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## **SPECIAL SUPPLEMENT**

### **LOCAL GOVERNMENT ACT 1993**

#### **Best-Practice Management of Water Supply and Sewerage Guidelines April 2004**

#### **NOTIFICATION**

THE Minister for Energy and Utilities, with the concurrence of the Minister for Local Government, pursuant to section 409(6) of the *Local Government Act 1993*, declares by this notice, the publication of the Best Practice Management of Water Supply and Sewerage Guidelines, April 2004 (Guidelines), as shown in the Schedule hereto.

Copies of the Guidelines may be obtained at a cost of \$30.00 from the Department of Energy Utilities and Sustainability (DEUS), Level 3, 10 Valentine Avenue, Parramatta, 2150.

The Guidelines are also available on the internet at [www.deus.nsw.gov.au](http://www.deus.nsw.gov.au).

FRANK ERNEST SARTOR, M.P.,  
Minister for Energy and Utilities

#### **SCHEDULE**



DEPARTMENT OF ENERGY, UTILITIES AND SUSTAINABILITY  
NSW GOVERNMENT

# *Best-Practice Management of Water Supply and Sewerage*

## *Guidelines*

*May 2004*



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NEW SOUTH WALES

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Whilst the Department of Energy, Utilities and Sustainability has taken due care in preparation of these guidelines, it accepts no liability for any errors or omissions, nor for any use of the guidelines by any person.



## Foreword

These *Guidelines for Best-Practice Management of Water Supply and Sewerage* have been published by the Minister for Energy and Utilities pursuant to section 409(6) of the *Local Government Act 1993*. The Minister for Local Government has concurred with these guidelines.

The guidelines encourage continuing improvement in performance and identify 6 criteria for best-practice management of water supply and sewerage. They also set out the outcomes local government Local Water Utilities (LWUs) need to achieve in order to be eligible for payment of a dividend from the surplus of their water supply or sewerage businesses.

LWUs which achieve the outcomes required by these guidelines will have healthy and sustainable water supply and sewerage businesses and will have demonstrated best-practice management of these businesses as well as their compliance with National Competition Policy.

Any local government LWU wishing to pay a dividend from the surplus of its water supply and sewerage businesses or seeking financial assistance under the Country Towns Water Supply and Sewerage (CTWS&S) Program must demonstrate its achievement of these outcomes through substantial compliance with these guidelines for each of the 6 criteria.



## Acknowledgements

These *Guidelines for Best-Practice Management of Water Supply and Sewerage* have been prepared by the Department of Energy, Utilities and Sustainability. The valuable contributions of the Department of Local Government, the Local Government Association of NSW and Shires Association of NSW (LGA and SA), the NSW Local Government Water Industry Directorate and a number of Local Water Utilities (LWUs) are gratefully acknowledged.



## Executive Summary

The NSW Government encourages best-practice by all NSW Local Water Utilities (LWUs). The purpose of best-practice management is:

- to encourage the effective and efficient delivery of water supply and sewerage services; and
- to promote sustainable water conservation practices and water demand management throughout NSW.

The NSW Government is required to demonstrate compliance with National Competition Policy (NCP). The approach adopted since 1995 is to progressively encourage best-practice management by LWUs to ensure effective, efficient and sustainable water supply and sewerage businesses.

Demonstrated best-practice management is therefore a pre-requisite for payment of a dividend from the surplus of a local government LWU's water supply and sewerage businesses and for financial assistance under the CTWS&S Program.

There are six (6) criteria, each of which must be complied with to qualify for a dividend payment. These are:

1. Strategic Business Planning.
2. Pricing and Developer Charges (including Liquid Trade Waste Approvals).
3. Demand Management.
4. Drought Management.
5. Performance Reporting.
6. Integrated Water Cycle Management.

To be eligible to make a dividend payment from a surplus, an LWU must:

- Demonstrate compliance against the 6 best-practice management criteria through an independent compliance audit report; and
- Obtain an unqualified financial audit report for its water supply and/or sewerage business(es).
- Resolve in a council meeting open to the public that it has achieved "substantial compliance" with each criterion in these guidelines (pages 17, 26). The required outcome for each criterion is set out in Table 1 on page 18.

LWUs that demonstrate best-practice management by achieving the outcomes required by these guidelines will have effective and sustainable water supply and sewerage businesses.

Pursuant to section 409 (5) of the *Local Government Act (1993)*, a dividend may be paid after the end of each financial year commencing in 2003/04.



Best Practice Management of Water Supply and Sewerage Guidelines

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## PART A BEST-PRACTICE - PRINCIPLES

### 1 Introduction

#### 1.1 Background

*The core function of water supply and sewerage businesses is the sustainable provision of these services to the community.*

In 2002 there were 126 non-metropolitan Local Water Utilities (LWUs) in NSW, providing water supply and sewerage services to 1.7 million people. 117 of these LWUs were general purpose local government councils, 6 were county councils providing water supply and/or sewerage services and 3 were bulk suppliers. The LWUs had a total turnover of \$724M and an asset base with a current replacement cost of \$9,800M. Of these LWUs, 43 are Category 1 businesses with an annual turnover for water supply or sewerage businesses of greater than \$2M.

#### 2002 NSW Non-metropolitan Local Water Utilities (LWUs)

- 126 LWUs in NSW
- Serve 1.7 million people
- Annual turnover \$724M
- Current replacement cost of assets \$9,800M

The core function of LWUs is the sustainable provision of water supply and sewerage services to the community. Best-practice management is fundamental to the effective and efficient delivery of these services.

The *2001/02 NSW Water Supply and Sewerage Performance Monitoring Report* shows that LWUs are continuing to perform well in comparison with the water utilities in other states of Australia, but in many cases still require substantial reform to achieve best-practice.

#### 1.2 Compliance with Best-Practice

The NSW Government encourages best-practice for all LWUs. The purpose of best-practice management is:

- to encourage the effective and efficient delivery of water supply and sewerage services; and
- to promote sustainable water conservation practices and water demand management throughout NSW.

The NSW Government is required to demonstrate compliance with National Competition Policy (NCP). LWUs have been encouraged since 1995 to introduce best-practice management for water supply and sewerage businesses.

From 1 July 2004, compliance with the six best-practice criteria is mandatory for payment of a dividend from the surplus of an LWU's water supply and sewerage businesses and for future financial assistance under the *Country Towns Water Supply & Sewerage (CTWS&S) Program*.

#### 1.3 Purpose of these Guidelines

Through the NSW Government's *Country Towns Water Supply and Sewerage Program*, sections 283 to 322 of the *Water Management Act 2000*, and sections 56 to 66 of the *Local Government Act 1993*, the Minister for Energy and Utilities is responsible for overseeing the performance of Local Water Utilities (LWUs) in:

*Providing appropriate, affordable and cost-effective water supply and sewerage services in urban areas of non-metropolitan NSW which*



*meet community needs, protect public health and the environment and make best use of regional resources.*

These guidelines reflect the Government's policy in relation to the Application of National Competition Policy to Local Government<sup>1</sup> that states:

*“ the Government supports the objects of the Local Government (NSW) Act 1993, which devolves to local councils significant responsibility for the conduct of their own affairs. The Government is confident that NSW councils are fully able to appreciate the significant efficiency gains and reduction in service costs that can flow from the adoption of competition reforms, and will be able to responsibly apply the Agreement for the benefit of their constituents and clients.”*

The Department of Energy, Utilities and Sustainability has prepared these *Guidelines for Best-Practice Management of Water Supply and Sewerage* pursuant to section 409(6) of the *Local Government Act 1993* (see 1.4 below). The Minister for Local Government has concurred with these guidelines.

The guidelines have been prepared to encourage continuing improvement in performance and identify criteria for best-practice management of water supply and sewerage.

#### **1.4 Local Government Amendment (National Competition Policy Review) Act 2003 No 8**

The amendments to section 409 of the *Local Government Act 1993* are shown below. These amendments commenced on 1 November 2003.

- (5) Despite subsections (3) and (4), a council may:
- (a) deduct, from the money required by subsection (3) to be used only for the specific purpose of water supply or sewerage services, an amount in the nature of a return on capital invested payment (dividend), and
  - (b) apply that amount towards any purpose allowed for the expenditure of money by councils by this Act or any other Act.
- (6) The Minister for Energy and Utilities, with the concurrence of the Minister administering this Act:
- (a) is to cause guidelines to be prepared and published in the Gazette relating to the management of the provision of water supply and sewerage services by councils, and
  - (b) may, if of the opinion that a council has not substantially complied with the guidelines, direct the council to comply with any particular aspect of the guidelines before making any further deduction under subsection (5).
- (7) Before making a deduction under subsection (5), a council must:
- (a) comply with the guidelines published under subsection (6) and any direction given under that subsection, and
  - (b) indicate in an open meeting of the council that the guidelines and any such direction have been complied with in relation to the making of the deduction.
- (8) Subsections (5)-(7) extend to a council that is a water supply authority within the meaning of the [Water Management Act 2000](#).

<sup>1</sup> *NSW Government Policy Statement on the Application of National Competition Policy to Local Government, June 1996*

## 2 Best-Practice Management

### 2.1 Introduction

With increasing demands on the limited water resources of NSW, it is vital that these resources are managed in an efficient and sustainable manner.

Best-practice management is essential for efficient and sustainable management of water resources and the environment. It enables a Local Water Utility (LWU) to achieve sustainable water supply and sewerage businesses and comply with National Competition Policy.

LWUs that achieve the outcomes required by these guidelines will have demonstrated best-practice management of these businesses.

Best-practice management involves a triple bottom line focus that provides a balanced view of the long-term sustainability of NSW water utilities. Triple bottom line accounting (social, environmental and economic) involves consideration of an LWU's business plan together with its social and environmental management practices.

Best-practice management of water supply and sewerage involves the following 6 criteria:

- Strategic Business Planning
- Pricing and Developer Charges (including Liquid Trade Waste Approvals)
- Demand Management
- Drought Management
- Performance Reporting
- Integrated Water Cycle Management

### 2.2 Best-Practice Criteria

#### **Strategic Business Planning**

The community and governments are demanding increased accountability, increased levels of service and efficiency from water utilities. In addition, regulatory authorities are imposing more stringent environmental and health regulations. A Strategic Business Plan addresses these issues and provides a framework within which the LWU can provide these services in an efficient manner and can continue to improve its performance. The business plan must include an appropriate financial plan.

A strategic business plan is an LWU's principal planning tool for its water supply and sewerage businesses. The business plan should address key strategic issues facing the LWU including:

#### a) Operating environment review

This should be a review of the key external operating environment facing the LWU including:

- Customer demands in terms of current and forecast water and sewer backlog areas, forecast growth requirements and anticipated service standards.
- Shareholder and regulatory requirements (environmental, OH&S, governance arrangements)

*The community and governments are demanding increased accountability, increased levels of service and efficiency.*

*A strategic business plan is an LWU's principal planning tool for its water supply and sewerage businesses. The business plan must include an appropriate financial plan.*



b) Asset Management Plan

Operation and Maintenance Plans

These plans should provide details of how the LWU plans to operate and maintain the assets of the business so as to meet the current and expected services that its community demands. The plans should also indicate how the LWU will comply with current and anticipated regulatory requirements.

Capital Works Plan

This plan should provide details of proposed works to renew, replace and augment current systems so as to maintain current services and meet the community's future service levels in terms of growth and anticipated standards and levels of service.

c) Key performance indicators

The strategic business plan should provide details of the key performance indicators that the business will assess its performance against. Primarily this should clearly identify the service standards (eg. water quality and availability, water losses, sewage treatment and discharge and service coverage) which the community can expect from the business.

d) Customer Service Plan

e) Levels of Service

f) Human Resources Plan

**Financial Plan**

A robust financial plan is a key element of an LWU's water supply or sewerage strategic business plan. The financial plan should clearly indicate how the business will finance the provision of services that meet levels of service negotiated with the community and the long-term commercial viability of the business. The plan should aim to achieve the lowest stable residential bills.

The financial plan should identify how the following costs and payments will be financed:

- Operation, maintenance and administration costs
- Capital renewals and replacement costs (including an acceptable rate of return)
- Capital augmentation costs (including an acceptable rate of return)
- Dividends and tax-equivalents

The strategic business plan and financial plan should also address the issues in the Check List in Appendix A.

### ***Pricing and Developer Charges (including Liquid Trade Waste Approvals<sup>2</sup>)***

Best-practice water supply, sewerage and liquid trade waste pricing requires transparent tariff structures and price levels that:

- Recover efficient costs of service provision, including an appropriate return on infrastructure capital.
- Provide appropriate signals to customers about the cost consequences of their service demands, in order to encourage efficient use of resources (both environmental and financial) associated with service provision.
- Are consistent with the principles of COAG and National Competition Policy reform agendas.
- Are simple for customers to understand and easy for the service provider to implement and administer.
- Have due regard for the social implications of price/tariff movements in terms of impacts on “vulnerable” customers.
- Support, where practical, government policy objectives in relation to regional development, employment, public health and welfare.

#### ***a) Water Supply Pricing***

With water becoming an increasingly scarce resource both locally and globally, it is appropriate that LWUs focus on influencing water demand through increasing emphasis on usage based pricing.

Best-practice **water supply** pricing requires that the usage charge recover those costs that vary with demand in the long-term (ie. long-run marginal cost), through a usage charge. These costs should include licence and extraction fees from external regulatory agencies and should reflect the indirect costs (ie. externalities) associated with these demands.

For some LWUs this cost may be such that all costs be recovered through a usage charge. Where an access charge is required, the access charge for larger non-residential customers should reflect their capacity requirements.

Where LWUs are responsible for both supply of fresh water and management of the wastewater (sewerage), integrated water cycle management (IWCM) strategies, including recycling, are becoming increasingly important. In this context, integrated pricing strategies could be considered. It is recognised that under the current Local Government Act this would not be possible since the Act requires that the water and sewerage ‘special purpose’ funds remain separate. Thus integrated water and sewerage pricing would require a legislative change.

*Best-practice pricing includes removal of land value from access charges and removal of significant cross subsidies.*

<sup>2</sup> As Gosford and Wyong Councils’ pricing and developer charges are regulated by IPART, these councils need only demonstrate compliance with the liquid trade waste approvals component of this criterion.



LWUs should adopt the following pricing principles when setting water supply tariffs:

1. Usage charges should be set to reflect the long-run marginal cost of water supply.
2. Residential water usage charges must be set to recover at least 75% of residential revenue.  
Non-residential water usage charges should be set to recover at least 50% of non-residential revenue.
3. To encourage water conservation, high water consuming residential customers should be subjected to a step price increase (expressed as an "excess water charge") of at least 50% for incremental usage above a specified threshold. This threshold should not exceed 450 kL/a per household.
4. LWUs must bill at least three times each year (and preferably every quarter) to improve the effectiveness of pricing signals.
5. In situations where large cross-subsidies for non-residential customers currently exist, LWUs should develop pricing strategies that target the removal of these cross-subsidies over a 5 year period.

With a higher proportion of water supply revenue obtained from usage charges, LWUs' revenue will be more greatly affected by annual weather variations. LWUs may therefore establish a revenue fluctuation reserve of up to 10% of turnover. LWUs can draw on this reserve to assist them to cope with wet years or drought water restrictions where water sales are lower than predicted. Dry years will result in a corresponding increase in demand and revenue.

For guidance in developing and implementing best-practice pricing tariffs refer to Appendix B.

#### *b) Sewerage Pricing*

Best-practice **sewerage** pricing involves a uniform annual sewerage bill for residential customers. For non-residential customers an appropriate sewer usage charge is required for the estimated volume discharged to the sewerage system, together with an access charge based on the capacity requirements that their loads place on the system relative to residential customers.

For guidance in developing and implementing best-practice pricing tariffs refer to Appendix B.

#### *c) Liquid Trade Waste Pricing & Approvals*

Best-practice **liquid trade waste** pricing requires appropriate annual trade waste fees and re-inspection fees for all liquid trade waste dischargers. These fees are in addition to the non-residential sewerage bill.

The LWU must also levy an appropriate trade waste usage charge for trade waste dischargers with prescribed pre-treatment<sup>3</sup>, and appropriate excess mass charges for large trade waste dischargers (> about 20 kL/d) and for dischargers of industrial waste.

<sup>3</sup> Prescribed pre-treatment comprises the equipment shown in Table 4.1 of 'Concurrence Guideline for Discharge of Liquid Trade Waste to the Sewerage System', DLWC 2002, or any pre-treatment facilities deemed appropriate by the LWU.



In order to properly manage dischargers of liquid trade waste to the sewerage system, LWUs must annually inspect the premises of each liquid trade waste discharger. To ensure they properly protect the environment and the sewerage system, LWUs must also adopt a Liquid Trade Waste Policy and issue a trade waste approval to each trade waste discharger connected to the sewerage system by June 2005.

#### d) *Developer Charges*

Developer charges are up-front charges levied to recover part of the infrastructure costs incurred in servicing new development or changes to existing development. Developer charges provide a source of funding for infrastructure and provide signals to the community regarding the cost of urban development.

In essence, where the costs of serving new urban development are in excess of the current and expected costs of servicing existing customers, then the additional costs should be recovered from new entrants in the form of an up-front contribution.

LWUs need to prepare a Development Servicing Plan (DSP)<sup>4</sup> with commercial water supply or sewerage developer charges in accordance with Developer Charges Guidelines for Water Supply, Sewerage and Stormwater, DLWC, December, 2002. The DSP must disclose any cross-subsidies.

Guidance on water supply and sewerage developer charges is provided in the Check List in Appendix B.

#### e) *Exceptions*

Some exceptions to the achievement of the required outcomes by an LWU are acceptable if these are outside the LWU's control, for example, where an LWU has in place a binding pre-existing agreement for tariffs with certain customers. These exceptional contracts must be replaced as soon as is legally practicable with best-practice tariffs. In such circumstances the LWU is deemed to have achieved substantial compliance provided it (1) discloses the number of such pre-existing binding agreements in a council meeting open to the public and (2) appends a note to this effect to its Statement of Compliance (page 26).

### ***Demand Management***

Appropriate Demand Management is essential for ensuring efficient use of our valuable water resources and to improve environmental outcomes as required by the *Water Management Act 2000*. Cost-effective demand management delivers significant environmental and social benefits and reduces capital and operating costs. Demand management is a key component of the strategic planning process. LWUs should identify and implement appropriate demand management measures to achieve cost and energy savings, protect the environment and reduce wastewater flows.

A key part of managing demand is understanding how and when water is used. A demand management program therefore requires metering of all customers supplied, together with demand analysis.

*Cost-effective demand management delivers significant environmental and social benefits and reduces capital and operating costs.*

<sup>4</sup> LWUs with growth of under 5 lots/a are exempted from preparing DSPs and need only prepare a brief Exemption Document in accordance with the Developer Charges Guidelines.

An LWU with growth of 5 or more lots/a that resolves not to levy developer charges needs to prepare a Policy Document in accordance with the Developer Charges Guidelines. However, such an LWU would fail to comply with these best-practice guidelines and is therefore ineligible for dividend payment from the surplus of its water supply or sewerage businesses. The LWU needs to tick the relevant "NO" box in Attachment 1 (pages 24 and 25).





Demand management measures that should be examined as part of a demand management program include:

- Active intervention – appropriate retrofit programs, rebates for water efficient appliances, rebates for rainwater tanks, effluent and stormwater re-use programs and building code programs (including the impact of the BASIX planning tool which will be mandatory for all new development in regional NSW from July 2005)
- Water pricing reform
- Community education
- Effluent and stormwater re-use
- Water loss and leakage reduction programs.

Each LWU should review its demand management measures every 2 years to ensure that it has an appropriate balance between demand and supply-side investment.

Guidance on demand management issues is provided in the Check List in Appendix C.

### ***Drought Management***

A fundamental responsibility of the manager of a water supply system is to soundly manage water use during droughts. Guidance on drought management issues is provided in the Check List in Appendix D.

### ***Performance Reporting***

Annual performance reporting and monitoring are required under National Competition Policy, are important for public accountability and have been strongly endorsed by the NSW Government, the Independent Pricing and Regulatory Tribunal, the Local Government Association and the Shires Association.

The NSW Government promotes continuous performance improvement to improve the quality and efficiency of services to the community. Performance monitoring provides valuable data for enabling an LWU to review and improve its performance by examining trends in its performance indicators and to benchmark its performance against that of similar utilities.

Guidance on performance reporting issues is provided in the Check List in Appendix E.

### ***Integrated Water Cycle Management***

Integrated water cycle management (IWCM) is the integrated management of the water supply, sewerage and stormwater services within a whole of catchment strategic framework having regard to catchment blueprints and other water management plans. IWCM is a framework to help identify water management problems, to address these problems, to determine the appropriate management responses and to manage the impacts of the problems so that social, environmental and economic objectives are met.

An IWCM Strategy has a long-term planning horizon. The first phase of the strategy (the Concept Study) defines the catchment, water resource and urban water issues faced by the LWU. Catchment issues such as floodplain management and acid sulphate soils may impact on the location of sewage treatment works (STWs), whilst water resource issues would include the changes to water access faced by LWUs under the *Water Management Act 2000* and urban water issues might include existing system deficiencies.



*IWCM is a framework to help identify water management problems and to determine appropriate management responses so that social, environmental and economic objectives are met.*

Once the issues are broadly defined, studies are undertaken for the second phase (the IWCM strategy) to better define issues and look at ways of managing them. Studies involve population and water demand projections, bulk supply and distribution analysis and management option development. This process results in the LWU adopting a long-term strategy for the integrated delivery of its water supply, sewerage and stormwater services to customers.

Such a strategy involves integrating planning and management of all components of the LWU's uses of the water cycle so that water is used optimally. A framework for integrated water cycle management is to be developed by the Department of Energy, Utilities and Sustainability in association with the Department of Infrastructure, Planning and Natural Resources and is planned to be available in 2004. Guidance on IWCM issues is provided in the Check List in Appendix F.



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## 3 Dividends

### 3.1 Introduction

A local government LWU is now permitted to pay an annual dividend from its water supply or sewerage businesses. Such a dividend may be paid for each business after the end of each financial year commencing in 2003/04.

However, as a pre-requisite to the payment of a dividend from the surplus in accordance with section 409 (5) of the *Local Government Act 1993*, an LWU must demonstrate achievement of the required outcome for each criterion in column (4) of Table 1 (page 18) on the basis of "substantial compliance".

An LWU must report its achievement of these outcomes in a note to its annual Special Purpose Financial Reports in accordance with Attachment 1 (page 26).

### 3.2 Criteria for Payment of Dividend

Achievement of the outcomes required by these guidelines will enable an LWU to demonstrate that its water supply and sewerage businesses are healthy and sustainable. This is essential to assure the local community that the LWU is managing the water supply and sewerage businesses responsibly and that the charges for these services will not increase unexpectedly.

It is recommended that each LWU verify that the overhead reallocation charge from its constituent council is calculated accurately and fairly before recommending that a dividend from its surplus be paid. An effective costing methodology, such as activity based costing, should be utilised when calculating the overhead reallocation charge, so as to allow recovery of only the LWU's share of the overhead costs.

Prior to paying a dividend from the surplus of a water supply or sewerage business, the LWU must obtain (1) an independent compliance audit report verifying that the LWU has demonstrated achievement of all the required outcomes set out in column (4) of Table 1; and (2) an independent financial audit report (conducted in accordance with Australian Accounting Standards and the requirements of the Ministers for Energy and Utilities and Local Government) that verifies the water supply and/or sewerage Special Purpose Financial Reports are a true and accurate reflection of the business and that the overhead reallocation charge to these businesses is a fair and accurate cost. The LWU must also resolve in a council meeting open to the public that it has achieved the required outcome for each of the 6 criteria in Table 1 of these guidelines.

LWUs must complete the Statement of Compliance and the Dividend Payment Form (page 26), the Statement of Financial Performance of Business Activities (page 14), append the above independent compliance audit report and unqualified independent financial audit report and forward these to the Department of Energy, Utilities and Sustainability **prior to** payment of a dividend from the surplus.

A county council which achieves the required outcomes may pay a dividend to its constituent councils on a pro-rata basis based on the number of assessments in each constituent council area.

LWUs facing major capital expenditure for new or replacement infrastructure should defer paying a significant dividend from their surplus as such a payment would directly increase the required Typical Residential Bill (TRB). Such capital expenditure in any financial year is defined as that which exceeds 3% of the current replacement cost (CRC) of the LWU's water supply or sewerage assets.



### 3.3 Amount of Dividend

A dividend is in the nature of a 'return on investment' paid to the 'shareholder' which in this case is the local government council responsible for managing and investing in the LWU's water supply and sewerage functions. The council may apply the dividend for any purpose under the *Local Government Act* or any other Act.

The dividend is in two parts: a dividend calculated for tax-equivalents and a dividend calculated from the surplus.

- All LWUs must pay the dividend for tax-equivalents.
- The dividend from the surplus may only be paid by LWUs which achieve the required outcome for each of the 6 criteria, as set out in Table 1 on page 18. The surplus excludes any government capital grants<sup>5</sup> for infrastructure (eg. towards the capital cost of backlog sewerage projects).

#### **Dividend for Tax-equivalents**

To ensure ongoing commercial viability<sup>6</sup>, prices should be set so annual cost recovery by a water supply or sewerage business includes taxes or tax-equivalents (excluding income tax). Accordingly, all NSW LWUs must make a dividend payment for the amount calculated as the annual tax-equivalent payment (excluding income tax) commencing in 2003/04.

The reported tax-equivalent expenses<sup>7</sup> (excluding income tax) for most NSW LWUs are under \$1/assessment. Accordingly, the upper limit for such dividend payments from each of an LWU's water supply or sewerage businesses is set at \$3/assessment. The council may apply the dividend for tax-equivalents for any purpose under the *Local Government Act* or any other act, including local community and charitable purposes.

Achievement of substantial compliance against the Best-Practice Guidelines is NOT a prerequisite for the payment of a dividend for tax-equivalents.

#### **Dividend from Surplus**

Provided that an LWU has demonstrated achievement of the required outcome for each criterion in column (4) of Table 1 (page 18) for its water supply or sewerage businesses, the LWU may pay an annual dividend from the surplus of that business.

The dividend payment is subject to the following preconditions:

- (1) The "Surplus Before Dividends" must be calculated on the basis shown in the Statement of Financial Performance of Business Activities on page 14; and
- (2) The dividend from surplus must not exceed 50% of this surplus in any one year; and

<sup>5</sup> Government capital grants include grants under the Country Towns Water Supply and Sewerage Program as well as any National Heritage Trust (NHT) funding. Such grants are "tax-free income" provided for investment in essential backlog infrastructure. Dividends will thus not be subsidised by government capital grants. Capital payments from other LWUs are also to be excluded.

<sup>6</sup> The 2003 National Competition Policy Assessment Framework for Water Reform, National Competition Council, February 2003 (Page 57 – Item 5 of Appendix C).

<sup>7</sup> As reported in LWUs' Special Purpose Financial Reports which are provided with the LWUs' Annual Financial Statements.



- (3) The dividend from surplus must not exceed the number of water supply or sewerage assessments<sup>8</sup> at 30 June of the relevant year multiplied by \$30<sup>9</sup>, less the dividend for tax-equivalents; and
- (4) The dividend from surplus may only be paid so that the total dividend from surplus paid in each rolling three year period does not exceed the total relevant surplus in the same period.

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<sup>8</sup> Refers to the total of occupied assessments and unoccupied assessments.

<sup>9</sup> The amount of \$30 is to be replaced by \$15 for a council which does not provide the full water supply service to its customers. Councils carrying out either a "bulk water supply" function or a "reticulation" function may therefore pay a maximum total dividend of \$15/assessment.



*Example Statement - Special Purpose Financial Reports***STATEMENT OF FINANCIAL PERFORMANCE OF BUSINESS ACTIVITIES – WATER SUPPLY (4)**  
for the year ending 30 June 04

	Year Ended 30 June 02 (Cat. ) \$'000	Year Ended 30 June 03 (Cat. ) \$'000	Year Ended 30 June 04 (Cat. ) \$'000
<b><u>REVENUE FROM OPERATIONS</u></b>			
Rates & Annual Charges			
User charges			
Fees			
Grants for non capital purposes			
Profit on sale of assets			
Other ordinary revenues			
<b>Total</b>	_____	_____	_____
<b><u>Less EXPENDITURE FROM OPERATIONS</u></b>			
Employee related costs			
Overheads (direct and allocated)			
Water Purchase charges			
Materials & contracts			
Loss on sale of assets			
Other operating expenses			
<b>Total</b>	_____	_____	_____
<b><u>NET OPERATING SURPLUS</u></b>	_____	_____	_____
<b><u>Less Depreciation</u></b>	_____	_____	_____
<b><u>Interest</u></b>			
<b><u>Dividend for Tax-Equivalents</u></b> (not exceeding \$3/assessment)			
<b><u>NET OPERATING SURPLUS BEFORE CAPITAL MOVEMENTS</u></b>	_____	_____	_____
<b><u>Add Developer Charges and Contributions (1)</u></b>			
<b><u>Less Capital Expenditure Adjustments</u></b>			
<b><u>SURPLUS BEFORE DIVIDENDS (2)</u></b>	_____	_____	_____
<b><u>Less Dividends (3)</u></b>			
<b><u>Add Governments capital grants and capital payments</u></b>			
<b><u>SURPLUS (NET INCREASE IN ASSETS)</u></b>	_____	_____	_____
<b><u>Add Opening Retained Earnings Adjustments</u></b>			
<b><u>CLOSING RETAINED EARNINGS</u></b>	_____	_____	_____
<b><u>NOTATION OF AMOUNTS UNPAID</u></b>			
❖ Tax Equivalent Payments (amount in excess of \$3/assessment)			
❖ Debt Guarantee Fees			
❖ Corporate Taxation Equivalent (30%) based on the Net Operating Surplus			

- Notes:** (1) Exclude Government capital grants and capital payments from other LWUs.  
(2) Relevant Surplus for purpose of determining dividend eligibility.  
(3) The dividend payment in (3) above is subject to the following preconditions:  
(a) The dividend from surplus must not exceed 50% of the surplus in (2) above in any one year; and  
(b) The dividend from surplus must not exceed the number of water supply or sewerage assessments at 30 June of the relevant year multiplied by \$30, less the dividend for tax-equivalents; the dividend for tax-equivalents must not exceed \$30/assessment; and  
(c) The dividend from surplus may only be paid so that the total dividend from surplus paid in each rolling three year period does not exceed the total relevant surplus in the same period.  
(4) A similar Statement of Financial Performance is required for sewerage services.

## 4 Abbreviations and Glossary

a	Annum.
ADWG '96	Australian Drinking Water Guidelines (National Health and Medical Research Council/Agriculture and Resource Management Council of Australian and New Zealand), 1996.
ADWF	Average dry weather flow. One of the design parameters for flow in sewers.
Annual Demand	The total water demand over a year. Used to size headworks components.
BOD	Biochemical oxygen demand. Used as a measure of the 'strength' of sewage.
Capital Cost	The present value (MEERA basis) of assets used to service development.
Capital Charge	Capital cost of assets per ET x Return on Investment (ROI) Factor.
COAG	Council of Australian Governments.
CPI	Consumer price index.
CRC	Current replacement cost.
CTWS&S	Country Towns Water Supply and Sewerage.
DEC	Department of Environment and Conservation.
Developer Charge (DC)	A charge levied on developers to recover part of the capital cost incurred in providing infrastructure for new development.
DM	Drought Management.
DEUS	Department of Energy, Utilities and Sustainability.
Discount Rate	The rate used to calculate the present value of money arising in the future.
DLWC	Department of Land and Water Conservation.
DIPNR	Department of Infrastructure, Planning and Natural Resources.
DSP	Development Servicing Plan.
EM	Environmental Management.
EP	Equivalent Persons (or equivalent population). Used as a design parameter for loadings of sewage treatment works.
EPA	Environment Protection Authority.
EPA, 1979	<i>Environmental Planning and Assessment Act 1979.</i>
ET	Equivalent tenement. A measure of the demand a development will place on the infrastructure in terms of the water consumption or sewage discharge for an average residential dwelling.
FINMOD	The NSW Financial Planning Model.
FP	Financial plan.
GST	Goods and services tax.
IWCM	Integrated Water Cycle Management.
IPART	Independent Pricing and Regulatory Tribunal, NSW.
kL	Kilolitre (1000 litres).





LGA 1993	<i>Local Government Act, 1993.</i>
LGA and SA	Local Government Association and Shires Association, NSW.
LWU	Local Water Utility.
MEERA	Modern Engineering Equivalent Replacement Asset. An asset value calculated on the basis that the asset is constructed at the time of valuation in accordance with modern engineering practice and the most economically viable technologies, which provides similar utility functions to the existing asset in service.
MEU	Ministry of Energy and Utilities.
ML	Megalitre (1,000,000 litres, or 1000 kilolitres).
NCP	National Competition Policy.
NPV	Net present value. The difference between the Present Value of a revenue stream and the Present Value of a cost stream.
OH&S	Occupational Health and Safety.
OH&S 2000	Occupational Health and Safety Act, 2000.
OMA	Operation, maintenance and administration (cost).
Peak Day Demand	The maximum demand in any one day of the year. Used to size water treatment works, service reservoirs trunk mains and pumping stations in the distribution system.
POEO Act	<i>Protection of the Environment Operations Act, 1997.</i>
PV	Present value. The value now of money, or ETs, in the future.
PWD	Public Works Department.
PWWF	Peak wet weather flow. One of the design parameters of flow in sewers.
Reduction Amount	The amount by which the capital charge is reduced to arrive at the developer charge. This amount reflects the capital contribution that will be paid by the occupier of a development as part of future annual charges.
ROI	Return on investment. Represents the income that is, or could be, generated by investing money.
SBP	Strategic Business Plan.
SS	Suspended solids, or the concentration of particles in sewage. Used as a measure of the 'strength' of sewage.
STW	Sewage treatment works.
TBL	Triple Bottom Line.
TRB	Typical residential bill.
UFW	Unaccounted-for-water.
WMA 2000	<i>Water Management Act, 2000.</i>
WTW	Water treatment works.

## PART B BEST-PRACTICE - PROCESS

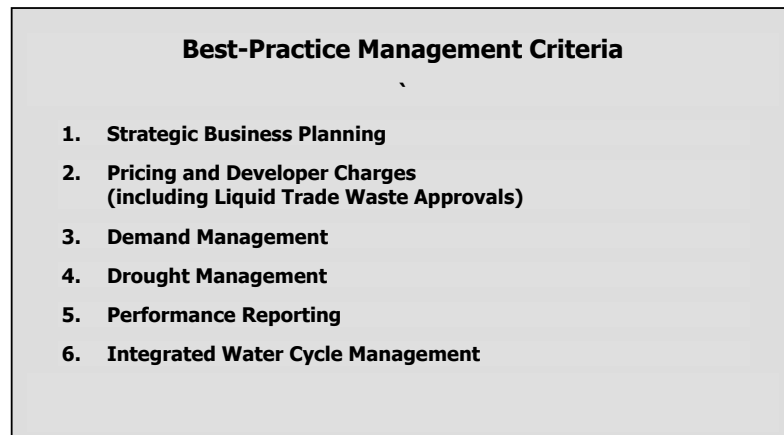
### 5 Eligibility Criteria

In order to be eligible to pay a dividend from its water supply or sewerage business, an LWU will need to demonstrate achievement of the required outcomes for each of the 6 criteria shown in Figure 1 below and in Table 1 overleaf.

For each business, LWUs will need to demonstrate achievement of each outcome listed in column (4) of Table 1 in order to be eligible to pay a dividend. In addition, the LWU will need to obtain a compliance audit report and an unqualified financial audit report in accordance with section 3.2 (page 11).

Where an LWU has not achieved substantial compliance with best practice pricing principles (criterion 2(b) in column (4) of Table 1), the Minister for Energy and Utilities may agree to waive the requirement to achieve these outcomes in a particular financial year where:

- (1) there are exceptional circumstances that justify such a waiver; and
- (2) the LWU has made substantial progress in achieving substantial compliance; and
- (3) the LWU has made a demonstrated commitment to achieve substantial compliance within a period not exceeding 12 months.



**Figure 1 Eligibility Criteria**

An LWU must report its achievement of these outcomes in a note to its annual Special Purpose Financial Report in accordance with Attachment 1 (page 26).



Table 1 – Required Outcomes for Best-Practice Criteria				
Criterion (1)	Required Outcome (2)	Date Required (3)	Indicators to Demonstrate Achievement of Outcome (4)	Tools & Resources (5)
1 Strategic Business Planning	A current, sound Strategic Business Plan (SBP) and a financial plan.	June 2004	<ul style="list-style-type: none"> <li>Current SBP that includes:                             <ul style="list-style-type: none"> <li>Operating environment review</li> <li>Asset management plan (operation, maintenance, capital works)</li> <li>Key performance indicators</li> <li>Customer service plan</li> <li>Levels of service</li> <li>Human resources plan</li> </ul> </li> <li>Address issues in Ref 1 and the Check List* in Appendix A.</li> </ul> <p>*Each check list is essentially a road map to assist LWUs to quickly address the issues covered by the relevant guidelines as well as any developments since publication of the guidelines.</p>	Appendix A  Demonstrate long term financial sustainability of the business to comply with NCP. Page 12 of Ref 14.
Financial Plan (FP)	A robust financial plan which includes a capital works plan.	June 2004	<ul style="list-style-type: none"> <li>A robust minimum 20 year financial plan which identifies the lowest required stable typical residential bill (TRB).</li> <li>Address issues in Ref 2 and the Check List in Appendix A.</li> </ul>	Appendix A  See above.
2 Pricing and Developer Charges (a)	Full cost-recovery for each of water supply and sewerage businesses.	June 2004	<ul style="list-style-type: none"> <li>Appropriate tariffs without significant cross-subsidies.</li> <li>Total annual income should be consistent with above financial plan. This generally results in a positive economic real rate of return (ERRR).</li> </ul>	Ref 4 Appendix B  Full cost-recovery with consumption based water supply pricing, trade waste charging and removal of cross-subsidies to comply with COAG and NCP. Pages 12, 17, 18, 22 of Ref 14.
(b)	Complying water supply tariff.	June 2004  June 2005 June 2005  June 2005	<ul style="list-style-type: none"> <li>Appropriate water usage charge/kL based on long-run marginal cost.</li> <li>Access charge relative to a customer's capacity requirements.</li> <li>No land value based charges (ie. rates).</li> <li>No "free" or "pre-paid" water allowance.</li> <li>Any large increases in non-residential customer bills phased in over 5 years.</li> <li>At least 75% of residential revenue generated through usage charges.</li> <li>To encourage water conservation, high water consuming residential customers should be subjected to a step price increase (expressed as an "excess water charge") of at least 50% for incremental usage above a specified threshold. This threshold should not exceed 450 kL/a per household.</li> <li>At least 50% of non-residential revenue generated through usage charges.</li> </ul>	Page 9 Ref 4 Page 10 Ref 4 Appendix B
(c)	Complying sewerage tariff.	June 2004	<ul style="list-style-type: none"> <li>Appropriate residential tariff.</li> <li>No land value based charges (ie. rates).</li> <li>Non-residential                             <ul style="list-style-type: none"> <li>Two-part tariff.</li> <li>Appropriate sewer usage charge/kL.</li> <li>Access charge that is reflective of the cost of providing these sewerage services.</li> </ul> </li> </ul> <p>Any large increases in non-residential customer bills phased in over 5 years.</p>	Page 28 Ref 4  Page 29 Ref 4 Page 29 Ref 4 Page 31 Ref 4
(d)	Complying liquid trade waste fees and charges for all liquid trade waste dischargers.	June 2004	<ul style="list-style-type: none"> <li>Annual trade waste fee for all liquid trade waste dischargers.</li> <li>Trade waste usage charge for dischargers with prescribed pre-treatment.</li> <li>Excess mass charges for large dischargers and industrial waste.</li> </ul>	Page 30 Ref 4 Page 34 Ref 4 Page 36 Ref 4

## Best Practice Management of Water Supply and Sewerage Guidelines

Eligibility Criteria

<b>Table 1 – Required Outcomes for Best-Practice Criteria</b>					
<b>Criterion (1)</b>	<b>Required Outcome (2)</b>	<b>Date Required (3)</b>	<b>Indicators to Demonstrate Achievement of Outcome (4)</b>	<b>Tools &amp; Resources</b>	<b>COAG/NCP/Statutory Requirements (5)</b>
Developer Charges (DC) (e)	<b>Commercial Developer Charges.</b>	June 2004	<ul style="list-style-type: none"> <li>Development Servicing Plan<sup>+</sup> in accordance with Ref 6, with commercial developer charges/developer charges.</li> <li>LWUs with growth of under 5 lots/a exempted.</li> </ul>	Page iv Ref 6 Appendix B	<i>Sections 305 to 307 of Water Management Act, 2000.</i> <i>Section 64 of Local Government Act, 1993.</i>
Liquid Trade Waste Approvals (f)	<b>Liquid trade waste approval</b> issued to each trade waste discharger.	June 2005	Liquid Trade Waste approvals issued. Liquid Trade Waste Policy adopted.	Ref 5 Appendix A	COAG and NCP – page 18 Ref 14 Section 68 of Local Government Act 1993, <i>Local Government (Approvals) Regulation 1999, Local Government (Water Services) Regulation 1999.</i>
3 Demand Management (DM)	<b>Sound demand management</b> in place.	June 2004	<ul style="list-style-type: none"> <li>Sound demand management implemented.</li> <li>Identification of most cost-effective demand management initiatives.</li> <li>Subsidisation and promotion of at least two of the identified demand management initiatives.</li> <li>Include demand monitoring, leakage reduction and community education.</li> </ul>	Appendix C	COAG and NCP Page 52 of Ref 14 <i>Water Management Act 2000.</i>
4 Drought Management	<b>Sound drought management</b> in place.	June 2005	<ul style="list-style-type: none"> <li>Sound drought management implemented.</li> <li>Include data on existing system and your LWU's drought management planning.</li> </ul>	Appendix D	<i>Water Management Act 2000.</i> <i>Local Government Act, 1993.</i>
5 Performance Reporting	<b>Completed performance reporting forms</b> to DEUS by 31 October Review and report on 2-page LWU Performance Report.	Oct 2003	<ul style="list-style-type: none"> <li>Reporting forms provided to DEUS by 31 October each year.</li> <li>Report on review of your LWU's 2-page Performance Report provided to Council (water, sewerage).</li> <li>Statement of Compliance to be submitted to DEUS prior to payment of dividend from surplus (including Dividend Payment Form, Statement of Financial Performance of Business Activities, a Compliance Audit Report and an unqualified independent Financial Audit Report).</li> </ul>	Ref 3 Appendix E	COAG and NCP Page 31 of Ref 14
6 Integrated Water Cycle Management (IWCM)	<b>Sound IWCM implemented.</b>	June 2005 June 2006	<ul style="list-style-type: none"> <li>Substantial commencement of sound Integrated Water Cycle Management.</li> <li>Completion and implementation of Integrated Water Cycle Management Strategy.</li> </ul>	Ref 8 Appendix F	COAG and NCP Page 43 of Ref 14. <i>Water Management Act 2000.</i>

## References for Table 1

1. *Strategic Business Plans for Water Supply and Sewerage: Guidelines for Preparation*, Public Works, NSW, 1993.
2. *NSW Financial Planning Model (FINMOD) – Overview of Financial Planning, How FINMOD Works, User Manual*, Department of Land and Water Conservation, NSW, 2000.
3. *2001/02 NSW Water Supply and Sewerage Performance Monitoring*, Ministry of Energy and Utilities/Local Government Association and Shires Association, NSW.
4. *Water Supply, Sewerage and Trade Waste Pricing Guidelines*, Department of Land and Water Conservation, NSW, 2002.
5. *Concurrence Guideline for Liquid Waste Discharges to the Sewerage System*, Department of Land and Water Conservation, NSW, 2002.
6. *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*, Department of Land and Water Conservation, NSW, 2002.
7. *Environmental Management Systems – Specification with guidelines for use*, International Standard ISO 14001.
8. *Integrated Water Cycle Management for NSW Local Water Utilities*, Department of Energy, Utilities and Sustainability, NSW (to be released 2004).
9. *Wise Water Management – A Demand Management Manual for Local Water Utilities*, Water Services Association of Australia, 1998.
10. *Planning Community Involvement in Water and Sewerage Projects*, Public Works, NSW, 1995.
11. *Occupational Health and Safety Act 2000 and Occupational Health and Safety Regulation 2001*.
12. *Asset Management Guidelines for Water Supply and Sewerage*, Public Works, NSW, 1991.
13. *Protection of the Environment Operations Act*, 1997.
14. *The 2003 National Competition Policy Assessment Framework for Water Reform*, National Competition Council, February 2003.



## 6 Payment of Dividend

**Eligibility for Payment** – Check lists have been prepared to provide guidance for LWUs in addressing best-practice management (refer to Appendices A to F). It is NOT necessary to address the issues in Appendices B to F to be eligible for payment of a dividend. LWUs are required to demonstrate achievement of the required outcome for each criterion in column (4) of Table 1 (page 18) in order to be eligible for payment of a dividend from the surplus.

LWUs must also complete all the boxes in Item 1 of Attachment 1 (pages 24 and 25).

**Statement of Compliance** – To be eligible for payment of a dividend from the surplus, LWUs must complete the Statement of Compliance shown in Attachment 1 (page 26), and append a compliance audit report and an unqualified independent financial audit report.

**Amount of Dividend** - If your LWU is eligible to pay a dividend from the surplus, determine the maximum dividend payable from the surplus (Item 3 in pages 24 and 25 of Attachment 1).

**Public Disclosure** – For each of water supply and sewerage, prior to paying a dividend from the surplus, an LWU must resolve in a council meeting open to the public that it has achieved the required outcome for each criterion set out in Table 1 of these guidelines.

**Reporting to Minister** – LWUs that are eligible to pay a dividend from the surplus and elect to do so, must complete the Dividend Payment form shown in Attachment 1 (page 26) and forward the Statement of Compliance, the Dividend Payment form and the Statement of Financial Performance of Business Activities (page 14), together with a compliance audit report and an unqualified independent financial audit report to the Department of Energy, Utilities and Sustainability prior to payment of the dividend. The Department will advise the LWU whether it may pay the proposed dividend from the surplus within 5 working days. The Department will also audit LWU compliance with these guidelines and will report to the Minister for Energy and Utilities.



Payment of Dividend

Best Practice Management of Water Supply and Sewerage Guidelines

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## ATTACHMENT 1 – PAYMENT OF A DIVIDEND

As all LWUs must pay a dividend for tax-equivalents (Item 2 overleaf), the total dividend paid for each of water supply and sewerage must be not less than the dividend for tax-equivalents.

You can check your LWU's eligibility for payment of a dividend from the surplus by completing boxes (1) to (6) in Item 1 overleaf for water supply and boxes (1) to (4) on page 25 for sewerage. If your LWU is eligible to pay a dividend from the surplus, determine the maximum dividend payable from the surplus (Item 3 overleaf).

Prior to the payment of a dividend from the surplus, the LWU must obtain an independent compliance audit report (page 11) and an unqualified independent financial audit report (page 11).

If your LWU has elected to pay a dividend from the surplus, complete the Statement of Compliance (page 26), complete the Dividend Payment Form (page 26) and the Statement of Financial Performance of Business Activities (page 14). Forward these, together with the independent compliance audit report and the unqualified independent financial audit report to the Department of Energy, Utilities and Sustainability (DEUS) prior to payment of the dividend.



*Note to Special Purpose Financial Report*

## Water Supply - Payment of Dividend for 2003/04

	Achievement?	
	Yes	No
<b>1. Required Outcomes for 6 Criteria<sup>a</sup></b>		
(1) Complete Strategic Business Plan (including Financial Plan)	<input type="checkbox"/>	<input type="checkbox"/>
(2) Pricing with full cost-recovery, without significant cross subsidies (Item 2(a) in Table 1)	<input type="checkbox"/>	<input type="checkbox"/>
Complying charges (a) Residential (Item 2(b) in Table 1)	<input type="checkbox"/>	<input type="checkbox"/>
(b) Non-residential (Item 2(b) in Table 1)	<input type="checkbox"/>	<input type="checkbox"/>
DSP with Commercial Developer Charges (Item 2(e) in Table 1)	<input type="checkbox"/>	<input type="checkbox"/>
(3) Complete performance Reporting Form by 31 October each year	<input type="checkbox"/>	<input type="checkbox"/>
(4) Sound Demand Management implemented	<input type="checkbox"/>	<input type="checkbox"/>
(5) Sound Drought Management implemented (by June 2005)	<input type="checkbox"/>	<input type="checkbox"/>
(6) Integrated Water Cycle Management Strategy (by June 2005)	<input type="checkbox"/>	<input type="checkbox"/>
<b>2. Dividend for Tax-Equivalents<sup>b</sup></b>		
(1) Calculated Tax-Equivalents (TE)	<input style="width: 100%;" type="text"/>	
(2) No. of assessments multiplied by \$3/assessment	<input style="width: 100%;" type="text"/>	
<b>Dividend for TE</b> (lesser of (1) and (2))	<input style="width: 100%;" type="text"/>	
<b>3. Dividend from Surplus<sup>c</sup></b>		
(1) 50% of 'Surplus before Dividends' (from <i>Special Purpose Financial Report</i> – Statement of Financial Performance of Water Supply Business Activities).	<input style="width: 100%;" type="text"/>	
(2) No. of assessments multiplied by \$30/assessment, less Dividend for TE	<input style="width: 100%;" type="text"/>	
(3) Cumulative 'Surplus before Dividends' for the 3 years to 30 June 2004, less the cumulative Dividends Paid for the 2 years to 30 June 2003 (from above Statement of Financial Performance of Water Supply Business Activities).	<input style="width: 100%;" type="text"/>	
<b>Maximum Dividend from Surplus</b> (least of (1), (2) and (3))	<input style="width: 100%;" type="text"/>	

a For a Local Water Utility (LWU) to be eligible for payment of a dividend from the surplus of its water supply business, it must be able to answer "yes" for each of items (1) to (6) above. Achievement of (1), (2), (3) and (4) is required by 30 June 2004, achievement of (5) and (6) is required by 30 June 2005.

b All local government LWUs must pay this dividend for tax-equivalents.

c The maximum dividend from surplus is the maximum dividend payable by an LWU which has demonstrated its achievement of the outcomes required in Table 1 of the *Guidelines for Best-Practice Management of Water Supply and Sewerage*. LWUs should also address the considerations in section 3.2 of the Guidelines.

Note to Special Purpose Financial Report

## Sewerage - Payment of Dividend for 2003/04

	Achievement?	
	Yes	No
<b>1. Required Outcomes for 4 Criteria<sup>a</sup></b>		
(1) Complete Strategic Business Plan (including Financial Plan)		
(2) Pricing with full cost-recovery, without significant cross subsidies (Item 2(a) in Table 1)		
Complying charges (a) Residential (Item 2(c) in Table 1)		
(b) Non-residential (Item 2(c) in Table 1)		
(c) Trade Waste (Item 2(d) in Table 1)		
DSP with Commercial Developer Charges (Item 2(e) in Table 1)		
Liquid Trade Waste Approvals <sup>b</sup> and Policy (by June 2005) (Item 2(f) in Table 1)		
(3) Complete Performance Reporting Form by 31 October each year		
(4) Integrated Water Cycle Management Strategy (by June 2005)		
<b>2. Dividend for Tax-Equivalents<sup>c</sup></b>		
(1) Calculated Tax-Equivalents (TE)		
(2) No. of assessments multiplied by \$3/assessment		
<b>Dividend for TE</b> (lesser of (1) and (2))		
<b>3. Dividend from Surplus<sup>d</sup></b>		
(1) 50% of 'Surplus before Dividends' (from <i>Special Purpose Financial Report</i> – Statement of Financial Performance of Sewerage Business Activities).		
(2) No. of assessments multiplied by \$30/assessment, less Dividend for TE		
(3) Cumulative 'Surplus before Dividends' for the 3 years to 30 June 2004, less the cumulative Dividends Paid for the 2 years to 30 June 2003 (from above Statement of Financial Performance of Sewerage Business Activities).		
<b>Maximum Dividend from Surplus</b> (least of (1), (2) and (3))		

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a For a Local Water Utility (LWU) to be eligible for payment of a dividend from the surplus of its sewerage business, it must be able to answer "yes" for each of items (1) to (4) above. Achievement of (1), (2) (excluding liquid trade waste approvals and policy) and (3) is required by 30 June 2004, achievement of (4) and trade waste approvals and policy is required by 30 June 2005.

b LWUs must have *resolved* to issue a Trade Waste Approval to each liquid trade waste discharger connected to the LWU's sewerage system by no later than June 2005.

c All local government LWUs must pay this dividend for tax-equivalents.

d The maximum dividend from surplus is the maximum dividend payable by an LWU which has demonstrated its achievement of the outcomes required in Table 1 of the *Guidelines for Best-Practice Management of Water Supply and Sewerage*. LWUs should also address the considerations in section 3.2 of the Guidelines.

*Note to Special Purpose Financial Report*

COUNCIL OF/COUNCIL OF THE CITY OF .....  
**STATEMENT OF COMPLIANCE\***  
**for the year ended 30th June 2004**

	YES	NO
<b>WATER SUPPLY</b>		
Council's Water Supply Business has demonstrated achievement of each of the outcomes in column (4) of Table 1 of the <i>Guidelines for Best-Practice Management of Water Supply and Sewerage</i> <sup>1</sup> .	<input type="checkbox"/>	<input type="checkbox"/>
Council has resolved in a council meeting open to the public that it has complied with the Best-Practice Management Guidelines <sup>1</sup> for its Water Supply business.	<input type="checkbox"/>	<input type="checkbox"/>
<b>SEWERAGE</b>		
Council's Sewerage Business has demonstrated achievement of each of the outcomes in column (4) of Table 1 of the <i>Guidelines for Best-Practice Management of Water Supply and Sewerage</i> <sup>1</sup> .	<input type="checkbox"/>	<input type="checkbox"/>
Council has resolved in a council meeting open to the public that it has complied with the Best-Practice Management Guidelines <sup>1</sup> for its Sewerage business.	<input type="checkbox"/>	<input type="checkbox"/>
<b>AUDIT REPORTS</b>		
Council has received and attached an independent compliance audit report verifying that the LWU has demonstrated achievement of the required outcomes in Table 1 of the Best-Practice Guidelines <sup>1</sup> .	<input type="checkbox"/>	<input type="checkbox"/>
Council has received and attached an unqualified independent financial audit report of its water supply/sewerage Special Purpose Financial Reports.	<input type="checkbox"/>	<input type="checkbox"/>

**COUNCIL OF/COUNCIL OF THE CITY OF .....  
 DIVIDEND PAYMENT FORM\***  
**for the year ended 30<sup>th</sup> June 2004**

	2004
<b>WATER SUPPLY</b>	
Dividend paid for tax-equivalents	<input type="checkbox"/>
Dividend paid from surplus	<input type="checkbox"/>
Total Dividend Paid for Water Supply Business	<input type="checkbox"/>
<b>SEWERAGE</b>	
Dividend paid for tax-equivalents	<input type="checkbox"/>
Dividend paid from surplus	<input type="checkbox"/>
Total Dividend Paid for Sewerage Business	<input type="checkbox"/>

\* The Statement of Compliance and the Dividend Payment Form should only be forwarded to the Department of Energy, Utilities and Sustainability if Council has resolved to pay a dividend from the surplus.

<sup>1</sup> *Guidelines for Best-Practice Management of Water Supply and Sewerage*, Department of Energy, Utilities and Sustainability, NSW.

## Appendix A - Water Supply and Sewerage: Strategic Business Planning & Financial Planning Check List – April 2004

The strategic business plan is a Local Water Utility's (LWU's) principal planning tool for its water supply and sewerage businesses.

This check list is essentially a road map and has been prepared to assist LWUs to quickly address the issues in a sound business plan as well as a number of more recent developments in strategic business planning. LWUs should update their financial plans annually and their strategic business plans after 3 years.

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### Strategic Business Plan – Check List

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Topic	Outcome Achieved
1. Executive Summary	Covers all major issues, main actions, price path.  Includes a <i>plan</i> of the system.
2. Operating Environment Review	All <i>principal issues</i> identified are <i>addressed</i> in the SBP.
3. Performance Indicators	LWU's 2001/02 or later TBL Performance Report included.  Review of LWU's TBL Performance Report included, together with proposed corrective actions (refer to example on page xxx of Ref 3). This review should be consistent with the SBP.
4. Levels of Service (LOS)	Are <i>clear, meaningful and measurable</i> .  A compliance monitoring and reporting system is in place.  Target LOS have been identified.
5. Service delivery	Options examined and conclusions reported.
6. Customer Service Plan	<i>Business objectives</i> developed for each key result area.
6.1 Unserviced areas	<i>All serviced and unserviced towns and villages</i> listed showing the population and whether the present facilities are satisfactory.  Proposals for serving unserviced towns are included and discussed in the business plan and financial plan.
6.2 Pricing, Developer Charges, Trade Waste	
A. Full Cost Recovery	Full cost recovery for each of the water supply and sewerage businesses (Ref 4, page 7). The total annual income should be consistent with the financial plan in Item 10. This generally results in a positive economic real rate return (ERRR).

## Strategic Business Plan – Check List

Topic	Outcome Achieved
B. Water Supply: Residential	Pay-for-use: appropriate water usage charge/kL with no water allowance; independent of land value. Significant increase in the water usage charge/kL (50% to 100%) for discretionary consumption (Item 2b of Table 1 of these guidelines).
C. Sewerage: Residential	Uniform annual sewerage bill per residential property, independent of land value (Ref 4, page 28).
D. Water Supply: Non-Residential	Two-part tariff with appropriate water usage charge/kL and access charge.
E. Sewerage: Non-Residential	Two-part tariff with appropriate sewer usage charge/kL and sewer discharge factor. Access charge reflective of the cost of providing these sewerage services.
F. Liquid Trade Waste Pricing	Appropriate trade waste fees and charges for <u>all</u> liquid trade waste dischargers (Ref 4, page 30). Trade waste usage charge for dischargers with prescribed pre-treatment (Ref 4, page 34). Excess mass charges for large dischargers and industrial waste (Ref 4, page 36).
G. Liquid Trade Waste Policy and Approvals	Trade Waste Policy adopted by 30 June 2005. Trade waste approval issued to <u>each</u> liquid trade waste discharger (Ref 5).
H. Developer Charges	Development Servicing Plan <sup>+</sup> with commercial developer charges; disclosure of any cross-subsidies (Ref 6, page iv). + LWUs with a growth of under 5 lots/a exempted.
6.3 Environmental Management	Summary of LWU's Environmental Management achievements is included.
6.4 Integrated Water Cycle Management	Summary of integrated water cycle management is included.
6.5 Demand Management	Summary of LWU's demand management is included.
6.6 Drought Management	Summary of LWU's drought management is included.
6.7 Community Consultation	Summary of community consultation is included
6.8 Occupational Health & Safety	Summary of LWU's occupational health and safety achievements is included.
7. Asset Management Plan	Summary of changes required to O & M procedures (eg. to operate new facilities) are reported, including impact on OMA expenditures. Asset register completed (Ref 13). Summary of best-practice operation plan is included (Ref 13). Summary of best-practice maintenance plan is included. Also report your LWU's implementation of any DEUS section 61 recommendations for corrective action with respect to water and sewage treatment works and dams. <b>Capital works program</b> included showing a tabulation of proposed annual expenditure for each project, including cost-effective asset renewals. Capital works program is integrated with the strategic business plan to meet the target levels of service. <i>Template is available from DEUS.</i>

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## Strategic Business Plan – Check List

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Topic	Outcome Achieved
	All major projects in the capital works program are discussed in the SBP and are consistent with the business objectives.
8. Human Resources Plan	<b>Organisation Chart</b> is included.
9. Action Plan	Actions listed and show the person responsible, <b>completion time and estimated cost</b> . The costs of the actions are included in the capital works program or in OMA expenditures.

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## Financial Plan – Check List

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Topic	Outcome Achieved
10. Objective	The financial plan includes all foreseeable costs and income and achieves <b>the lowest uniform level of stable typical residential bills</b> (in Year 1\$) to meet the levels of service negotiated with the community.  Long-term <b>financial sustainability is demonstrated</b> to comply with National Competition Policy.
11. Financial Model	LWUs using the FINMOD software for their financial plan have used the latest version (FINMOD 2.1 or FINMOD 4.0).
12. Timeframe	The financial plan covers a period of at least <b>20 years</b> .
13. Growth and Number of Assessments	Input accurate numbers of existing residential and non-residential assessments.  New assessments for backlog water supply or sewerage projects are included in the growth projections.  Growth projections input into your LWU's financial planning are consistent with the SBP document.
14. Rates	Appropriate values have been used. Such rates in January 2004 were:  Inflation 2.5% pa Investment 5.5% pa Borrowing 6.5% pa
15. Grants	No capital works grants are assumed after about 2011/12.

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## Financial Plan – Check List

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Topic	Outcome Achieved
16. Forecast Data	<p>Forecast data, such as future operation, maintenance and administration (OMA) costs and the revenue split (between annual residential income and annual non-residential income), have been carefully considered as part of the LWU's asset management planning.</p> <p>Common errors are</p> <ul style="list-style-type: none"> <li>● Neglecting to include increases in operation and maintenance costs associated with proposed capital works such as backlog sewerage or new water and sewage treatment works.</li> <li>● Neglecting to make appropriate provision for dividend and tax-equivalent payments (excluding income tax).</li> <li>● Neglecting to include future increases in non-residential water supply and sewerage income as a result of removing existing cross-subsidies.</li> <li>● Neglecting to include future increases in trade waste income from introducing appropriate trade waste fees and charges for <u>all</u> liquid trade waste dischargers.</li> <li>● Neglecting to include future commercial developer charges.</li> <li>● Neglecting to include the cost of actions in the SBP.</li> </ul> <p>Increases or reductions to OMA costs have been discussed in the SBP document.</p>
17. Residential Bills and Developer Charges	The financial plan has balanced typical residential bills and developer charges.
18. Results	The input data, key output graphs (No. of assessments, capital works expenditure, typical residential bill, cash and investments and debt outstanding) and the full projected results and financial statements ie. Statement of Financial Performance, Statement of Financial Position and Cash Flow Statement are included for the preferred case. Results are presented in Year 1\$ (ie. not inflated \$).
19. Sensitivity Analysis	<p>Sensitivity Analysis has been carried out and results are included.</p> <p>A description of the cases analysed, and the reasons for their selection have been included in the SBP document.</p>
20. Price Path	Price path adopted for the typical residential bill over the next 5 years in Year 1\$. This provides some price certainty to the LWU's customers.

## REFERENCES

1. *Strategic Business Plans for Water Supply and Sewerage: Guidelines for Preparation*, Public Works, NSW, 1993.
2. *NSW Financial Planning Model (FINMOD) – Overview of Financial Planning, How FINMOD Works, User Manual*, Department of Land and Water Conservation, NSW, 2000.
3. *2001/02 NSW Water Supply and Sewerage Performance Monitoring*, Ministry of Energy and Utilities/Local Government Association and Shires Association, NSW.
4. *Water Supply, Sewerage and Trade Waste Pricing Guidelines*, Department of Land and Water Conservation, NSW, 2002.
5. *Concurrence Guideline for Liquid Waste Discharges to the Sewerage System*, Department of Land and Water Conservation, NSW, 2002.
6. *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*, Department of Land and Water Conservation, NSW, 2002.
7. *Environmental Management Systems – Specification with guidelines for use*, International Standard ISO 14001.
8. *Integrated Water Cycle Management for NSW Water Utilities*, Department of Energy, Utilities and Sustainability, NSW (to be released 2004).
9. *Wise Water Management – A Demand Management Manual for Local Water Utilities*, Water Services Association of Australia, 1998.
10. *Water Supply and Sewerage Management Guidelines*, NSW Government, 1991.
11. *Planning Community Involvement in Water and Sewerage Projects*, Public Works, NSW, 1995.
12. *Occupational Health and Safety Act 2000 and Occupational Health and Safety Regulation 2001*.
13. *Asset Management Guidelines for Water Supply and Sewerage*, Public Works, NSW, 1991.

## NOTES

1. Full achievement of the required outcome for Item 6.2G is required for meeting the liquid trade waste approvals requirements in Table 1 on page 18 of the Best-Practice Guidelines.
2. For further information, assistance and copies of the reference documents, please contact Sam Samra, Manager Water Utility Performance on 9895 5907 or [Sam.Samra@deus.nsw.gov.au](mailto:Sam.Samra@deus.nsw.gov.au)
3. LWUs should continue to forward a copy of their completed strategic business plan and financial plan to DEUS.

Manager Water Utility Performance  
Department of Energy, Utilities and Sustainability  
Level 17  
227 Elizabeth Street  
Sydney NSW 2000



Appendix A

**Best Practice Management of Water Supply and Sewerage Guidelines**

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## Appendix B – Pricing and Developer Charges

### Section 1: Water Supply, Sewerage and Trade Waste Pricing

#### Check List – April 2004

Best-practice pricing of Local Water Utility (LWU) water supply, sewerage and liquid trade waste services is fundamental to effective management of water supply and sewerage businesses. Appropriate tariffs ensure fair pricing of services, removal of significant cross-subsidies and protection of our valuable water resources and environment.

The main reference for the implementation of best-practice pricing is Ref 1 – *Water Supply, Sewerage and Trade Waste Pricing Guidelines*.

To comply with the COAG Strategic Framework for Water Reform and National Competition Policy, each LWU needs to achieve:

- Full cost-recovery for its water supply business and for its sewerage business (Ref 1, page 7).
- Appropriate water supply tariff with appropriate water usage/kL, no land value (ie. rates) in charges, no water allowance.
- Appropriate sewerage tariff with a uniform annual sewerage bill per residential property (Ref 1, page 28), two-part tariff with appropriate sewer usage charge/kL for non-residential customers (Ref 1, page 29, 31) and no land value (ie. rates) in sewerage charges (Ref 1, page 31).
- Annual trade waste fee for all liquid trade waste dischargers (Ref 1, page 30), trade waste usage charges for dischargers with prescribed pre-treatment (Ref 1, page 34) and excess mass charges for large dischargers of industrial waste (Ref 1, page 36).

The NSW Water Supply Pricing software and the NSW Sewerage and Trade Waste Pricing Software will simplify development and analysis of tariff options. In addition, the Typical Residential Bill (TRB) and the total annual income should be on the basis of a sound financial plan.

This check list is essentially a road map to assist LWUs to quickly address the issues in Ref 1. It also highlights common deficiencies in tariffs. Each LWU should use the check list to ensure that it has addressed the necessary issues. Each LWU should also annually review its tariffs to ensure they are raising the required income for its water supply and sewerage businesses.

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## Water Supply Pricing – Check List

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Topic	Outcome Achieved
1. Tariff	<p>A. Two-part tariff with an appropriate water usage charge/kL based on the long-run marginal cost.</p> <p>B. To encourage water conservation, high water consuming residential customers should be subjected to a step price increase (expressed as an “excess water charge”) of at least 50% for incremental usage above a specified threshold. This threshold should not exceed 450 kL/a per household.</p> <p>C. Does <u>not</u> involve a water allowance, land value based charges (rates) or a declining block tariff (Ref 1, page 12).</p> <p>D. Raises required income to ensure full cost-recovery, the long-term financial sustainability of the water supply business and minimising of customer bills (Ref 1, page 7).</p> <p>E. Residential water use charges should recover at least 75% of residential revenue.</p> <p>F. Non-residential water usage charges should recover at least 50% of non-residential revenue.</p>
2. Access charge	Annual access charges reflective of customer’s demands on the system.
3. Residential Units	<p>Each <b>strata title</b> unit treated as a single residential assessment with a 20mm service connection (Ref 1, page 14). Pensioners can thus receive the \$87.50 pensioner rebate from their bill (sections 501, 502 and 575 (3) (b) of <i>Local Government Act 1993</i>).</p> <p><b>Company or community title</b> units treated as a single non-residential customer under a <b>two-part tariff</b>. However, under an <b>inclining block tariff</b> such properties must be disaggregated into the appropriate number of units and treated as described above for strata title units (Ref 1, page 14).</p>
4. Tariff implementation	<p>A. Examined impact of new tariff on the bills for representative customers (Ref 1, page 20).</p> <p>B. Undertaken community consultation.</p> <p>C. Any phasing-in of charges should be on the basis of the adopted best-practice tariff.</p> <p>D. Phased-in increases over 5 years for non-residential customers facing large increases (Ref 1, page 21).</p>
5. Data Management	Appropriate customer data compiled, including customer identifier, metered annual water consumption, service connection size and customer category (Ref 1, page 52).

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## Sewerage and Trade Waste Pricing – Check List

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Topic	Outcomes Achieved
6. Sewerage Tariff	<p>A. Uniform annual sewerage bill per residential property (Ref 1, page 28).</p> <p>B. Two-part sewerage tariff for non-residential customers (Ref 1, page 29).</p> <p>C. Does <u>not</u> involve land value based tariffs (rates), uniform annual charges or declining block tariffs (Ref 1, page 27).</p> <p>D. Raises required income to ensure full cost-recovery, the long-term financial sustainability of the sewerage business and minimising of customer bills (Ref 1, page 7).</p>
7. Sewer Usage Charge	Sewer usage charge/kL reflects the long-run marginal cost of sewerage business (Ref 1, page 29).
8. Sewerage Access Charge	Annual non-residential sewerage access charge reflective of customer's peak load on the system (Ref 1, page 31).
9. Residential Units	<p>Each <b>strata title</b> residential unit or flat treated as a residential assessment (ie. no distinction between houses and flats)</p> <p>A block of <b>company or community title</b> units or flats treated as a single non-residential assessment.</p>
10. Sewer Discharge Factor	The volume of sewage discharged to the sewerage system may be estimated using a <b>sewer discharge factor</b> times the metered water consumption (Ref 1, pages 29 and 93).
11. Trade Waste Tariffs	<p>A. All liquid trade waste dischargers requiring <b>nil or minimal pre-treatment</b> pay an annual trade waste fee and a re-inspection fee, where required (Ref 1, page 33).</p> <p>B. All liquid trade waste dischargers with <b>prescribed pre-treatment</b> pay an annual trade waste fee and a re-inspection fee (where required) together with an appropriate trade waste usage charge/kL for all liquid trade waste discharged to the sewerage system (Ref 1, page 34).</p> <p>C. All <b>large liquid trade waste dischargers</b> (&gt; about 20kL/d) and <b>dischargers of industrial waste</b> pay an annual trade waste fee and re-inspection fee (where required) together with an excess mass charge/kg of pollutants discharged (Ref 1, page 36).</p>

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## Sewerage and Trade Waste Pricing – Check List

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Topic	Outcomes Achieved
12. Trade Waste Dischargers with Prescribed Pre-treatment	<p>An appropriate trade waste usage charge levied for such dischargers <b>with appropriately sized and maintained pre-treatment facilities</b> (Ref 1, page 35).</p> <p>A much higher trade waste usage charge levied for such dischargers <b>without appropriately sized and maintained pre-treatment facilities</b> (Ref 1, page 35).</p>
13. Excess Mass Charges for Large Trade Waste Dischargers and Industrial Waste	<p>Appropriate excess mass charges apply for all such dischargers exceeding the concentration of pollutants in domestic sewage (ie. BOD 300mg/L; SS 300mg/L; Oil/Grease 50mg/L; Ammonia (as N) 35mg/L; N (as TKN) 50mg/L; P 10mg/L; TDS 1000mg/L) (Ref 1, pages 37, 97 and 98).</p>
14. Trade Waste Discharge Factor	<p>The volume of liquid trade waste discharged to the sewerage system may be estimated using a <b>trade waste discharge factor</b> times the metered water consumption (Ref 1, pages 35 and 93).</p>
15. Tariff Implementation	<p>A. Examined impact of new tariff options on the sewerage and trade waste bills for representative customers (Ref 1, page 40).</p> <p>B. Undertaken community consultation.</p> <p>C. Any phasing-in of charges should be on the basis of the sewer usage charge and trade waste fees and charges in the adopted best-practice tariff (Ref 1, page 43).</p> <p>D. Phased-in of increases over 5 years for non-residential and trade waste customers facing large increases (Ref 1, page 43).</p>
16. Data Management	<p>Appropriate customer data compiled including customer identifier, metered annual water consumption, water service connection size, customer category, business type, sewer discharge factor, trade waste customer category and trade waste discharge factor (Ref 1, page 52).</p>

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## REFERENCES

1. *Water Supply Sewerage and Trade Waste Pricing Guidelines*, Department of Land and Water Conservation, NSW, 2002.
2. *NSW Financial Planning Model (FINMOD) – Overview of Financial Planning, How FINMOD Works, User Manual*, Department of Land and Water Conservation, NSW, 2000.
3. *2001/02 NSW Water Supply and Sewerage Performance Monitoring*, Ministry of Energy and Utilities/Local Government Association and Shires Association, NSW.
4. *Wise Water Management – A Demand Management Manual for Local Water Utilities*, Water Services Association of Australia, 1998.
5. *Planning Community Involvement in Water and Sewerage Projects*, Public Works, NSW, 1995.
6. *Concurrence Guideline for Liquid Waste Discharges to the Sewerage System*, Department of Land and Water Conservation, NSW, 2002.

## NOTES

1. For further information, assistance and copies of the pricing software and reference documents, please contact Scott Chapman, Performance and Benchmarking Coordinator on 9895 5900 or [Scott.Chapman@deus.nsw.gov.au](mailto:Scott.Chapman@deus.nsw.gov.au)

## Section 2 - Water Supply and Sewerage Developer Charges

Developer charges have two related functions:

1. they provide a source of funding for infrastructure required for new urban development, and
2. they provide signals regarding the cost of urban development and thus encourage less costly forms and areas of development.

Local Water Utilities (LWUs) should use this check list as a road map to ensure they have addressed the necessary issues.

The main reference for the implementation of Developer Charges is Ref 1 - *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*.

This check list has been prepared to assist LWUs to quickly address the issues in developer charges for water supply and sewerage and comprises the main elements of Ref 1. It also highlights common errors in developer charges calculations and Development Servicing Plans (DSPs).

<b>Water Supply and Sewerage Developer Charges Check List</b>		<b>Common Errors</b>
Topic	Outcome Achieved	
1. Procedure	<b>LWUs:</b>  Establish whether your <b>LWU</b> is to prepare (pages 7, 8):  DSP Policy document <sup>1</sup> , or Exemption document <sup>2</sup> .	Failure to recognise that an LWU which does not wish to levy Developer Charges for water supply and sewerage is required to prepare a formal document.
2. Timing	DSP (or other documents) for water supply and sewerage need to be implemented and registered with Department of Energy, Utilities and Sustainability by 30 June 2004 (Ref 1, page 7).	Under-estimating the time required to prepare, exhibit and adopt DSPs.

<sup>1</sup> For an LWU with growth of 5 or more lots/a.

<sup>2</sup> For an LWU with growth of under 5 lots/a.

<b>Water Supply and Sewerage Developer Charges Check List</b>		<b>Common Errors</b>
Topic	Outcomes Achieved	
3. Service Area	Determine service areas and the capital cost for each service area. A service area typically comprises the area serviced by a separate water supply distribution system, sewage treatment works, small towns/villages or a development area of >500 lots (Ref 1, page 19).	<p>Too many service areas.</p> <p>Parts of the town are not covered by a service area.</p>
4. The Capital Charge	<p>A. Calculate the capital cost for each service area (Ref 1, page 19).</p> <p>B. Include all existing or new assets required, or likely to be required to serve a development area (Ref 1, page 15).</p> <p>C. Do <b>not</b> reduce capital cost for any government subsidy or similar payment (Ref 1, page 59).</p> <p>D. Ensure capital works program is comprehensive, with sufficient infrastructure to serve the projected development (Ref 1, page 15).</p> <p>E. Exclude reticulation and future renewals. Also exclude out-of-sequence development, where the full capital cost of the assets has been met by the developer (Ref 1, page 15).</p> <p>F. Value existing assets on the basis of MEERA* cost (Ref 1, page 18, Ref 7).</p> <p>G. Add Return on Investment (ROI) to the Capital cost, using either the ROI factor or spreadsheet approach (Ref 1, page 21).</p> <p>H. LWUs must carefully estimate their future annual water demand per ET and peak day demand per ET on the basis of appropriate water supply pricing (Ref 2, page 9), demand management and recorded water consumption per connected residential property.</p> <p>I. Calculate Capital Cost/Capital Charge per ET by dividing the cost of assets by the capacity (Ref 1, pages 20, 21).</p> <p>J. Agglomerate service areas where the capital charge is within 30% of the highest to minimise the number of DSPs (Ref 1, Page 19).</p> <p>K. Calculate the weighted average capital charge and the capital charge for each DSP area (Ref 1, pages 19, 94).</p>	<p>Failure to include all assets eg. future sewage transport systems.</p> <p>Failure to include assets beyond 5 years, that are clearly serving development (eg. a future water treatment works).</p> <p>Failure to include pre-1970 water supply headworks.</p> <p>Failure to use 1996 as the effective year of commissioning for pre-1996 assets.</p> <p>Over-estimation of demand per ET.</p> <p>Failure to agglomerate service areas in accordance with Ref 1, page 19.</p>

\* MEERA – Modern Engineering Equivalent Replacement Asset



<b>Water Supply and Sewerage Developer Charges Check List</b>		<b>Common Errors</b>
Topic	Outcomes Achieved	
5. The Reduction Amount	<p>Select method to be used (Ref 1, page 33):</p> <p style="padding-left: 40px;">NPV of annual charges (to be used where a robust 30-year financial plan is available), or</p> <p style="padding-left: 40px;">Direct NPV, or</p> <p style="padding-left: 40px;">Under 2000 assessments (small LWU, low growth).</p> <p>Calculate <b>one</b> reduction amount using <b>one</b> of the methods only (Ref 1, page 34).</p>	<p>Choosing inappropriate method.</p> <p>Using more than <b>one</b> method.</p>
6. The Reduction Amount- <i>NPV of Annual Charges</i>	<p>A. Ensure you have at least a 30-year financial plan and capital works program (Ref 1, page 34).</p> <p>B. Base operating costs on the most efficient and lowest cost means of providing the service (Ref 1, page 35).</p> <p>C. Following the input of developer charges into your financial model (eg. FINMOD), alter the TRB (to reflect the new reduction amount) and copy the new revenue into the calculator spreadsheet.</p> <p>D. Typically the calculation should require approximately 3 iterations. Suggested initial estimate of reduction amount: (projected TRB – Operating cost/assessment) x 10</p>	<p>Financial plan incomplete, or too short</p> <p>Inconsistent data used in the DSP and financial plan (eg. growth projections, capital works).</p>
7. The Reduction Amount <i>Direct NPV</i>	<p>This method may be used in the absence of a financial plan (Ref 1, page 33).</p> <p>Ensure you have a 30-year capital works program with new works divided into works to improve levels of service and works for growth, together with 50-year renewals program (Ref 1, page 40).</p>	<p>Inconsistent data input.</p>
8. The Reduction Amount <i>Under 2000 Assessments</i>	<p>Use only for LWUs with under 2000 assessments for water supply or sewerage, with low growth (Ref 1, page 46).</p> <p>Use for LWUs with a number of tariff areas (each tariff area with under 2000 assessments – Ref 1, page 45).</p>	<p>Using this method where high growth is expected.</p>

<b>Water Supply and Sewerage Developer Charges Check List</b>		<b>Common Errors</b>
Topic	Outcome Achieved	
9. The Developer Charge	<p>A. Subtract the reduction amount from the capital charge for each DSP area to obtain the <u>maximum developer charge for the DSP</u> (Ref 1, page 47).</p> <p>LWUs may <u>not</u> charge higher developer charges than the maximum calculated value for each DSP area (Ref 1, page 47).</p> <p>B. Adjust for areas with different OMA cost or different tariff (Ref 1, page 45).</p> <p>C. Adopt a <b>commercial developer charge</b> based on social, financial and environmental considerations (Ref 1, page 47). Disclose any <b>cross-subsidies</b> in DSP, Annual Report and in communication materials for consultation with stakeholders.</p> <p>D. Where lower developer charges are to be levied, consider conveying locational signals by maintaining relativity between DSPs (Ref 1, page 1).</p>	<p>Adopting developer charge that is the weighted average of two or more DSP areas. This leads to some DSP areas being incorrectly charged higher than the calculated maximum developer charge.</p> <p>Failure to understand the full financial and social impacts of levying a lower developer charge than the calculated maximum.</p> <p>Failure to clearly disclose cross-subsidies.</p>
10. Documentation	<p>A. LWUs may use the Model Development Servicing Plan (Ref 1, pages 111 to 126) as the framework for their DSP. An electronic version of the model plan is available to assist LWUs (see note 2 overleaf).</p> <p>B. DSP contents in accordance with the guidelines (Ref 1, page 9).</p> <p>C. Background document(s) identified and referred to in the DSP (Ref 1, page 9).</p> <p>D. A separate DSP is required for each DSP area, and for each of water supply and sewerage (Ref 1, page 10). LWUs may elect to bind the DSPs as one document.</p>	<p>DSP lacks clarity and has insufficient information.</p> <p>A single DSP covers more than one DSP area or covers water supply and sewerage.</p> <p>Cross-subsidies not disclosed.</p>
11. Exhibition	<p>A. Exhibit for at least 30 working days (Ref 1, page 10).</p> <p>B. Inform industry bodies and developers (Ref 1, page 10).</p> <p>C. Consider submissions on the draft DSPs (Ref 1, page 11).</p>	<p>Short exhibition period.</p> <p>Insufficient consideration of submissions received.</p>

<b>Water Supply and Sewerage Developer Charges Check List</b>		<b>Common Errors</b>
<b>Topic</b>	<b>Outcome Achieved</b>	
12. Adopt DSP A.	LWU formally adopts DSP (Ref 1, page 10).	No reference in Management Plan.
B.	Foreshadow in Management Plan that Council is preparing new DSPs for water supply, sewerage and/or stormwater and that developer charges will be in accordance with the DSPs.	
C.	Register DSP with Department (Ref 1, page 10).	

## REFERENCES

1. *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*, Department of Land and Water Conservation, NSW, 2002.
2. *Water Supply, Sewerage and Trade Waste Pricing Guidelines*, Department of Land and Water Conservation, NSW, 2002.
3. *Wise Water Management – A Demand Management Manual for Local Water Utilities*, Water Services Association Australia, 1998.
4. *2001/02 NSW Water Supply and Sewerage Performance Monitoring*, Ministry of Energy and Utilities/Local Government Association and Shires Association, NSW.
5. *NSW Financial Planning Model (FINMOD) – Overview of Financial Planning, How FINMOD Works, User Manual*, Department of Land and Water Conservation, NSW, 2000.
6. *Planning Community Involvement in Water and Sewerage Projects*, Public Works, NSW, 1995.
7. *NSW Reference Rates Manual for Valuation of Water Supply, Sewerage and Stormwater Assets*, Ministry of Energy and Utilities, NSW, 2003.

## NOTES

1. Unless the LWU is eligible to prepare an exemption document (Item 1), achievement of Item 9C is essential for meeting the developer charges requirements in Table 1 on Page 18 (criterion 2) of the Best-Practice Guidelines.
2. For further information, assistance and copies of the reference documents, please contact Scott Chapman, Performance and Benchmarking Coordinator on 9895 5900 or [Scott.Chapman@deus.nsw.gov.au](mailto:Scott.Chapman@deus.nsw.gov.au)

## Appendix C - Demand Management

### Check List – April 2004

Best-practice demand management is essential for efficient management of a Local Water Utility's (LWU's) water supply business and for efficient use of water resources. Cost-effective demand management measures deliver significant environmental and social benefits and help minimise customer water supply bills through lower capital and operating costs.

A permanent reduction in demand achieved through demand management serves the same purpose as an increase in supply capacity – such as building new treatment or storage facilities. LWUs have often found many demand management actions to be more cost-effective than increasing supply capacity. When demand is reduced, benefits accrue through deferral and downsizing of the capacity of new capital works and lower treatment and transfer costs.

A key part of managing demand is understanding how and when water is used. A demand management program therefore requires metering of all customers supplied, together with demand analysis.

Demand management measures that should be examined as part of a demand management program include:

- Active intervention – appropriate retrofit, rebate and building code programs
- Water pricing reform
- Community education
- Effluent and stormwater re-use.

LWUs should also pursue active programs to identify and reduce system water loss through leakage reduction.

This check list is essentially a road map to assist LWUs to quickly implement sound demand management measures. Each LWU should also review its demand management measures every 2 years to ensure that it has an appropriate balance between demand and supply-side investment.

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### Demand Management – Check List

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Topic	Outcome Achieved
1. Demand Monitoring	<p>A. Bulk water production metered and recorded on a daily basis.</p> <p>B. All new free standing and multi-unit residential developments (both strata and non-strata) approved after 1 July 2004 must be separately metered.</p> <p>C. All free standing residential premises must be separately metered by 1 July 2007.</p>

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## Demand Management – Check List

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Topic	Outcome Achieved
	<p>D. LWUs should encourage separate metering of existing multi-unit residential developments, where cost-effective.</p> <p>E. Customer water consumption billed <u>at least</u> three times a year (and preferably quarterly).</p> <p>F. Customers classified in accordance with the categories defined in the latest <i>NSW Water Supply and Sewerage Performance Monitoring Report</i> and consumptions reported annually.</p> <p>G. If facing augmentation of the peak day capacity of your system, monitor and record service reservoir levels on a daily basis in high demand periods.</p>
2. Demand Forecasting	<p>A. Historical records corrected for influence of climate.</p> <p>B. Data records screened for errors.</p> <p>C. Demand forecasts prepared for each customer category as well as for leakage and unaccounted for water (UFW).</p>
3. Demand Management Planning	<p>A. Examined a range of long-term demand management measures including:</p> <ul style="list-style-type: none"> <li>- retrofit programs</li> <li>- rebates for water efficient appliances</li> <li>- rebates for rainwater tanks</li> <li>- rebates for garden mulch</li> <li>- effluent and stormwater re-use programs.</li> </ul> <p>B. Completed benefit/cost analysis of demand management measures that includes benefits from reduced capital works and lower operating costs.</p> <p>C. Completed investment schedule/plan for implementing cost-effective demand management measures.</p>
4. Implementation	<p>A. Subsidised and promoted at least two of the identified demand management initiatives, referred to in 3. above.</p> <p>B. Implemented a cost-effective leakage reduction program to reduce system water losses.</p> <p>C. Ongoing customer education campaign focussing on the importance of conserving our valuable water resources.</p> <p>D. If average residential water use per property exceeds that for the median NSW utility (290 kL/a in 2002/03) by over 20%, the LWU must show progress towards achieving a reduction in average residential use by 1 July 2007.</p> <p>E. Monitoring program for reviewing the effectiveness of the implemented demand management measures.</p>

## REFERENCES

1. *2001/02 NSW Water Supply and Sewerage Performance Monitoring*, Ministry of Energy and Utilities/Local Government Association and Shires Association, NSW.
2. *Water Demand Trend Tracking & Climate Correction – User manual*, Department of Land and Water Conservation, NSW, 2002.
3. *Demand Management Decision Support System – User Manual*, Department of Land and Water Conservation, NSW, 2002.

For further information, assistance and copies of the reference documents, please contact Scott Chapman, Performance and Benchmarking Coordinator on 9895 5900 or [Scott.Chapman@deus.nsw.gov.au](mailto:Scott.Chapman@deus.nsw.gov.au)

Appendix C

Best Practice Management of Water Supply and Sewerage Guidelines

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## Appendix D - Drought Management

### Check List – April 2004

A comprehensive drought management plan details the demand and supply issues to be addressed during drought conditions. Appropriate drought management planning will ensure that town water supplies with significant storage do not fail in times of drought.

Drought management planning includes documenting basic data on water demands, rainfall, evaporation, records of past droughts, the existing water supply system, and its water resources, and strategies to achieve the objective of having sufficient water to satisfy the basic needs of the community.

This check list is essentially a road map to assist LWUs to quickly implement sound drought management planning. LWUs should have a sound drought management plan in place and be ready to implement their plan when drought conditions arise.

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### Drought Management – Check List

Topic	Outcome Achieved
<b>1. Executive Summary</b>	Covers all major issues, objectives, planning, strategies and monitoring for existing essential supplies of water to the service area(s).  Includes a summary of the drought management plan for implementation.
<b>2. Background</b>	A. Includes the existing water supply system(s) in the service area(s) and a locality map.  B. Includes history of past droughts.  C. Includes information on the impact of past droughts on water services, eg. restrictions, effect of restrictions on demands, any emergency sources identified, etc.
<b>3. Objectives</b>	A. Identifies key objectives required to maintain a basic/restricted supply to all users. There is a need to consider social and environmental impacts.  B. Tailor strategies relevant to the service areas.  C. Endorse and implement a plan that minimises the risk of the community running out of water.



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## Drought Management – Check List

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Topic	Outcome Achieved
<b>4. Data</b>	<ul style="list-style-type: none"> <li>A. Identification of all communities served by the LWU's reticulated water supply, those with private reticulated water services and those with no reticulated water services within the service area(s).</li> <li>B. Identification of any properties, businesses, other LWUs etc. that may seek water in times of drought.</li> <li>C. Identification of all water requirements. Identify the normal and minimum potable and non-potable water requirements.</li> <li>D. Identify water dependent industry/businesses, any fire fighting requirements and opportunities for recycled water use.</li> <li>E. Includes a description and plan of all water supply schemes in the service area(s).</li> <li>F. Includes height/storage volume and height/surface area graphs for all water supply dams and weirs.</li> <li>G. Historical performance of rivers, dams, weirs and bores in previous droughts.</li> </ul>
Note: All data to be specified on a daily basis.	<ul style="list-style-type: none"> <li>H. Includes the average rainfall figures and evaporation rates.</li> </ul>
<b>5. Plan</b>	<ul style="list-style-type: none"> <li>A. Demand management options.</li> <li>B. Restriction strategies including means and methods for the enforcement of restrictions and the expected results of imposing restrictions.</li> <li>C. Availability of alternative water sources (including estimated costs and times to implement).</li> <li>D. Water cartage options.</li> <li>E. Identify legislation, local laws and council policies affecting the contingency arrangements.</li> <li>F. Links to water sharing plans/committees, water management plans/committees, irrigators, etc.</li> <li>G. Impact of extraction on downstream stakeholders.</li> <li>H. Impact of reduced flows in watercourses.</li> <li>I. Level of prediction and intervention – trigger points.</li> <li>J. Identify human resource requirements.</li> </ul>

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## Drought Management – Check List

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Topic	Outcome Achieved
<b>6. Monitoring During Drought</b>	<ul style="list-style-type: none"> <li>A. Daily monitoring of demands.</li> <li>B. Daily monitoring of water supply sources (dams, bores and streams).</li> <li>C. Monitoring impact of restrictions on consumption</li> <li>D. Monitoring the electrical conductivity, alkalinity and algae levels in the water sources.</li> </ul>
<b>7. Consultation</b>	<p>Comprehensive media strategy and public consultation.</p> <p>Regular consultation with appropriate government agencies (DEUS, DEC, NSW Health, DIPNR etc).</p>
<b>8. Operation of Drought Management Plan (DMP)</b>	<ul style="list-style-type: none"> <li>A. DMP should discuss, analyse and identify any impact on other regions and localities ie. upstream, downstream or conjunctive water users.</li> <li>B. DMP should demonstrate a sustainable strategy that considers all other stakeholders.</li> <li>C. DMP documents an agreed procedure for progressive implementation of water restrictions.</li> </ul>

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### REFERENCE

*Drought Management Guidelines*, NSW Local Government Water Directorate, December 2003.

For further information and assistance, please contact Piers Toop, Manager Reform Planning & Policy on 9895 5920 or [Piers.Toop@deus.nsw.gov.au](mailto:Piers.Toop@deus.nsw.gov.au)

Appendix D

Best Practice Management of Water Supply and Sewerage Guidelines

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## Appendix E - Water Supply and Sewerage Performance Reporting

### Check List – April 2004

Performance reporting and monitoring provide valuable data for enabling each Local Water Utility (LWU) to review and improve its performance. By examining trends in its performance indicators and benchmarking its performance against other similar utilities, an LWU can identify and rectify any areas of under-performance.

To provide a balanced view of the long-term sustainability of NSW water utilities, a Triple Bottom Line (TBL) accounting focus has been adopted, with performance reported on the basis of social, environmental and economic performance indicators.

Annual performance reporting and monitoring are required under National Competition Policy, are important for public accountability and have been strongly endorsed by the NSW Government, the Independent Pricing and Regulatory Tribunal, the Local Government Association and the Shires Association.

This check list is essentially a road map to assist LWUs to quickly address the issues in their annual water supply and sewerage performance reporting and comprises the main elements of Reference 1. It also highlights common errors in the preparation of these reports.

To achieve the required outcome for Water Supply and Sewerage reporting, LWUs must provide their completed annual water supply and sewerage performance reports to the Department of Energy, Utilities & Sustainability by 31 October each year.

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### Water Supply and Sewerage Performance Reporting - Check List

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Topic	Activity	Common Errors
1. Population (Q1)	Population Served (Q1a)	Population is generally not well reported by LWUs. It is often inconsistent from year to year and does not correlate well with the number of assessments and the number of connected properties.

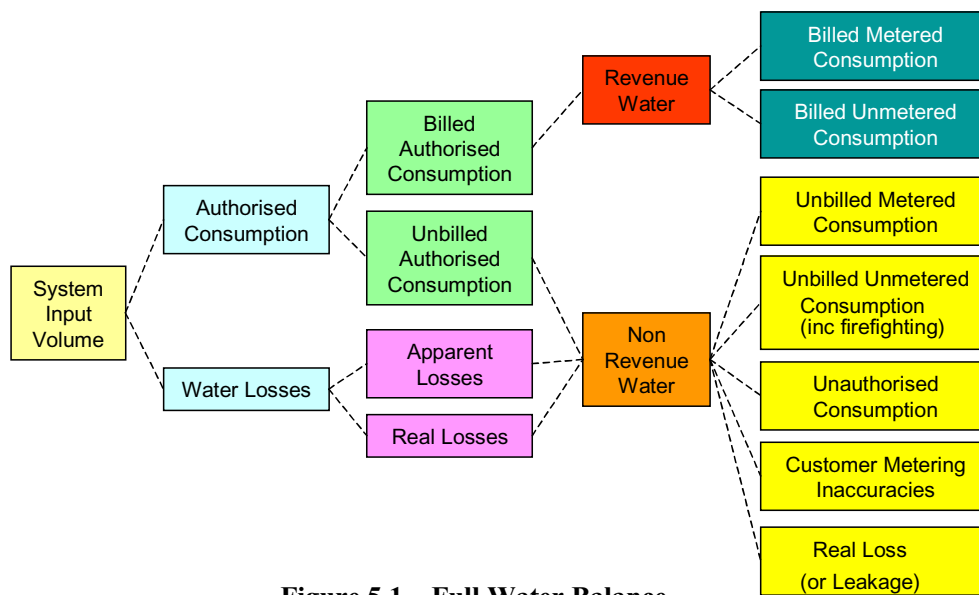
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## Water Supply and Sewerage Performance Reporting - Check List

Topic	Activity	Common Errors
2. Dwellings and assessments (Q2 to Q7)	No. of single Dwellings Connected (Q2a)  No. of Multiple Dwellings Connected (Q2b)  Average No. of Properties per Multiple Dwelling (Q2c)  Non-Residential Properties Connected (Q3)  Assessments (Q4)	The number of connected properties is generally not well reported. A common error is to report the number of flats served rather than the number of blocks of flats in Q2b.  Consider these elements carefully as they are key parameters which form the basis for many performance indicators.
3. Assets Employed (Q8 to Q11)	Length of Mains (Q10)	
4. Sewage Collected (Sewerage Report Q12 to Q13)	Volumes of Sewage Collected (Q12)	LWUs should provide a breakdown of volumes of sewage collected, particularly the residential and non-residential components.
5. Water Consumption and Water Resources (Water Report Q12 to Q17)	Annual Consumption and Water Losses (Q12)	LWUs should provide a breakdown of potable water consumption for each category of water use.  The sum of Q12a to Q12h should equal Q12i. System water loss (Q12k) is part of Q12h. LWUs should identify the fate of all water produced as shown in Figure 5.1 on page 53.
6. Drinking Water Quality (Water Report Q42)	Compliance with <i>1996 Australian Drinking Water Guidelines</i> (ADWG)	In addition to reporting the required results, this involves compliance with the NSW Health Drinking Water Monitoring Program, including collecting the required number of samples and investigating and appropriately responding to any non-compliance.
7. Special Schedules Nos 3 and 5 of Annual Financial Statements	Financial Data	LWUs should ensure they report the breakdown of revenue into <b>residential</b> and <b>non-residential</b> (Items 6 and 7 respectively).  LWUs should be careful to exclude administration and engineering costs associated with the development of capital works projects from the LWU's management expenses reported in Item A1 of the Special Schedule Nos 3 and 5.

## Water Supply and Sewerage Performance Reporting - Check List

Topic	Activity	Common Errors
8. 2-page Performance Reports	Report on review of your LWU's 2-page 2001/02 or later TBL Performance Report provided to Council for each of water supply and sewerage (refer to example in page xxx of the Reference below).	



**Figure 5.1 – Full Water Balance**

### REFERENCE

*2001/02 NSW Water Supply and Sewerage Performance Monitoring*, Ministry of Energy and Utilities/Local Government Association and Shires Association, NSW. An electronic copy of this report is available from the Department's website ([www.deus.nsw.gov.au](http://www.deus.nsw.gov.au))

### NOTES

1. Achievement of Item 8 is essential for meeting the performance reporting requirements in Table 1 on page 18 (criterion 5) of the Best-Practice Guidelines.
2. For further information, assistance and copies of the reference document, please contact Scott Chapman, Performance and Benchmarking Coordinator on 9895 5900 or [Scott.Chapman@deus.nsw.gov.au](mailto:Scott.Chapman@deus.nsw.gov.au)

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## Appendix F - Integrated Water Cycle Management

### Check List – April 2004

Integrated Water Cycle Management (IWCM) is a means for Local Water Utilities (LWUs) to manage their water systems to maximise benefits. It involves the integration of the LWUs' three main services - water supply, sewerage and stormwater - so that water is used optimally. It also involves the integration with other services (eg. roads and drainage, waste collection) and with various external requirements, particularly the NSW Water Reforms.

At present DEUS is conducting a pilot program where IWCM strategies are being undertaken in conjunction with 10 LWUs within NSW. To date, one study has been completed, two studies are nearing completion and seven are in progress.

IWCM Strategies should be prepared in accordance with the guideline document *Integrated Water Cycle Management for NSW Water Utilities*, Department of Energy, Utilities and Sustainability - to be released shortly.

This check list is essentially a road map to assist LWUs to quickly address the issues of IWCM and comprises the main elements of IWCM. LWUs should review their IWCM Strategies after 5 years.

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### Integrated Water Cycle Management – Check List

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Topic	Outcome Achieved
<b>1. Concept Study</b>	
1.1 Executive Summary	~ Covers all major issues and all main actions that need to be considered in the strategy document.
1.2 Background	A. ~ Catchment Context – catchment issues are identified. Review should consider all relevant natural resource management policies. B. ~ Water Resources Context – water resource issues are identified based on the Water Reform Policy agenda and updated on the DEUS website ( <a href="http://www.deus.nsw.gov.au">www.deus.nsw.gov.au</a> ). C. ~ Urban Context – urban issues are identified. This should include a review of recent performance reporting results, the strategic business plan for the LWU, DEC licence requirements as well as identified system and asset issues.
1.3 Audit & Interpretation (the extent of the issues is determined)	A. ~ Catchment Audit – assess LWU catchment against natural resource management policy framework. B. ~ Water Resource Audit – assess LWU utilisation of water resource against water reform policy agenda. C. ~ Urban Audit – assess LWU performance, service delivery and planning functions against benchmarks and regulatory requirements.



## Integrated Water Cycle Management – Check List

Topic	Outcome Achieved
1.4 Analysis & Potential Actions (identifies the potential solutions to the identified issues)	<ul style="list-style-type: none"> <li>~ Demonstrate consideration and preliminary assessment of potential actions to manage issues defined in 1.2 and 1.3.</li> <li>~ Minimum considerations include:               <ul style="list-style-type: none"> <li>Review of LWU business planning structures;</li> <li>Identification of potential water resource management tools;</li> <li>Actions resulting from operating environment changes; and</li> <li>Recommendation of potential integrated management actions.</li> </ul> </li> </ul>
<b>2.0 IWCM Strategy</b>	
2.1 Executive Summary	<ul style="list-style-type: none"> <li>~ Covers all major issues and the main elements and timeframes associated with the adopted strategy.</li> <li>~ Includes the outcomes of community consultation.</li> </ul>
2.2 Introduction	<ul style="list-style-type: none"> <li>A. ~ Includes a discussion of the aims and expected outcomes of the strategy.</li> <li>B. ~ Includes a brief discussion of the IWCM philosophy.</li> <li>C. ~ Reiterates outcomes of the <b>Concept Study</b>.</li> <li>D. ~ Includes description of existing water supply, sewerage and stormwater businesses and infrastructure.</li> </ul>
2.3 What are the LWU's Issues	<ul style="list-style-type: none"> <li>~ Expand on the issues identified in the <b>Concept Study</b>.</li> </ul>
2.3.1 Government Reforms	<ul style="list-style-type: none"> <li>~ Include a detailed review of the current reforms (water reforms, <i>Protection of the Environment Operations Act, 1997</i>, COAG) and identify how the LWU may be impacted.</li> </ul>
2.3.2 Catchment Issues	<ul style="list-style-type: none"> <li>~ Identify how and where catchment issues may be impacting on the LWU's activities and where LWU activities may be contributing to catchment activities.</li> </ul>
2.3.3 Urban Planning Issues	<ul style="list-style-type: none"> <li>~ Include demographics and projections.</li> </ul>
2.3.4 Urban Water Management Issues	<ul style="list-style-type: none"> <li>A. ~ Analyse current system performance and future system requirements.</li> <li>B. ~ Include historical demand analysis, climatic correction of water production records, peak day demand calculations, unaccounted for water (UFW).</li> <li>C. ~ Include water and effluent forecasting, bulk distribution analysis and bulk supply analysis.</li> <li>D. ~ Include nutrient balance forecasting.</li> </ul>
2.3.5 Community Issues	<ul style="list-style-type: none"> <li>~ Include the community consultation plan and document the outcomes.</li> <li>~ Include identified community issues.</li> </ul>

## Integrated Water Cycle Management – Check List

Topic	Outcome Achieved
2.4 How Do We Fix the LWU's Issues?	<p>Include discussion of scenario development. This should include discussion of:</p> <ul style="list-style-type: none"> <li>~ Preliminary screening of options;</li> <li>~ Optimisation of bundles of options into a series of scenarios;</li> <li>~ Development of Triple Bottom Line (TBL) assessment criteria; and</li> <li>~ Reporting of TBL results against each scenario developed.</li> <li>~ Include a list of the management options considered in following sections.</li> </ul>
2.4.1 Planning Controls	<ul style="list-style-type: none"> <li>~ Identify and cost planning measures that could be used to manage the identified issues.</li> </ul>
2.4.2 Water Sensitive Urban Design	<ul style="list-style-type: none"> <li>~ Identify and cost designs that will work for your area.</li> </ul>
2.4.3 Demand Management	<p>Identify and cost demand management strategies and their impacts on LWU future demands (annual and peak day demands). Assessment should consider:</p> <ul style="list-style-type: none"> <li>A. ~ An active leakage reduction and UFW program;</li> <li>B. ~ Water efficient retrofit programs;</li> <li>C. ~ Education; and</li> <li>D. ~ Water tariff structure.</li> </ul>
2.4.4 Rainwater Tanks	<ul style="list-style-type: none"> <li>~ Investigate and cost rainwater tanks for supplying external, toilet flushing and washing machine water use in all new and a percentage of existing customers.</li> <li>~ Investigate the impact of rainwater tanks on annual and peak day demand on your water supply system.</li> </ul>
2.4.4 Dams & Storages	<ul style="list-style-type: none"> <li>~ Investigate and cost the need to provide extra storage (if extra water needs cannot be met through other water sources).</li> </ul>
2.4.5 Sewerage System Optimisation	<ul style="list-style-type: none"> <li>~ Investigate and cost how current infrastructure can be optimised to improve performance, eg. STW optimisation, reduction in infiltration/exfiltration etc.</li> </ul>
2.4.6 Decentralised Sewage Management Options	<ul style="list-style-type: none"> <li>~ Investigate and cost the decentralised management (eg. common effluent drainage and on-site systems) where appropriate.</li> </ul>
2.4.7 Effluent Re-use	<ul style="list-style-type: none"> <li>~ Investigate and cost where effluent could be used to replace potable water or reduce river extractions.</li> </ul>
2.4.8 Effluent Return Flows	<ul style="list-style-type: none"> <li>~ Investigate and cost how the quality, quantity and timing of returning highly treated effluent to the river upstream/downstream of the LWU extraction point will positively influence achieving water quality and river flow objectives, to provide a net environmental benefit.</li> </ul>

## Integrated Water Cycle Management – Check List

Topic	Outcome Achieved
2.4.9 Greywater Re-use	~ Investigate and cost the potential to re-use greywater to reduce potable demands and the impact on reducing sewage flows.
2.4.10 Stormwater Management and Re-use	~ Investigate and cost the potential to re-use stormwater to reduce potable demands and improve management to reduce environmental impacts.
2.4.11 Implementation Program	~ Develop an implementation program for the next 30 years to meet the LWU water cycle management requirements.
2.4.12 Impact on Customer Charges	~ Include analysis of developer charges and typical residential bills for each scenario developed.
2.4.13 Scenarios	Bundle options considered into a number of scenarios including: <ul style="list-style-type: none"> <li>A. ~ ‘Do Nothing’;</li> <li>B. ~ Traditional Solutions; and</li> <li>C. ~ Integrated Solutions</li> <li>D. ~ Include impact on customer charges, environmental and social impact assessments</li> </ul>
2.5 How Do We Know the Issue is Fixed?	~ Develop a monitoring and review program to ensure that the management options identified achieve the desired outcomes.
2.5.1 Environmental Management Plan	~ Develop an environmental management plan which contains clear and measurable key performance indicators (KPIs) to monitor the LWU’s performance in the urban water cycle and the catchment (water resource).
2.5.2 Review Timeframe	~ Develop a review framework which should be undertaken every 5 years to update key assumptions (eg. population projections, demand management outcomes) and refine management options to achieve the desired outcomes.

## REFERENCES

1. *Integrated Water Cycle Management for NSW Local Water Utilities*, Department of Energy, Utilities and Sustainability (to be released 2004).
2. *Strategic Business Plans for Water Supply and Sewerage: Guidelines for Preparation*, Public Works, NSW, 1993.
3. *NSW Financial Planning Model (FINMOD) – Overview of Financial Planning, How FINMOD Works, User Manual*, Department of Land and Water Conservation, NSW, 2000.
4. *2001/02 NSW Water Supply and Sewerage Performance Monitoring*, Ministry of Energy and Utilities/Local Government Association and Shires Association, NSW.
5. *Water Supply, Sewerage and Trade Waste Pricing Guidelines*, Department of Land and Water Conservation, NSW, 2002.
6. *Concurrence Guideline for Liquid Waste Discharges to the Sewerage System*, Department of Land and Water Conservation, NSW, 2002.
7. *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*, Department of Land and Water Conservation, NSW, 2002.
8. *Environmental Management Systems – Specification with guidelines for use*, International Standard ISO 14001.
9. *Wise Water Management – A Demand Management Manual for Local Water Utilities*, Water Services Association of Australia, 1998.
10. *Water Supply and Sewerage Management Guidelines*, NSW Government, 1991.
11. *Planning Community Involvement in Water and Sewerage Projects*, Public Works, NSW, 1995.
12. *Occupational Health and Safety Act 2000 and Occupational Health and Safety Regulation 2001*.
13. *Asset Management Guidelines for Water Supply and Sewerage*, Public Works, NSW, 1991.

## NOTES

1. Substantial commencement of a sound *integrated water cycle management strategy* is required by 30 June 2005.
2. Completion and implementation of a sound *integrated water cycle management strategy* is required by 30 June 2006.
3. For further information, assistance and copies of the reference documents, please contact Peter Schneider, Urban Water Resource Planner on 9895 5978 or [Peter.Schneider@deus.nsw.gov.au](mailto:Peter.Schneider@deus.nsw.gov.au)

Appendix F

Best Practice Management of Water Supply and Sewerage Guidelines

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