An argument that often arises is whether a Council that has more than one CWMS should charge different rates for each scheme based on the different cost structure of the scheme.

There are four main points to consider:

1. The service provided by each scheme is the same – the removal of wastewater from a property. It would seem equitable that users receiving a similar service in a Council area would pay similar charges for the service.
2. Each customer in a specific scheme pays the same service charge, regardless of the fact that the actual cost to provide the service to a specific customer may be higher than the average as a result of long pipe runs and pumping costs from low points in the network. The same principle arguably should hold true for schemes across a Council area.
3. Many schemes received a subsidy for their initial establishment, which varied to the extent necessary to enable expected net long-run costs to be recovered based on a common standard charge across all schemes (notionally equivalent to average SA Water country sewerage rates). If the 'net costs' are meant to be the same why would charges be any different?
4. Differences in the full cost of each scheme are likely to be related to:
 - a. The size of each scheme and the economies of scale available to larger schemes over smaller schemes.
 - b. The age of the assets and technology employed in each scheme, with increased operating costs for schemes with older assets and old technology.

It does not seem equitable that users of schemes within a Council area that are more expensive to operate should be disadvantaged compared to schemes that are either benefitting from economies of scale, have lower operating costs through newer assets or better technology than that available to other Council CWMS .

On balance, it would seem to be a more equitable treatment of users of multiple CWMS within a single Council area to have one common pricing regime apply across the Council area. Any other course of action would seem to be discriminatory to smaller townships with less efficient schemes. The state-wide sewerage charges provided by SA Water across rural South Australia have a uniform rating system.

One exception to having a uniform service charge is warranted where communities have agreed to develop schemes at their own cost, i.e. without state subsidy. There are a number of such schemes, particularly associated with areas where the freeholding of shacks

occurred and the explicit arrangement was that those areas would meet the full CWMS costs. As such, owners of the shack properties have received significant capital gains and it would be inequitable for those owners to benefit from the capital gain, but have the CWMS community in the Council area subsidise the cost of the CWMS.

A second exception may be contemplated where either the service delivered is different, e.g. full sewerage versus desludging of septic tanks only or where the structure of the service supplied is different, e.g. full CWMS operation provided by Council versus disposal of effluent to SA Water sewerage system.

Note that ESCOSA permits the use of pricing commonality between schemes for the first Price determination period, which ends on June 30 2017. ESCOSA has stated that it “...will confirm its position for future regulatory positions as part of the next Price Determination.”¹⁵

3.2 Vacant vs. Occupied

Some Councils have differential rates for vacant land¹⁶ where the differential rate for vacant land is greater than the differential rate for residential and other land use types. The basis for this is a policy one – increasing the rates on vacant land to ostensibly discourage the holding and stockpiling of vacant blocks.

The CWMS Code makes it clear that the basis for charging properties provided with or having access to a CWMS is the estimated volume of effluent generated by the property, with the cost to each residential unit being equalised at one property unit. It also provides that each vacant allotment should be charged on the basis of one property unit. All other property categories (excluding vacant) are compared to the a single residential dwelling and where it is estimated that the volume of effluent for other property categories is greater than for a single residential dwelling then the number of property units to apply to other property categories is greater than 1.

Section 155(3) of the LG Act permits the variation of the service rate or annual service charge on the basis of whether the land is vacant or occupied. In the case of an annual service charge this is generally taken to mean that the annual service charge applying to vacant land may be less than that applying to occupied land on the basis that there is no provision of service even though the service is available to the land.

The imposition of a higher annual service charge on vacant land is discouraged on the following basis:

¹⁵ As advised by ESCOSA to the LGA on November 12, 2015.

¹⁶ Vacant land means land without a dwelling or other structure. If there is a dwelling or structure and it is unoccupied this does not constitute vacant land.

- It is inequitable to charge a higher annual service charge where no service is provided.
- Charging a higher annual service charge on vacant land effectively means that other service users are being subsidised as it is not possible to charge more than the full cost of providing the service – this is not in line with the basis for charging set out in the CWMS code.

Councils should consider whether there should a differential service charge for vacant land that is less than the residential service charge on the basis that while the infrastructure has been provided for the piece of land there is no service being provided, noting that the infrastructure depreciation and cost of capital components are most likely the major elements of the cost of the service. A sound method of applying a differential service charge for vacant properties is to reduce the residential service charge by the proportion that the average annual operating and maintenance costs bears to the full cost, effectively only charging for the provision of the infrastructure to the property.

It is worth noting that ESCOSA have recommended the following in relation to SA Water:

“Customers should only be charged for a water and sewerage service if they enter into an agreement with SA Water to become a customer.”

The implementation of this principle would remove from SA Water the right to charge a property simply because the water or sewer main abuts the property. A discussion on the pros and cons of removing SA Water’s right to charge non-connected properties is at pages 65 to 74 of ESCOSA’s report.¹⁷ The key reasons for such a recommendation are stated as:

- Properly informed consumption choices based on payment of the full costs of consumption of the service; and
- Allowing a supplier to charge non-connected customers entrenches monopoly supply and disadvantages competitors.

Importantly, ESCOSA stated, at page 67 of their report, “...[t]he Inquiry cautions against applying its recommendations to **councils** or other service providers...” without there having been a full consideration of the impact of such an approach.

3.3 Standard Boundary Kit

There are a number of situations where the connection of a property to the CWMS scheme requires that the property owner has to pump the wastewater to Council’s connection point, usually an inspection point. Discussions with a number of councils provide a consensus view that the onus for getting the wastewater to the connection point is the responsibility of the property owner and that operation and maintenance of any pumps or

¹⁷ ESCOSA, (2014), *Inquiry Report Into Reform Options for SA Water’s Drinking Water and Sewerage Prices*, pp.65-74

pipes involved in moving the wastewater to the connection point is the responsibility of the property owner. Such an approach simplifies the administration of the CWMS scheme.

3.4 Desludging Septic Tanks

Many councils include in their service charge an allowance for the desludging of septic tanks, at Council expense, on a regular basis, usually three or four years. The adoption of such a practice assists Council to maintain the integrity and effectiveness of the CWMS. This should be clearly outlined in Council's CWMS pricing policy. It should also be clear from the pricing policy that any extra desludging of septic tanks outside of the normal time frame will be at the customers cost.

3.5 Sale of Recycled Water

Some councils provide recycled water derived from a CWMS scheme to community and sporting groups at no charge. Generally, the basis for this is that it is cheaper to dispose of the water in this manner rather than further treat the water for disposal in creeks or other waterways or to upgrade the scheme to deal with a higher volume of water. This is an appropriate basis for disposing of the water to community and sporting groups cost free. The important principle here is that there should be no cost to CWMS users from this practice. So, if the cost of disposing of the water to community and sporting groups is higher (e.g. additional treatment, cost of infrastructure, etc.) than other disposal means then there should be a fee arrangement levied against water recipients that reflects the difference between the two methods of disposal of the water, or the Council should specifically subsidise the provision of recycled water to community and sporting groups to ensure that CWMS users do not make the subsidy. It is important that it is transparent to the community that the provision of free or subsidised recycled water to community and sporting groups meets the strategic direction of Council in regard to social, environmental or other objectives.

4. CWMS Framework – Legislative and Other

4.1 Legislation

4.1.1 Local Government Act and Regulations

The Local Government Act 1999 (LG Act) provides that a CWMS is a ‘prescribed service’ for the purposes of the Act. Prescribed services are the treatment or provision of water; the collection, treatment or disposal of waste; television transmission or retransmission or any other service prescribed by regulations.¹⁸

The application of fees and charges for ‘prescribed services’ are covered by Section 155 of the LG Act with further clarification provided by Regulations 12 and 13 of the Local Government (General) Regulations 2013. See Appendix 1 for the relevant text of the Act and Regulations.

An overview of the legislative provisions follows.

Where a Council provides or makes available a prescribed service to a piece of land it may charge a service rate, an annual service charge or a combination of both to rateable land. For land that is non-rateable it may only charge an annual service charge. The fact that the Council uses a third party to provide or make available the service does not abrogate the Council’s power to levy a service rate and/or an annual charge.

Generally, where the service is not provided or made available to a piece of land then no service rate or annual service charge may be applied, except under certain circumstances.¹⁹

In setting service rates and annual service charges may vary based on whether the land is occupied or vacant or on any other factor prescribed by regulation. Two factors have been prescribed – (1) variation by land use and (2) the number of property units applicable to the land as defined in the CWMS Property Units Code.

The amount recovered by a service rate and/or an annual service charge generally must not exceed the full cost of providing the service. Where a Council has established a reserve to identify any surplus from CWMS operations then the amounts identified in the reserve must only be applied to the CWMS service.

Where ESCOSA makes a price determination in relation to a prescribed service then the determination made by ESCOSA has precedence over other price setting mechanisms.

¹⁸ No other services have yet been prescribed by regulation.

¹⁹ As set out in Regulation 13 of the Local Government (General) Regulations – see Appendix 1 for text.

Should a CWMS be discontinued then any excess of funds held by Council may be applied for another purpose which has been specifically identified in a Council's annual business plan .

4.1.2 South Australian Public Health (Wastewater) Regulations 2013

These regulations²⁰, made under the South Australian Public Health Act 2011, prescribe:

- a *Community Wastewater Management Systems Code* which provides guidance to "...consultants, local Councils, developers, builders and plumbers, property owners and occupiers on:
 - The technical requirements to be considered in the planning stages of a CWMS
 - The requirements for the design of the CWMS
 - The procedures and required information for the submission of applications to the DHA for assessment of a proposed CWMS
 - Ongoing operation and maintenance requirements for a CWMS."²¹
- The requirements for establishing a CWMS.

The regulations and the code are largely technical in nature.

4.2 ESCOSA determinations

Section 35 of the Water Industry Act 2012 provides that ESCOSA has the power to make price determinations in relation to sewerage services.

ESCOSA issued a varied price determination on 23 July 2015 which made the following price determination for sewerage services.²²

"2 PRICE DETERMINATION

2.1 Pricing Principles

2.1.1 The **retail prices** charged by a **licensee** for each **regulatory year** must comply with the following pricing principles:

...

²⁰ Refer to Appendix 2 for reference to the legislation.

²¹ Department of Health and Ageing (2013), *Community Wastewater Management Systems Code*, p. 3

²² Essential Services Commission of South Australia, (2015), *2013-2017 Price Determination for Minor and Intermediate Retailer*, accessed at <http://www.escosa.sa.gov.au/ArticleDocuments/549/20150723-Water-VariationTo2013-2017PriceDetermination-MIR.pdf.aspx?Embed=Y>

(b) Where **sewerage services** are supplied, the following **National Water Initiative Pricing Principles** apply:

(i) Principles 1, 2, 3, 4, 5, and 6 of the **Recovery of Capital Expenditure** set of principles; and

(ii) Principles 1, 4, 5, 6, 7, 8, 9 and 10 of the **Setting Urban Water Tariffs** set of principles.

...

2.1.2 In addition to the matters specified under clause 2.1.1, in setting **retail prices** for each **regulatory year**, a **licensee** must also comply with any principles, requirements or matters specified by the **Commission** under an industry code, industry rule or guideline as in force from time to time in respect of the provision of **retail services**.

2.2 Price Monitoring

2.2.1 The **Commission** may, during the period of this determination:

(a) monitor the **retail prices** charged by a **licensee**; and

(b) publish reports on **retail prices** or monitor and publish reports on matters relating to **retail prices** charged by a **licensee**.

2.3 Reporting Requirements

2.3.1 A **retail licensee** must provide the **Commission**, by 30 November each year:

(a) a Pricing Schedule containing the **retail prices**, fees and charges for **water services** and **retail services** imposed by the licensee, for the current and previous **financial year**; and

(b) a Pricing Policy Statement demonstrating compliance of those **retail prices** with the **National Water Initiative Pricing Principles** relevant to the **retail services** offered by the **licensee**, in accordance with clause 2.1.1 of this **determination.**"

The relevant National Water Initiative Pricing Principles referred to above in relation to sewerage services are referenced at Appendix 2. It is interesting to note that while the background material on both the Recovery of Capital Expenditure and Setting Urban Water Tariffs state that the principles outlined will not apply to wastewater schemes that ESCOSA have determined that a number of the principles, but not all, will apply as set out in the price determination.

4.3 CWMS Property Units Code

The Department for Health and Ageing together with the Local Government Association of South Australia (LGA) have jointly developed a CWMS Property Units Code (CWMS Code) which has legislative endorsement.²³ The code sets out the rationale for defining a 'property unit' and the basis for application of the 'property unit' concept to the broad range of properties likely to be connected to a CWMS. This forms the basis for charging differentially between the full range of properties having access to a CWMS. While most councils use the code it does not have mandatory force. Councils may use other methods for charging CWMS users but must ensure that their charging regime is equitable.

Note that the CWMS Code does not specify the amount to charge. Service charges will be based on the recovery of the estimated full long-run cost of the CWMS and the basis that a Council has determined for differential service charges, if any.

4.4 Other relevant material

Two other documents provided by the LGA are of use in determining the cost and pricing of CWMS. They are:

1. *Costing Principles for Local Government – Guidelines for Council Staff* (issued December 2013 and revised January 2015).²⁴ These guidelines include detailed information that will assist Councils to determine the costs and the pricing basis of a CWMS consistent with the LG Act and ESCOSA price determinations. The guidelines include a worked example based on CWMS.
2. *Guidelines for the Pricing and Costing of Retail Water Services by Local Governments*.²⁵ These guidelines amplify the *Costing Principles for Local Government*. In particular, there is a detailed analysis of the ESCOSA requirements and while the focus is water retail services the discussion relating to the National Water Initiative Pricing Principles is of relevance to CWMS. There is also a comprehensive discussion on the concept of full cost from both an accounting and an economic perspective.

²³ Regulation 12 of the Local Government (General) regulations 2013 refers – See Appendix 1 for the text.

²⁴ Accessed at <http://www.lga.sa.gov.au/webdata/resources/files/Costing%20Principles%20for%20Local%20Government.pdf>

²⁵ Accessed at https://www.lga.sa.gov.au/sitedata/unity/resources/files/ECM_628850_Guidelines%20for%20the%20Costing%20and%20Pricing%20of%20Retail%20Water.pdf

Appendix 1 – Relevant Local Government legislation

Local Government Act 1999 as at July 4 2016

155—Service rates and service charges

(1) In this section—

prescribed service means any of the following services:

- (a) the treatment or provision of water;
- (b) the collection, treatment or disposal (including by recycling) of waste;
- (ba) a television transmission (or retransmission) service;
- (c) any other service prescribed by the regulations for the purposes of this definition.

(2) A council may impose—

- (a) a service rate, an annual service charge, or a combination of a service rate and an annual service charge, on rateable land within its area to which it provides, or makes available, a prescribed service;
- (b) an annual service charge on non-rateable land to which it provides, or makes available, a prescribed service.

(2a) Subsection (2) does not apply in prescribed circumstances.

(3) A service rate, or annual service charge, may vary—

- (a) according to whether the land to which it applies is vacant or occupied; or
- (b) according to any other factor prescribed by the regulations and applied by the council.

(4) If a council provides more than one prescribed service of a particular kind in its area, a different service rate or annual service charge may be imposed in respect of each service.

(5) A council must not seek to recover in relation to a prescribed service an amount by way of service rate, annual service charge, or a combination of both exceeding the cost to the council of establishing, operating, maintaining, improving and replacing (including by future capital works and including so as to take into account the depreciation of any assets) the service in its area (being a cost determined taking into account or applying any principle or requirement prescribed by the regulations).

(5a) Subsection (5) is subject to the qualification that if the Essential Services Commission (**ESCOSA**) makes a determination under another Act that regulating prices, conditions relating to prices, and price-fixing factors for the provision of a prescribed service that is inconsistent with that subsection, the determination made by ESCOSA will prevail to the extent of the inconsistency (and ESCOSA may, in acting under another Act in a case that is relevant to the operation of this section, apply or take into account a factor or principle that is in addition to a matter referred to in subsection (5)).

(6) Subject to subsection (7), any amounts held in a reserve established in connection with the operation of subsection (5) must be applied for purposes associated with improving or replacing council assets for the purposes of the relevant prescribed service.

(7) If a prescribed service under subsection (6), is, or is to be, discontinued, any excess of funds held by the council for the purposes of the service (after taking into account any expenses incurred or to be incurred in connection with the prescribed service) may be applied for another purpose specifically identified in the council's annual business plan as being the purpose for which the funds will now be applied.

(8) An annual service charge may be based on—

- (a) the nature of the service; or
- (b) the level of usage of the service; or
- (c) any factor that applies under subsection (3); or
- (d) a combination of 2 or more factors under the preceding paragraphs.

(9) A service charge imposed by a council under this section is recoverable as if it were a rate (even as against non-rateable land).

(10) A council may declare a service rate or an annual service charge in respect of a particular prescribed service despite the fact that the service is provided on behalf of the council by a third party.

(11) If a prescribed service, in relation to a particular piece of land, is not provided at the land and cannot be accessed at the land, a council may not impose in respect of the prescribed service a service rate or annual service charge (or a combination of both) in relation to the land unless the imposition of the rate or charge (or combination of both)—

- (a) is authorised by the regulations; and
- (b) complies with any scheme prescribed by the regulations (including regulations that limit the amount that may be imposed or that require the adoption of a sliding or other scale established according to any factor, prescribed by the regulations, for rates or charges (or a combination of both) imposed under this section).

Local Government (General) Regulations 2013 as at March 31 2016

12—Service rates and charges

(1) In this regulation—

CWMS Property Units Code means the *Code for Establishing and Applying Property Units as a Factor for the Imposition of Annual Service Charges for Community Wastewater Management Systems* published by the LGA on 20 April 2006, as in force at the time that this regulation is made.

(2) For the purposes of this regulation—

- (a) the LGA is declared to be a prescribed body under section 303(4) of the Act; and
- (b) the Code is adopted by these regulations pursuant to section 303(4) of the Act; and
- (c) the principal office of the LGA (at 148 Frome Street, Adelaide, 5000 or, if the LGA moves its principal office, at that new address) is specified for the purposes of section 303(7)(c) of the Act.

(3) For the purposes of section 155(2a) of the Act, the prescribed circumstances in which section 155(2) of the Act does not apply are where the land is non-rateable land of 1 of the following classes and the prescribed services are not made use of at the land:

- (a) unalienated Crown land used wholly or primarily for—
 - (i) the conservation or protection of natural resources within the meaning of the *Natural Resources Management Act 2004*; or
 - (ii) recreational or sporting activities;
- (b) unalienated Crown land within the meaning of the *Crown Land Management Act 2009*;
- (c) land constituted as a reserve under the *National Parks and Wildlife Act 1972*;
- (d) land constituted as a wilderness protection area or wilderness protection zone under the *Wilderness Protection Act 1992*;
- (e) land vested, under section 15 of the *Harbours and Navigation Act 1993*, in the Minister to whom that Act is committed.

(4) Pursuant to section 155(3)(b) of the Act, the following factors are prescribed:

- (a) any category of land use declared as a permissible differentiating factor under regulation 14;
- (b) in respect of a service for the collection, treatment or disposal of wastewater or effluent—the number of property units that apply with respect to the relevant land, as determined under the CWMS Property Units Code.

(5) For the purposes of section 155(5) of the Act, the cost of capital (as understood as an economic concept) may be taken into account when determining the cost to the council of establishing, operating, maintaining, improving or replacing the relevant service.

13—Rates and charges for services not provided at the land

(1) For the purposes of section 155(11), a council is authorised to impose a service rate or annual service charge (or a combination of both) for a prescribed service in respect of the collection of domestic waste in accordance with the scheme set out in subregulation (2).

(2) For the purposes of subregulation (1), the following provisions apply to the imposition of rates or charges in relation to a particular piece of land:

- (a) if the prescribed service is provided no more than 500 metres from the access point to the land—the full service rate or annual service charge (or a combination of both) may be charged for the prescribed service;
- (b) if the prescribed service is provided more than 500 metres but no more than 2 kilometres from the access point to the land—75% of the service rate or annual service charge (or a combination of both) may be charged for the prescribed service;
- (c) if the prescribed service is provided more than 2 kilometres but less than 5 kilometres from the access point to the land—50% of the service rate or annual service charge (or a combination of both) may be charged for the prescribed service;
- (d) if the prescribed service is provided 5 kilometres or more from the access point to the land—no rate or annual service charge may be charged for the prescribed service (but nothing in this paragraph prevents a council from entering into an agreement for the provision of a prescribed service in respect of the collection of waste that involves the payment of an amount for the provision of the prescribed service).

(3) In this regulation—

access point means the point on the land where the land is generally accessed;

domestic waste means waste produced in the course of a domestic activity.

Appendix 2 - Other relevant references and legislation

The following URLs can be used to access other relevant references and legislation.

Costing Principles for Local Government

<http://www.lga.sa.gov.au/webdata/resources/files/Costing%20Principles%20for%20Local%20Government.pdf>

Guidelines for the Pricing and Costing of Retail Water Services by Local Governments

https://www.lga.sa.gov.au/sitedata/unity/resources/files/ECM_628850_Guidelines%20for%20the%20Costing%20and%20Pricing%20of%20Retail%20Water.pdf

National Water Initiative Pricing Principles

<https://www.environment.gov.au/system/files/resources/34dbb722-2bfa-48ac-be7e-4e7633c151ed/files/nwi-pricing-principles.pdf>

South Australian Public Health (Wastewater) Regulations 2013

[https://www.legislation.sa.gov.au/LZ/C/R/SOUTH%20AUSTRALIAN%20PUBLIC%20HEALTH%20\(WASTEWATER\)%20REGULATIONS%202013.aspx](https://www.legislation.sa.gov.au/LZ/C/R/SOUTH%20AUSTRALIAN%20PUBLIC%20HEALTH%20(WASTEWATER)%20REGULATIONS%202013.aspx)

Water Industry Act 2012

<https://www.legislation.sa.gov.au/LZ/C/A/WATER%20INDUSTRY%20ACT%202012.aspx>

Water Industry Regulations 2012

<https://www.legislation.sa.gov.au/LZ/C/R/Water%20Industry%20Regulations%202012.aspx>

148 Frome St
Adelaide SA 5000

GPO Box 2693
Adelaide SA 5001

T (08) 8224 2000

F (08) 8232 6336

E lgasa@lga.sa.gov.au

www.lga.sa.gov.au