

APPENDIX A
Audit Brief



INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

INVITATION TO TENDER

SYDNEY WATER CORPORATION - 2001/02 OPERATIONAL AUDIT

1 BACKGROUND

The Independent Pricing and Regulatory Tribunal of New South Wales (IPART) is seeking suitably qualified consultants to conduct an audit of Sydney Water Corporation's (Sydney Water's) performance against its Operating Licence.

Sydney Water is a statutory State Owned Corporation wholly owned by the NSW Government. The Corporation provides water, sewerage and some stormwater drainage services to about 4 million customers within Sydney, Blue Mountains and Illawarra regions.

In accordance with the *Sydney Water Act 1994*, an Operating Licence was granted to Sydney Water by the NSW Government in 1995. At the end of 1999, the Tribunal recommended to the government terms and conditions to amend the Operating Licence for Sydney Water. The Licence was renewed on 1 January 2000 for a 5 year term. A copy of the Operating Licence can be found at www.sydneywater.com.au

The Operating Licence

- allows Sydney Water to provide services in its area of operations
- sets out minimum performance standards for the Corporation
- contains protection mechanisms for consumers of Sydney Water's services.

As part of its regulatory responsibilities, the Tribunal is required to conduct an annual Audit to assess the Corporation's performance against the Operating Licence.¹

The Audit is used by the Tribunal as the basis for its report on Sydney Water's performance and its recommendations to the Minister for Energy (the Minister responsible for Sydney Water). The Tribunal is required to:

- a) inform the Minister about any failure of the Corporation to meet operational standards or any other requirements imposed on the Corporation under the operating licence
- b) monitor, and report to the Minister on, compliance by the Corporation with the operating licence, and
- c) provide advice to the Minister about any penalties or remedial action required as a result of the Corporation's performance under the operating licence.²

¹ Section 31 (1) *Sydney Water Act 1994*.

² Section 31 (2), *Sydney Water Act 1994*.

The Tribunal is currently undertaking a mid-term review of Sydney Water's Operating Licence and will report to the Minister by 30 September 2002. The review is to consider:

- whether the licence is fulfilling its objectives, and
- any other matter required to be reviewed by the licence.

2 OBJECTIVES OF CONSULTANCY

The objective of the audit is to advise and report to the Tribunal on Sydney Water's performance against its Operating Licence for the period from 1 July 2001 to 30 June 2002.

In preparing its report the auditor must:

1. Review and assess the level of compliance (or progress) achieved by Sydney Water against the Operating Licence requirements.
2. Assess and report on progress by Sydney Water in implementing the Ministerial Requirements arising from the 2000/01 Operational Audit of Sydney Water (these items are set out in Attachment 1).
3. Review and assess the level of compliance with (or performance against) the amended System Performance Standards introduced by the Minister on 1 July 2001. These standards relate to water pressure, water continuity and sewerage overflows on private land and are set out in Attachment 2.
4. Identify any factors that have affected Sydney Water's performance for the period from 1 July 2001 to 30 June 2002.
5. Identify any factors that could impact on Sydney Water achieving the performance requirements of the Operating Licence in the future.
6. Based upon the audit assessment, make recommendations on how Sydney Water can improve its performance in the future.
7. Give consideration to any public submissions on Sydney Water's performance.
8. Consult with Sydney Water's regulators (EPA, NSW Health and the Department of Land and Water Conservation) and other stakeholders, as appropriate.

The auditor will be responsible for assessing and interpreting the audit requirements and ensuring that the audit process satisfies all statutory requirements.

During the past three years, the NSW Health has commissioned an annual independent audit of water quality requirements, including the requirements of the Operating Licence. Provided it is endorsed by NSW Health, the 2001/02 report and discussions with NSW Health should form the basis of the auditor's assessment as to compliance with the relevant water quality guidelines.

Under its Operating Licence Sydney Water is required to provide IPART with a range of reports to inform the Operational Audit. This package of information will be provided to the successful tenderer at the start of the contract.

2.1 Outputs

The main outputs from the Audit are:

- two draft reports and a final written report addressing the objectives of the consultancy
- discussions and meetings with the Tribunal and/or the Tribunal Secretariat, and
- presentations to the Tribunal and/or Tribunal Secretariat which outline the major issues and findings.

Seven bound copies and 1 loose-leaf copy, as well as electronic copies in Microsoft Word and PDF format, should be provided for both draft reports and the final reports.

The auditor should note that the final report will be tabled in Parliament by Sydney Water's portfolio Minister and, as such, will become a public document. Accordingly, the report should be clearly and logically set out and written in plain English, avoiding the use of unnecessary technical language. IPART will also publicly display and make the report available for downloading on its website.

On completion of the audit, the auditor's reports, working papers and advice provided to the Tribunal will become the property of the Tribunal.

2.2 Format of Report

The Tribunal's format for the final report includes:

- a summary of compliance with the requirements of the Operating Licence and Ministerial Requirements and a summary of key recommendations
- a summary of key audit findings expressed in the context of the Sydney Water's business, legislated objectives and regulatory environment
- for each section of the licence and for any Ministerial Requirements:
 - a summary of findings
 - a summary of requirements
 - details of compliance
 - a discussion of any relevant factors affecting compliance
 - a discussion of any other relevant issue
 - recommendations on how performance can be improved in the future.

Further details of the Tribunal's preferred format will be provided to the successful tenderer.

3 CONDITIONS OF TENDER

3.1 Timing

The successful tenderer must be able to meet the following work schedule:

CONTRACT PROGRAM		
Month	Date	Activity
September	Mon 2	Start of contract
October	Mon 21	Delivery of first draft Audit Report (First milestone)
	Fri 25	Discussion of first draft with Tribunal and /or Secretariat
November	Mon 18	Delivery of second draft Audit Report (Second milestone)
	Wed 20*	Discussion of second draft with Tribunal and/or Secretariat
December	Mon 2	Delivery of final Audit Report (Third milestone)
	Fri 6*	Discussion of final Audit Report with Tribunal and/or Secretariat (if required)
	Tue 10	Debriefing meeting with IPART and SWC on the final audit recommendations
		End of Contract

*Indicative dates – subject to negotiation between the Tribunal Secretariat and auditor.

Formal written progress updates will be required from the consultant on a weekly basis. Progress meetings in addition to those in the above program are expected. The detailed consultancy work plan should reflect these.

3.2 Fee

The fee quoted is to be inclusive of all costs including Goods and Services Tax, incidental expenses and disbursements. Payments will be due within 28 days of receiving an invoice as per an agreed payment schedule. The consultant may wish to outline a draft payment schedule.

A detailed breakdown of the consultancy work program is required with the proposal. The proposal should include estimates of the time required for the project, auditors to be involved in the project, their rates, and a total fee estimate. Staff costs should be clearly reconciled to the detailed work plan.

The auditor should allow for presentations to the Tribunal, discussion and meetings with the Tribunal Secretariat, and stakeholder meetings as required.

3.3 Proposal

The consultancy proposal should:

- demonstrate an appreciation for the task and describe the approach intended to achieve it
- provide a list of personnel to be involved in the audit, together with brief resumes detailing relevant experience
- include a detailed work plan
- outline any potential conflicts of interest
- provide details of previous clients who can be contacted.

3.4 Presentation

Short listed tenderers will be required to make a presentation on their proposal as part of the tender evaluation process.

3.5 Criteria for selection

In selecting the successful consultant the Tribunal will consider the following matters:

- in-depth understanding and expertise in the areas covered by the Operating Licence (ie water quality, system performance standards, customer service and environmental measures)
- extent of knowledge about water and sewerage businesses
- experience in similar projects
- understanding of Sydney Water's regulatory framework
- proposed consultancy fee
- proposed audit and quality assurance procedures
- adequate resourcing and ability to provide results within the stated time frame
- guaranteed availability of key staff
- demonstrated ability to enlist the agency's cooperation while encouraging an acceptance of the audit outcomes
- any conflict of interest identified
- demonstrated ability to produce quality reports suitable for public distribution.

The successful tenderer will be able to assemble an audit team with specific expertise and experience in each of the core auditable areas (water quality, system performance standards, customer service and environmental measures) and will include in its consultancy proposal details of the audit team structure having regard to these categories. Tenderers may consider forming consortia or contracting specialist consultants to achieve this balance of skills.

3.6 Acceptance of Tender

The Tribunal reserves the right to:

- accept no tender at all
- postpone indefinitely the acceptance of a tender
- call for new tenders
- appoint one or more tenderers to undertake the review
- approve or reject any sub-contractors the tenderer may wish to appoint.

3.7 Disclosure of information on Government Contracts

Potential tenderers should note that Government contracting guidelines may require the routine disclosure of the following information:

- details of contract (description of project to be completed or goods/services to be provided or property to be transferred; commencement date of the contract; the period of the contract)
- the full identity of the successful tenderer including details of cross ownership of relevant companies
- the price payable by the agency and the basis for future changes in this price
- the significant evaluation criteria and the weighting used in tender assessment, and
- provisions for re-negotiation (where applicable).

3.8 Consultancy Contract

The successful tenderer will be obliged to enter into a contract with the Tribunal prior to commencing the Audit. The Tribunal's consultancy contract covers issues including, but not limited to:

- consultancy information and documentation
- ownership of intellectual property
- conflicts of interest
- confidentiality
- insurance.

The Tribunal reserves the right to modify contract terms for the final contract as it considers appropriate. A copy of the Tribunal's draft contract is available on request.

4 PARTIES TO THE AUDIT

The party managing and commissioning the Audit is the Independent Pricing and Regulatory Tribunal of New South Wales. The primary contact at the Tribunal is:

Mr Michael Sedwell

tel: 61-2-9290-8487

e-mail: michael_sedwell@ipart.nsw.gov.au

5 LODGEMENT OF TENDER

Three bound copies and 1 loose-leaf copy of the tender should be lodged in a sealed envelope marked **2001/02 Sydney Water Operational Audit**

addressed to: Ms Meryl McCracken
General Manager, Support Services
Independent Pricing and Regulatory Tribunal of NSW

at PO Box Q290
QVB POST OFFICE NSW 1230

or Level 2
44 Market Street
SYDNEY NSW 2000

The tender should be received at the Tribunal's office no later than 5.00 pm Sydney time, on Wednesday 31 July 2002.

ATTACHMENT 1 SUMMARY OF MINISTERIAL REQUIREMENTS AND AUDIT RECOMMENDATIONS FROM THE 2000/2001 OPERATIONAL AUDIT

Summary of Ministerial Requirements arising from the 2000/2001 Operational Audit³

Area	Requirement
Demand Management	1. <i>"In the interim, and so that I remain informed of the Corporation's progress in terms of its water conservation and demand management programs, I expect a continuation of the six monthly Demand Management Strategy Progress reports."</i>
Drinking Water Quality	2. <i>"...I require that Sydney Water include in future Annual Drinking Water Quality Monitoring Plans, submitted to NSW Health, reference to the selection and frequency of testing of the drinking water characteristics."</i>
	3. <i>"...I require Sydney Water to implement a system to track adherence by the SCA to the water quality aspects of the Bulk Water Supply Agreement by 1 September 2002."</i>
Dispute Resolution	4. <i>"...I require Sydney Water to seek from EWON annual confirmation that it continues to meet the requirements of the Operating Licence clauses relevant to its role."</i>
	5. <i>...I also require that, for future reporting to IPART, Sydney Water include information it already receives from EWON on those contracts from customers where the costs for reparations place the matters outside EWON's jurisdiction."</i>

³ Letter from the Minister for Energy to the Chairman, Sydney Water, 12 April 2002.

ATTACHMENT 2 SYDNEY WATER'S AMENDED SYSTEM PERFORMANCE STANDARDS

Clause 7.3 of the Operating Licence requires that the Minister for Energy nominate an independent person to review Sydney Water's System Performance Standards by 11 April 2001.

Upon direction from the Minister for Energy, the Tribunal conducted a review of Sydney Water's System Performance Standards and recommended that a number of amendments be made. The Tribunal's recommended amendments relate to:

- water pressure
- water continuity
 - unplanned interruptions
 - planned and warned interruptions, and
- sewage overflows on private land.

Following is a letter dated 22 August 2001 from the Minister for Energy to Sydney Water Corporation outlining the amended System Performance Standards which were to apply from 1 July 2001.



New South Wales

MINISTER FOR INFORMATION TECHNOLOGY,
MINISTER FOR ENERGY, MINISTER FOR FORESTRY, AND
MINISTER FOR WESTERN SYDNEY

DITM Ref: D11334
MEU Ref: 01/00749

22 AUG 2001

Mrs Gabrielle Kibble
Chairman
Sydney Water Corporation
115-123 Bathurst Street
SYDNEY NSW 2000

Dear Mrs Kibble,

I am writing to you in relation to the Review of Sydney Water's System Performance Standards recently undertaken by the Independent Pricing and Regulatory Tribunal (Tribunal) in accordance with clause 7.3.1 of Sydney Water's Operating Licence.

While the Tribunal has not recommended that any new standards be introduced at this time, it has recommended that Sydney Water's existing system performance standards be tightened. In addition, the Tribunal has recommended that Sydney Water be required to report on a number of indicators of performance in various areas. Some of these indicators are to be used to provide greater insight into performance against the standards.

In making this determination I have considered the recommendations contained in the Tribunal's report and the advice of the Ministry of Energy and Utilities. In addition, my determination is based on Sydney Water having in place data collection systems that will allow data to be collected in a manner that complies with the following requirements.

Amended Standards

Schedule 4 of Sydney Water's Operating Licence contains performance standards for drinking water pressure, drinking water continuity and sewage overflows. In line with the Tribunal's recommendations, standards in these areas will remain but the associated performance targets have been tightened.

Attachment 1 to this letter is a Notice that contains the amended performance standards and associated definitions. I have published this notice in the Government Gazette, and require that the amended standards take effect from 1 July 2001.

The amended standard for drinking water pressure now includes the Designated Low Water Pressure Areas, which were previously excluded under Schedule 4 of the Operating Licence. These areas include urban areas adjacent to reservoirs in the Blue Mountains, and non-urban properties in Bayview, West Camden, Llandilo, Berkshire

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Park, Castlereagh, North Richmond, Oakville, Riverstone, Schofields and the Blue Mountains.

Accordingly, I require Sydney Water to report to me by 1 July 2002 on its program of capital works to bring the Designated Low Water Pressure Areas in urban areas up to the amended pressure standard. The program should also reflect any of Sydney Water's existing arrangements with regard to the provision of water services to these areas.

Future Standards

In addition to amending the existing standards, the Tribunal also recommended that standards should be introduced for water reliability, repeat interruptions to water supply, sewage overflows to public land and repeat occurrences of sewage overflows. The Tribunal recommended that data be collected against these future standards so that performance targets can be set as part of the end of term review of the Operating Licence in 2004.

In relation to the proposed future standard on water reliability, the development of performance measures in this area is important as it relates to the long term management of Sydney's water supply. That said, I note that the long term management of Sydney's water supply is the joint responsibility of both Sydney Water and the Sydney Catchment Authority. Accordingly, I require Sydney Water to work with the Sydney Catchment Authority with a view to develop performance measures for water reliability for further consideration at the end of term review of both Operating Licences. I will write to the Minister responsible for the Sydney Catchment Authority in similar terms.

In relation to the Tribunal's recommendation that Sydney Water collect data on an indicator for distribution losses, I note that Sydney Water already reports to the Tribunal an 'unaccounted for water' statistic as part of the Demand Management Strategy Implementation Report required under clause 8.2.3 of the Operating Licence.

The Tribunal's proposed future standards for repeat water supply interruptions and repeat sewage overflows are aimed at ensuring that Sydney Water's water and wastewater systems are adequately maintained. As an operator, it is important that Sydney Water manage its systems to ensure the ongoing delivery of high quality water and wastewater services to its customers.

After the 1999 Operational Audit, I required Sydney Water to report to me on its strategic framework for asset management, which was to take into account reviews of the system performance standards. In December 2000, Sydney Water provided me with its draft Asset Management Framework.

Based on the Tribunal's findings for this review, I now require Sydney Water to incorporate the Tribunal's findings regarding repeat continuity and repeat sewage overflow events into its Asset Management Framework and to provide the Framework to the Ministry of Energy and Utilities for comment. Sydney Water is to update its Asset Management Framework by 1 January 2002 and the Ministry is to report to me on the adequacy of the Framework by 1 July 2002.

Performance Indicators

As noted above, the Tribunal has also recommended the introduction of a number of performance indicators for Sydney Water to collect and report to the Tribunal. The Tribunal's report notes that the purpose of the indicators is to report on the level of service provided and to complement and provide supporting information in relation to the performance standards.

I support the use of performance indicators to provide further insight into performance against system performance standards. Accordingly, I require Sydney Water to collect and report data on those performance indicators that relate to the amended standards for drinking water pressure, drinking water continuity and sewage overflows on private land. This requirement will take effect from beginning of the current report year, being 1 July 2001. Performance indicators are to be reported to the Tribunal by 1 September each year with the first report due to the Tribunal on 1 September 2002.

There will be no requirement at this time to collect and report data on the indicators associated with the proposed future standards. The proposed indicators for repeat water supply interruptions and sewage overflow events are to be considered in Sydney Water's review of its Asset Management Framework, which is to be referred to the Ministry for Energy and Utilities for comment.

The performance indicators that I require Sydney Water to report to the Tribunal are contained in Attachment 2.

Sewerage and Stormwater System Indicators

In addition to performance indicators on the amended and future standards, the Tribunal has also recommended that Sydney Water collects and reports data on a number of indicators that relate to environmental investments in sewerage and stormwater systems. In response, I note that Sydney Water is already required to report to IPART on a wide range of environmental indicators required under Part 9 of the Operating Licence. I believe that these arrangements remain appropriate.

That said, I acknowledge that assessing the effectiveness of Sydney Water's investment in sewerage and stormwater environmental investments is necessary and important. It is for this reason that I am referring these indicators to the Ministry of Energy and Utilities for further review and comment to me by 1 July 2002.

This will enable the Ministry to consider these indicators within the context of Sydney Water's Asset Management Framework and also as part of its review of the current arrangements for stormwater management in the Sydney region.

Customer Service Indicators

After the 1999 Operational Audit, I required Sydney Water to develop a suite of performance measures relating to customer service and satisfaction. Further to this, I required Sydney Water to enter into negotiations with IPART regarding the adoption of these measures for audit purposes. I consider Sydney Water's involvement in this review and through discussions with the Tribunal's consultant (Halcrow Management Sciences) to satisfy my requirements to begin the negotiations with the Tribunal by the end of March this year.

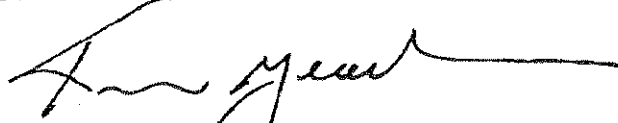
While I am satisfied that negotiations between Sydney Water and the Tribunal have begun, I would like Sydney Water to commence collection of data on the customer service indicators in Attachment 3 from 1 July 2001. This data collection exercise will assist the Tribunal to determine the appropriateness and usefulness of measuring particular customer service indicators. After the first year of collection, I expect that the Tribunal will need to further refine the scope of the indicators following receipt of adequate data from Sydney Water. At that time, the Tribunal's findings on the review of the Customer Contract, which is to be finalised by 25 October 2001 can also be considered.

Monitoring and Recording Protocol

In order to ensure that data provided on the standards is robust, the Tribunal has recommended the inclusion of data accuracy requirements in the definitions for the amended standards. In addition, the Tribunal has proposed that an enhanced Monitoring and Recording Protocol be developed in conjunction with Sydney Water. This protocol should not be limited to the reporting on performance standards but also cover the reporting of indicators and the means through which the Tribunal can be satisfied that the systems being used to collect the data are robust.

I require Sydney Water to finalise this Protocol in consultation with the Tribunal as soon as possible, so that data collected during the audit period commencing 1 July 2002 is covered by the new arrangements.

Yours sincerely,



Kim Yeadon MP
Minister for Information Technology
Minister for Energy, Minister for Forestry
Minister for Western Sydney

ATTACHMENT 1: NOTICE OF AMENDED PERFORMANCE STANDARDS

A. Water pressure

SPS 1

Water pressure

The number of properties connected to Sydney Water's system that are reported as not receiving continuous water pressure at the main tap of at least 15 metres should not exceed 15,000 properties in a report year. The number of reportable properties is to include designated low pressure areas.

Accuracy: $\pm 10\%$ with 95% confidence limits

Interpretation and Definitions (for SPS1)

- Report year means a period of 12 consecutive months commencing on 1 July of each year and ending on the next following 30 June. At the expiration of each report year a new report year commences.
- A reportable property is one where pressure falls below the relevant reporting threshold for a continuous period exceeding 15 minutes during the year as a result of inadequate system capability under normal operating conditions or as a result of operational problems that are not remedied within 4 consecutive days. All incidents of low pressure advised to Sydney Water, whether reported by customers or identified by Sydney Water's own systems are to be included as reportable.
- System capability means the ability of the water supply system, under normal operating conditions, to adequately meet all customer water demands on the system up to and including maximum hour demands.
- Maximum hour demands are system specific and are the maximum sum of all customer demands on that particular part of the water supply system occurring over a one hour period on the maximum consumption day of the year.
- Normal operating conditions exclude short-term operational problems, such as mainbreaks, which are measured by the continuity performance requirements (Clause 7.1.1 and Schedule 4 of the Operating Licence), and circumstances of abnormal demand, such as those due to fire fighting.
- A main tap is the point of connection of the customer's service to the Sydney Water main.
- Where connected properties are in multiple occupancy, each separately billed or occupied part shall be counted as one connected property.
- Connected properties currently unoccupied shall be included.
- Designated low pressure areas are those locations listed in Schedule 4 of Sydney Water's Operating Licence and include urban areas adjacent to reservoirs in the Blue Mountains and non-urban properties in Bayview, West Camden, Llandilo, Berkshire Park, Castlereagh, North Richmond, Oakville, Riverstone, Schofields and the Blue Mountains.

B. Water Continuity

SPS 2a Unplanned interruptions

Sydney Water must ensure that in any report year, the number of properties connected to its water supply system that are reported as affected by an unplanned shut off of water supply exceeding 5 hours does not exceed 35,000.

Accuracy: $\pm 5\%$ with 95% confidence limits.

SPS 2b 'Planned and warned' interruptions

Sydney Water must ensure that in any report year, the number of properties connected to its water supply system that are reported as affected by a 'planned and warned' shut off of water supply exceeding 5 hours does not exceed 32,000.

Accuracy: $\pm 5\%$ with 95% confidence limits

Interpretation and Definitions (for SPS 2a and 2b)

- Report year means a period of 12 consecutive months commencing on 1 July of each year and ending on the next following 30 June. At the expiration of each report year a new report year commences.
- A reportable property is one affected by a shut off of water supply exceeding 5 hours. All shut offs advised to Sydney Water, whether reported by customers or identified by Sydney Water's own systems are to be included as reportable.
- Shut off means a total loss of water supply and begins at the earliest of either when Sydney Water was notified of an interruption or when valve isolation commenced.
- A shut off ends when normal supply is restored.
- A planned shut off commences at the time specified in the notice.
- Exclude shut offs at single properties caused by meter malfunctions or difficulties in the customer's own pipework.
- Where a property experiences multiple shut offs exceeding 5 hours in a report year, it shall be counted as a reportable property in the appropriate category each time.
- Planned means notice has been given in accordance with the Customer Contract.
- Unplanned means that notice has not been given in accordance with the Customer Contract and includes events caused by third party damage and power failure.
- The number of reportable properties from an incident shall be estimated by counting each property from the best available database taking account of pressure data where relevant.
- Where connected properties are in multiple occupancy, each separately billed or occupied part shall be counted as one connected property.
- Connected properties currently unoccupied shall be included.

C. Sewage Overflows

SPS 3: Sewage overflows on private land

Sydney Water must ensure that in any report year, the number of private properties reported as affected by dry weather uncontrolled sewage overflow incidents does not exceed 25,000.

Accuracy: $\pm 5\%$ with 95% confidence limits.

Interpretation and Definitions (for SPS 3)

- Report year means a period of 12 consecutive months commencing on 1 July of each year and ending on the next following 30 June. At the expiration of each report year a new report year commences.
- Uncontrolled sewage overflow means an overflow from any part of the reticulation system that is not a directed sewage overflow.
- Directed sewage overflow means an overflow from a directed overflow structure.
- Only dry weather uncontrolled sewage overflows that are notified to Sydney Water, identified by its employees or Sydney Water's own systems are to be included.
- Uncontrolled sewage overflows during wet weather are excluded.
- Directed overflow structure means a designed structure (excluding access chambers) in the reticulation system which operates as a relief to allow sewage to discharge at a planned location or a sewage pumping station, but does not include a bypass from a sewage treatment plant.
- All directed sewage overflows are excluded.
- Where connected properties are in multiple occupancy, each separately billed or occupied part shall be counted as one connected property.
- Private property means all property privately owned or used for private purposes
- Private property currently unoccupied shall be included.
- Dry weather uncontrolled sewage overflows to private land shall be reported regardless of whether they affect public land as well.
- Where a private property is affected by more than one dry weather uncontrolled sewage overflow in a report year, the property shall be counted each time it is affected.

ATTACHMENT 2: REQUIRED PERFORMANCE INDICATORS**A. Water pressure**

Indicator	Guidance
Number of properties that do not receive continuous water pressure at the main tap of at least 15 metres as a result of abnormal operations	Include any property affected by operational problems for any duration of greater than 4 days. Exclude properties affected by system capability problems
Number of properties where pressure of less than 15 metres head at the main tap occurs more than once during the report year	Include any property affected for a period exceeding 15 minutes per 1 calendar day as a result of system capability deficiencies or affected for a period exceeding 4 days as a result of abnormal operations. Include properties in Designated Low Pressure Areas

B. Water Continuity

Other Indicators	Guidance
<p>1. Number of properties affected by shut-offs in a report year that are:</p> <ul style="list-style-type: none"> • >1 hour but ≤ 5 hours • >5 hours but ≤ 12 hours • >12 hours but ≤ 24 hours • >24 hours 	<p>The definitions for SPS 2(a) and 2(b) apply where appropriate</p>
<p>2. Number of events in a report year by type of interruption:</p> <ul style="list-style-type: none"> • Planned and warned • Unplanned • Third party damage • Power failure 	<p>Include all planned and unplanned interruptions of any duration exceeding 1 hour</p> <p>Notice given in accordance with the Customer Contract</p> <p>All events where notice has not been given in accordance with the Customer Contract</p> <p>Includes events caused by third party damage and power failure</p> <p>Third party damage means physical damage caused directly or indirectly by someone other than Sydney Water, its agents or contractors</p> <p>Events caused by loss of main power supply</p>

C. Sewage Overflows

Other Indicators	Guidance
<p>1. Number of dry weather uncontrolled sewage overflow events in a report year resulting from:</p> <ul style="list-style-type: none"> • Chokes • Third party damage • Hydraulic overload 	<p>The definitions for SPS 3 apply as appropriate</p> <p>Including but not limited to blockages and collapses</p> <p>Third party damage means physical damage caused directly or indirectly by someone other than Sydney Water, its agents or contractors</p> <p>Total less third party damage and</p>
<p>2. Response to priority 6 sewer incidents by time band in a report year:</p> <p>≤1 hour</p> <p>>1 hour</p>	<p>Priority 6 sewer incidents require a response within one hour and meet one or more of the following criteria:</p> <ul style="list-style-type: none"> • Danger to environment • Danger to health • Danger to people • Causing damage to property/properties
<p>3. Response to priority 5 sewer incidents by time band in a report year:</p> <p>≤3 hours</p> <p>>3 hours</p>	<p>Priority 5 sewer incidents require a response within 3 hours and meet one or more of the following criteria:</p> <ul style="list-style-type: none"> • No service available to one customer • Risk to environment • Risk to health • Risk to people • Threat to property/properties

ATTACHMENT 3: REQUIRED CUSTOMER SERVICE INDICATORS

D1.1 Complaints

Indicator: Time to provide a substantive response to customer complaints:

% within 2 days

% within 5 days

% within 10 days

Definition of a complaint

- A complaint is any communication received from a consumer or representative of a consumer which expresses dissatisfaction with a product, service or disservice of Sydney Water or its representative that relates to its obligations as set out in the *Sydney Water Act 1994* or its Operating Licence.
- Sydney Water is not required to make judgements on whether the complaint is justified
- A communication can be in any medium including face to face, telephone, letter, fax or electronic mail
- Dissatisfaction includes any element of dissatisfaction, whether mildly termed or in Sydney Water's opinion unjustified
- A complaint received from a customer representative, such as a solicitor, local MP or Energy and Water Ombudsman NSW should be included as a complaint
- Sydney Water's representative includes its own employees and any one employed by another body working on behalf of Sydney Water, for example a contractor
- Where a further communication from the customer or his representative is received actively chasing the complaint, this shall be logged as a separate complaint, although one providing or requesting further information is not to be recorded as a complaint
- A letter or telephone call advising of a problem (eg burst main) does not necessarily constitute a complaint unless it expresses dissatisfaction with the business.

Definition of a substantive response

A substantive response is one that addresses the issues raised by the customer and:

- resolves them to the customer's satisfaction, or provides explanation of the relevant policy and explains why no further action is required; or
- provides a date when the issue will be resolved if the complaint is relating to future planned operational or capital works

A part response is not a substantive response. (For example, it may be provided to advise the customer that further investigation is required before it is able to provide a substantive response.) The response time should be reported from when the proposed action has been completed, except where the response relates to future planned operational or capital works.

General requirements

- response times should be calculated using working days where date of receipt is day 0 and weekends and public holidays are not included. A part response should not be recorded as a response
- where Sydney Water responds to a written complaint by telephone call or visit then the date of the telephone call or visit must be recorded as the date of response.

Sydney Water may exclude complaints that are;

- anonymous
- not about its core activities as expressed in the operating licence or the *Sydney Water Act 1994*
- sent in response to or alongside invitations for feedback from Sydney Water, eg in response to customer surveys.

D1.2 Telephone calls to a primary contact number

Indicator: Percentage of calls received by a permanent primary advertised number that are answered:

Within 15 seconds

Within 30 seconds

Definitions

- a primary permanent advertised number is one which Sydney Water advertises to its customer base for use in contacting Sydney Water
- only includes telephone calls received during the advertised hours for the relevant permanent primary advertised number
- calls to an automated bill payment telephone number are excluded

Calls answered and response times:

- a call is received once the caller hears the first ring tone
- a call is answered once an agent answers the call
- an agent is a person engaged by Sydney Water to answer telephone calls to one of the principal primary advertised numbers
- for avoidance of doubt, an agent does not include any pre-recorded or voice synthesiser message
- response times should be calculated from when the caller hears the first ring tone to the point the caller speaks to an agent.

General requirements

Where Sydney Water uses alternative methods of answering a call the following points should be considered as times when the call is considered answered by Sydney Water and response times should be calculated accordingly;

- Interactive Voice Response units and touch tone telephone – from the time of the first ring tone to the point the customer speaks to an agent
- Answer phone messages – from the time of the first ring tone up to the point the message has completed its run, and asks customer to leave their details
- recorded message - where a recorded message is used to advise customers of a particular incident, the response time is to be considered from the point the customer hears the first ring (or the message begins, whichever is first) to the point the message has run for at least 20 seconds or has completed, whichever is first.

Sydney Water may exclude calls that are;

- not made from the primary customer base, such as suppliers of Sydney Water, Sydney Water contractors etc, using the primary contact numbers
- to a temporary contact point, for example one specifically set up to deal with flooding incidents.

D1.3 Metered accounts where meter not read

Indicator: Percentage of metered accounts receiving a bill not based on:

An actual meter read during the report year

A business meter read for two consecutive report years

Definitions

- a metered account refers to any account which is billed based on volume
- if a property has multiple meters and each metered account receives a separate bill based on a meter read, these should be reported as separate metered accounts for the purposes of this indicator
- if a property has multiple meters and a single account is issued due to common ownership, the meters will be treated as separate metered accounts for the purposes of this indicator
- a customer meter read is one which is provided by the customer to Sydney Water
- a business meter read is one taken by Sydney Water or its contractor
- an actual meter read is one taken by Sydney Water or its contractor or the customer (i.e. includes both a customer meter read and a business meter read)

D1.4 Account contacts

Indicator: Time to provide a substantive response to account contacts by time band:

% less than one day

% less than five days

% less than ten days

Definition of an account contact

An account contact is defined as

- any communication received from the customer that relates to any aspect of the billing or payment process, and requires a response or action from Sydney Water
- a communication can be in any medium, whether face to face, telephone, written, fax or electronic mail.
- calls to an automated bill payment telephone number are excluded

Definition of a substantive response

A substantive response is considered one that does the following:

- addresses the issues raised by the customer and resolves them to the customer's satisfaction, or provides explanation of the relevant policy, and explains why in its opinion no further action is required
- if the issue cannot be addressed immediately due to circumstances beyond the control of Sydney Water, the response must provide a clear strategy of action and/or identify when the action will be undertaken
- a part response is not a substantive response. (For example, it may be provided to advise the customer further investigation is required before it is able to provide a substantive response.)

General requirements

- where a further communication from the customer or his representative is received actively chasing the account contact, this shall be logged as a separate contact
- response times should be calculated using business days where date of receipt is day 0 and weekends and public holidays are not included. A part response should not be recorded as a response
- where Sydney Water provides a substantive response to an account contact by telephone call or visit then the date of the telephone call or visit must be recorded as the date of response.

D1.5 Other indicators

Customer contacts	Guidance
1. Calls made to one of the permanent advertised contact numbers where callers received a busy tone	Record the total number of calls made where callers to one of the principal contact numbers received a busy tone. This figure should be recorded separately for each of the permanent advertised principal customer contact numbers. For example, it must record the number of calls made to the general customer services number that received a busy tone even if lines for payment of bills are available.
2. Total number of calls abandoned	Calls received where the customer hangs up before the agent answers the call, or before the call is considered answered where there is an automatic system.

Disconnections	
3. Total number of disconnections for non payment	A disconnection is defined as the point where the customer's water supply is completely cut by Sydney Water due to the non-payment of a bill.
4. Total number of flow restrictions for non payment	A flow restriction is defined as Sydney Water's direct intervention in the supply system in order to reduce flow to a customer's property in response to the non payment of a bill.
5. Total number of debt recovery actions	The total number of debt recovery actions that are initiated by Sydney Water
6. Number and value of payment assistance vouchers utilised	Total number and value of payment assistance vouchers utilised in report year

Summary of Ministerial Requirements arising from the Review of System Performance Standards⁴

Area	Requirement
System Performance Standards	6. "...I require Sydney Water to report to me by 1 July 2002 on its program of capital works to bring the Designated Low Water Pressure Areas in urban areas up to the amended pressure standard. The program should also reflect any of Sydney Water's existing arrangements with regard to the provision of water services to these areas."
	7. "...I require Sydney Water to work with the Sydney Catchment Authority with a view to develop performance measures for water reliability for further consideration at the end of term review of both Operating licences."
	8. "...I now require Sydney Water to incorporate the Tribunal's findings regarding repeat continuity and repeat sewage overflow events into its Asset Management Framework and to provide the Framework to the Minister of Energy and Utilities for comment."
	9. "Sydney Water is to update its Asset Management Framework by 1 January 2002"
Performance Indicators	10. "I support the use of performance indicators to provide further insight into performance against system performance standards. Accordingly, I require Sydney Water to collect and report data on those performance indicators that relate to the amended standards for drinking water pressure, drinking water continuity and sewerage overflows on private land."
	11. "Performance indicators are to be reported to the Tribunal by 1 September each year with the first report due to the Tribunal on 1 September 2002."
Customer Service	12. "While I am satisfied that negotiations between Sydney Water and the Tribunal have begun, I would like Sydney Water to commence collection of data on the customer service indicators in Attachment 3 from 1 July 2001."
Monitoring and Reporting Protocol	13. "I require Sydney Water to finalise this Protocol in consultation with the Tribunal as soon as possible, so that data collected during the audit period commencing 1 July 2002 is covered by the new arrangements"

⁴ Letter from the Minister for Energy to the Chairman, Sydney Water, 22 Aug 2001.

ATTACHMENT 1 SUMMARY OF MINISTERIAL REQUIREMENTS AND AUDIT RECOMMENDATIONS FROM THE 2000/2001 OPERATIONAL AUDIT

Summary of Ministerial Requirements arising from the 2000/2001 Operational Audit³

Area	Requirement
Demand Management	1. <i>"In the interim, and so that I remain informed of the Corporation's progress in terms of its water conservation and demand management programs, I expect a continuation of the six monthly Demand Management Strategy Progress reports."</i>
Drinking Water Quality	2. <i>"...I require that Sydney Water include in future Annual Drinking Water Quality Monitoring Plans, submitted to NSW Health, reference to the selection and frequency of testing of the drinking water characteristics."</i>
	3. <i>"...I require Sydney Water to implement a system to track adherence by the SCA to the water quality aspects of the Bulk Water Supply Agreement by 1 September 2002."</i>
Dispute Resolution	4. <i>"...I require Sydney Water to seek from EWON annual confirmation that it continues to meet the requirements of the Operating Licence clauses relevant to its role."</i>
	5. <i>...I also require that, for future reporting to IPART, Sydney Water include information it already receives from EWON on those contracts from customers where the costs for reparations place the matters outside EWON's jurisdiction."</i>

³ Letter from the Minister for Energy to the Chairman, Sydney Water, 12 April 2002.

APPENDIX B
Operating Licence

Operating

LICENCE

under the
Sydney Water Act 1994

NEW SOUTH WALES



SYDNEY WATER ACT 1994

**OPERATING LICENCE RENEWED UNDER SECTION 17 AND
AMENDED UNDER SECTION 16 OF THE SYDNEY WATER ACT 1994**

With the advice of the Executive Council, I, the Honourable Gordon Samuels AC, Governor of New South Wales, hereby renew the operating licence of Sydney Water Corporation under section 17 of the Sydney Water Act, and amend the operating licence under 16 of the Sydney Water Act 1994 and clause 10.1 of the operating licence, in the manner set out below.


Governor of New South Wales

Signed at Sydney, this 19th day of October 1999.

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SYDNEY WATER CORPORATION



Operating Licence under the *Sydney Water Act 1994*

- A. The Governor of New South Wales has renewed Sydney Water Corporation's operating licence under section 17 of the *Sydney Water Act 1994*.
- B. This Licence is renewed for a period of 5 years from 1 January 2000.
- C. This Licence is renewed subject to the Act.
- D. The Commencement Date of the Licence is 12 April 2000.



DEFINITIONS & INTERPRETATION

1.1 Definitions

In this Licence:

Act means the *Sydney Water Act 1994* and any regulations in force under it.

Annual audit is defined in clause 10.1.1 as the annual operational audit of Sydney Water.

Area of Operations means the area of operations specified in section 10(1) of the Act, a description of which is in Schedule 2.

[Note: Sydney Water has the same area of operations that Sydney Water Corporation Limited had immediately before it ceased to be a company State Owned Corporation. Section 10(1) requires that an operating licence contain a schedule that details the area of operations to which the operating licence applies.]

ARMCANZ means the Agriculture and Resource Management Council of Australia and New Zealand.

Catchment Authority means the Sydney Catchment Authority constituted under the *Sydney Water Catchment Management Act 1998*.

Commencement Date means the date on which these terms and conditions of licence take effect.

Competition Principles Agreement means the Competition Principles Agreement made on 11 April 1995 between the Commonwealth, States and internal territories, as in force from time to time.

Consumer means any person who consumes or uses the Services and includes, but is not limited to, a resident consumer (such as a tenant) or a non-resident consumer.

Customer means any person who is taken to have entered into a Customer Contract under section 55 of the Act, or to have entered into a contract on terms relating to the imposition of charges under sections 64 or 65 of the Act. Persons within this definition are owners of land:

- (a) connected to a water main, sewer main or re-use main owned by Sydney Water; or

- (b) not connected but having available for connection a water main, sewer main or re-use main owned by Sydney Water and liable for charges by Sydney Water in accordance with the Act; or

- (c) within a declared stormwater drainage area located in Sydney Water's Area of Operations.

Customer Contract means the contract annexed as Schedule 1, as varied from time to time in accordance with section 59 of the Act.

Dispute Resolution Body means a reputable person possessing qualifications and experience in the resolution of disputes by way of mediation or otherwise and includes a person who carries out investigative functions in the nature of an ombudsman.

Drinking water means water intended primarily for human consumption but which has other personal, domestic or household uses such as bathing and showering.

Ecologically Sustainable Development or ESD has the same meaning as in the *Protection of the Environment Administration Act 1991*.

ESD Indicators means indicators of Ecologically Sustainable Development practices and principles.

End of term review means the end of term review of this Licence under clause 2.4.1.

[Note: The End of term review is to commence on or about 1 January 2004.]

Environment Plan means a plan concerning the environment which contains, at a minimum, the details set out in clause 9.3.

EPA means the Environment Protection Authority constituted by the *Protection of the Environment Administration Act 1991*.

IPART means the Independent Pricing and Regulatory Tribunal of NSW constituted by the *Independent Pricing and Regulatory Tribunal Act 1992*.

Licence means this operating licence granted under section 12 of the Act to Sydney Water or any renewal of it, as in force for the time being.

Licence Review Body means IPART or, if the Minister administering the *Independent Pricing and Regulatory Tribunal Act 1992* directs that IPART is not to undertake the Mid-term review or the End of term review (as applicable) following receipt of advice from IPART concerning its workload, a person, (other than the Licence Regulator, Sydney Water or its Subsidiaries), who in the opinion of the Minister has suitable qualifications and experience for undertaking a Mid-term review or an End of term review.

Licence Regulator means a body established under section 30 of the Act.

[Note: The Licence Regulator is a body corporate representing the Crown.]

Memorandum of understanding means a memorandum of understanding to which clause 3.3.1 applies.

Mid-term review means the mid-term review of this Licence under clause 2.3.1.

[Note: The mid-term review is to occur on or about 1 January 2002.]

Minister means the Minister responsible for administering those provisions of the Act relating to this Licence.

National Parks and Wildlife means the National Parks and Wildlife Service constituted by the *National Parks and Wildlife Act 1974*.

NSW Fisheries means the NSW Department of Fisheries.

NSW Health means the NSW Department of Health.

NHMRC means the National Health and Medical Research Council.

Other Grades of water includes Re-use water but not Drinking water.

Property means any real property that is connected to or for which a connection is available to Sydney Water's Water supply system or Sewerage system determined from the point that the services provided by those systems are measured by Sydney Water for billing or other purposes. "Properties" has a corresponding meaning.

Rental Bond Board means the Rental Bond Board constituted by the *Landlord and Tenant (Rental Bonds) Act 1977*.

Re-use water means water derived from sewage treatment plants and untreated effluent extracted from sewers, which upon further treatment is suitable for its intended re-use application.

Services means the following services of Sydney Water permitted by this Licence and any applicable law:

- (a) storing and supplying water;
- (b) providing sewerage services;
- (c) providing stormwater drainage services; and
- (d) disposing of waste water.

Sewage overflow means a discharge of untreated or partially treated sewage from the Sewerage system. These overflows may occur in wet or dry weather.

Sewerage system means the system employed by Sydney Water to provide sewerage services.

SOC Act means the *State Owned Corporations Act 1989*.

Stormwater drainage system means the stormwater drainage system which Sydney Water must provide, operate, manage and maintain, which system was transferred from the Water Board to Sydney Water under Part 3 of the Act, subject to the transfer of any part or the whole of that system to another body where the Minister is satisfied that satisfactory arrangements have been made for the system to be provided by another body in accordance with section 14 of the Act.

Subsidiary has the same meaning as in the SOC Act. "Subsidiaries" has a corresponding meaning.

[Note: Section 3(1) of the State Owned Corporations Act 1989 defines a subsidiary to mean "a body corporate that is a subsidiary of a state owned corporation as determined in accordance with the Companies (New South Wales) Code or any other applicable law, and (in relation to a statutory SOC) includes a body corporate that would be such a subsidiary if the statutory SOC were a company SOC".]

DEFINITIONS & INTERPRETATION CONT.

Suburb means the suburb assigned a geographical name under the *Geographical Names Act 1966*.

Sydney Water means the Sydney Water Corporation constituted as a corporation by the Act.

Systems means the following systems of Sydney Water necessary for it to provide the Services:

- (a) Water Supply system;
- (b) Sewerage system;
- (c) Stormwater drainage system; and
- (d) Waste water system.

Trade Waste water means any Waste water generated from or as a result of an industrial or commercial activity undertaken, other than at domestic or household premises.

Unaccounted water losses means the difference between the amount of bulk water measured entering Sydney Water's supply system from all sources and the amount of water used by Customers, including metered water use and estimated legitimate unmetered usage. Unaccounted water losses includes the water lost, for example through evaporation, leakage from the system or unlawful use.

Waste water means any discarded water of any origin, clean or contaminated, that is discharged into a Sewerage or Stormwater drainage system.

Waste water system means the system employed by Sydney Water to provide waste water services.

Water Board means the body established under the *Water Board Act 1987*.

Water supply system means the system maintained and operated by, or on behalf of, Sydney Water for the purpose of supplying water derived from all sources of supply including water held in storage, groundwater and water made available for supply following chemical or other treatment, filtration or processing.

1.2 Interpretation

1.2.1 In this Licence, unless the contrary intention appears:

- (a) the word person includes an individual, a body corporate, an unincorporated body or other entity and one or more of each of them;
- (b) a reference to a law includes legislation (including the Act) and regulations made under legislation;
- (c) a reference to regulations includes ordinances, codes, licenses, orders, permits and directions;
- (d) a reference to a law, regulations, guidelines, any memorandum of understanding, plan or other strategy, standards, or list of indicators includes consolidations, amendments, variations, re-enactments, or replacements of any of them;
- (e) a reference to a person includes a reference to the person's executors, administrators, successors, substitutes (including, but not limited to, persons taking by novation) and assigns;
- (f) a reference to a year means a calendar year that ends on 31 December. "Yearly" has a corresponding meaning;
- (g) a reference to a financial year means a period of 12 months that ends on 30 June; and
- (h) a reference to a clause or Schedule is to a clause of or Schedule to this Licence.

1.2.2 If this Licence requires that something undergo public consultation, it requires as a minimum that:

- (a) notice of that thing and the nature and timing of the consultation be:
 - (i) advertised in a major daily newspaper circulating in the Area of Operations;
 - (ii) communicated to persons to whom it would reasonably be expected notice should be given; and
 - (iii) given to the Licence Regulator.
- (b) submissions be sought from the public and that these submissions be considered by the person conducting the review.

- 1.2.3 If any part of this Licence is prohibited, void, voidable, illegal or unenforceable, then that part is severed from the Licence but without affecting the continued operation of the remainder of the Licence.
- 1.2.4 A reference in this Licence to any organisation, association, society, group or body shall, in the event of it ceasing to exist or being reconstituted, renamed or replaced or if its powers or functions are transferred to any other entity, body or group, refer respectively to any such entity, body or group, established or constituted in lieu thereof or succeeding to similar powers and functions.
- 1.2.5 If there is disagreement between Sydney Water and the Licence Regulator as to the proper interpretation of any term of this Licence, the matter must be referred to the Minister for resolution by him or a person appointed by him.
- 1.2.6 The italicised explanatory notes in this Licence do not form part of this Licence.
- 1.2.7 Where the Licence Regulator requires some act or thing to be done under this Licence, Sydney Water must provide reasonable assistance to the Licence Regulator, or other person nominated by the Licence Regulator, with the intent of enabling that act or thing to be done.
- 1.2.8 If there is any inconsistency between this Licence and a Memorandum of understanding or between this Licence and a Customer Contract (including any interpretation of any provision), this Licence will prevail to the extent of the inconsistency, in each case.
- 1.2.9 Any clause of this Licence that expressly or impliedly requires Sydney Water to vary the Customer Contract is subject to section 59 of the Act and is of no force or effect unless the variation is approved by the Governor under section 59 of the Act.

2

INFORMATION ABOUT THIS LICENCE

2.1 Objectives of this Licence

The objective of this Licence is to enable and require Sydney Water to lawfully provide the Services within its Area of Operations. Consistent with this objective, this Licence requires Sydney Water to:

- (a) meet the objectives and other requirements imposed on it in the Act;
- (b) comply with the quality and performance standards in this Licence;
- (c) recognise the rights given to Customers and Consumers;
- (d) be subject to operational audits of compliance with this Licence; and
- (e) establish a dispute resolution scheme.

2.2 Duration of licence

- 2.2.1 This Licence is renewed for a term of 5 years commencing on 1 January 2000.
- 2.2.2 Notwithstanding the expiry of the term, the Governor may renew this Licence in accordance with the Act.

[Note: Section 17 of the Act allows the Governor to renew the licence for a maximum of 5 years at a time.]

2.3 Mid-term Licence Review

- 2.3.1 On or about 1 January 2002, a Mid term review must be undertaken:
 - (a) to determine whether this Licence is fulfilling its objectives; and
 - (b) in relation to any matter required to be reviewed by this Licence.
- 2.3.2 The review is to be undertaken by a Licence Review Body appointed by the Minister.
- 2.3.3 The Licence Review Body must engage in public consultation as part of the review.
- 2.3.4 The Licence Review Body is to report to the Minister within six months of commencing the review on the following:
 - (a) the findings of the review;
 - (b) any recommendations for amendment to this Licence; and

- (c) any recommendations for amendment to any law that adversely impacts on this Licence.

- 2.3.5 The Minister may accept or reject any recommendation made by the Licence Review Body.
- 2.3.6 If any recommendation made by the Licence Review Body and accepted by the Minister requires an amendment to this Licence, the recommendation is of no force or effect unless this Licence is relevantly amended in accordance with section 16 of the Act.
- 2.3.7 Any recommendation made by the Licence Review Body that is not accepted by the Minister is of no force or effect.
- 2.3.8 The Licence Review Body's report must be made available to the public by Sydney Water at the direction of the Minister (which direction must be given within 2 months after the Minister receives the report). Copies are to be made available from Sydney Water's offices on request free of charge and posted on Sydney Water's website on the internet for downloading by any person also free of charge. A reasonable number of copies are to be made available from Sydney Water offices and lodged with environmental centres and public libraries in the Area of Operations.

2.4 End of Term Licence Review

- 2.4.1 An End of term review for the purpose of determining the terms of any renewal of this Licence is to commence on or about 1 January 2004.
- 2.4.2 The review is to be undertaken by a Licence Review Body appointed by the Minister.
- 2.4.3 The Licence Review Body is to engage in public consultation as part of the review.
- 2.4.4 The Licence Review Body is to report to the Minister within 12 months of commencing the review on the following:
 - (a) the findings of the review;
 - (b) any recommendations for amendment to this Licence, including any additional terms to be included in any renewal of this Licence; and

- (c) any recommendations for amendment to any law that adversely impacts on this Licence.
- 2.4.5 The Minister may accept or reject any recommendation made by the Licence Review Body.
- 2.4.6 If any recommendation made by the Licence Review Body and accepted by the Minister requires an amendment to this Licence, the recommendation is of no force or effect unless this Licence is relevantly amended in accordance with section 16 of the Act.
- 2.4.7 Any recommendation made by the Licence Review Body that is not accepted by the Minister is of no force or effect.
- 2.4.8 The Licence Review Body's report must be made available to the public by Sydney Water at the direction of the Minister (which direction must be given within 2 months after the Minister receives the report). Copies are to be made available from Sydney Water's offices on request free of charge and posted on Sydney Water's website on the internet for downloading by any person also free of charge. A reasonable number of copies are to be made available from Sydney Water offices and lodged with environmental centres and public libraries in the Area of Operations.

2.5 Licence amendment

- 2.5.1 Subject to section 16 of the Act and clause 2.5.2, this Licence may be amended by the Governor by notice in the Government Gazette.

[Note: Section 16 of the Act requires that, in addition to the above procedure, in order for an amendment to this Licence to take effect, written notice of the amendment must be laid before Parliament. 15 sitting days of each House of Parliament must have passed after the proposed amendments were laid before Parliament without a notice of motion being given to disallow the proposed amendment; or if such a notice has been given, it has lapsed, been withdrawn or defeated.]

- 2.5.2 Before notice of the Licence amendment is tabled in Parliament under section 16 of the Act, the Minister must give Sydney Water reasonable

notice of the proposed amendment to enable it to comply with the amendment (if relevant) upon its commencement.

2.6 Contravention of Licence

Sydney Water acknowledges that, if the Minister is of the opinion that Sydney Water has contravened this Licence, the Minister may take action against Sydney Water under section 19 of the Act.

[Note: Section 19 of the Act provides that, where the Minister is of the opinion that Sydney Water contravenes this Licence, the Minister may serve a notice on Sydney Water requiring it to rectify the contravention; or, in addition to or instead of the notice to rectify, the Governor may direct that a letter of reprimand is to be served on Sydney Water, or direct that Sydney Water is to pay a monetary penalty not exceeding \$1 million.]

2.7 Cancellation of Licence

This Licence may be cancelled by the Governor in the circumstances described in section 20 of the Act.

[Note: Section 20 sets out the circumstances in which this Licence may be cancelled by the Governor. These include where Sydney Water ceases without authority or permission to do any of the things referred to in section 14 of the Act; or where Sydney Water is, in the Minister's opinion, in material default in compliance with the Licence and has not rectified such default or shown cause why the Licence should not be cancelled; or where Sydney Water is convicted on more than 3 occasions within a 12 month period of criminal offences punishable by at least \$10,000 fine or 12 months penal servitude or imprisonment if Sydney Water were a natural person.]

SYDNEY WATER'S RESPONSIBILITIES

3.1 Responsibilities of Sydney Water under this Licence and other laws

3.1.1 Sydney Water must comply with this Licence and all applicable laws.

[Note: Sydney Water has obligations under a number of laws including:

- Protection of the Environment Operations Act 1997;
- Public Health Act 1991;
- Water Legislation Amendment (Drinking Water and Corporate Structure) Act 1998;
- Water Act 1912; and
- Independent Pricing and Regulatory Tribunal Act 1992.]

3.2 Responsibility of Sydney Water under the Sydney Water Act

3.2.1 Sydney Water acknowledges that its principal objectives under section 21 of the Act (each of which is of equal importance) are:

- (a) to be a successful business and to this end operate at least as efficiently as any comparable business, maximise the net worth of the State's investment in Sydney Water, and exhibit a sense of social responsibility by having regard to the interests of the community in which it operates;
- (b) to protect the environment by conducting its operations in compliance with the principles of Ecologically Sustainable Development contained in section 6(2) of the *Protection of the Environment Administration Act 1991*;
- (c) to protect public health by supplying safe drinking water to its customers and other members of the public in compliance with the requirements of this Licence.

3.2.2 Sydney Water acknowledges that its special objectives under section 22 of the Act are:

- (a) to reduce risks to human health; and
- (b) to prevent the degradation of the environment.

3.2.3 The special objectives are to be interpreted by reference to the objectives referred to in section 6(1)(b) of the *Protection of the Environment Administration Act 1991*, so far as they are relevant to Sydney Water.

3.3 Memorandum of Understanding

3.3.1 In accordance with section 35 of the Act, Sydney Water must maintain a Memorandum of understanding with each of the Water Administration Ministerial Corporation, NSW Health, and EPA for the term of this Licence.

[Note: Section 35 of the Act requires Sydney Water to enter into separate memoranda of understanding with certain regulatory agencies, being the Water Administration Ministerial Corporation, the Director-General of NSW Health and EPA. If Sydney Water and those regulatory agencies are not able to agree on a term of the memorandum of understanding, the view of the regulatory agency prevails. Section 36 deals with public exhibition of memoranda of understanding.]

3.3.2 The purpose of a Memorandum of understanding is to form the basis for co-operative relationships between the parties to the memorandum. In particular:

- (a) the memorandum with NSW Health is to recognise the role of NSW Health in providing advice to the Government of NSW in relation to drinking water quality standards and the supply of water which is safe to drink; and
- (b) the memorandum with the EPA is to recognise the EPA as the environmental regulator of the State and to commit Sydney Water to environmental improvements;

3.3.3 Clause 3.3.1 does not limit the persons with whom Sydney Water may have a memorandum of understanding.

LICENCE AUTHORISATION & AREA OF OPERATIONS

4.1 What the licence authorises and regulates

- 4.1.1 This Licence is granted to enable and require Sydney Water to provide, construct, operate, manage and maintain efficient, co-ordinated and commercially viable Systems for providing the Services throughout the Area of Operations.

[Note: The Systems include those systems of Sydney Water necessary to enable it to provide the Services.]

- 4.1.2 Sydney Water must ensure that the Systems comply with the quality and performance standards required in this Licence or required to be developed under this Licence.

4.2 Powers not limited

This Licence does not restrict or affect Sydney Water's power to carry out any functions imposed under any applicable law.

4.3 Area of Operations

The Area of Operations may only be varied under section 10 of the Act.

[Note: The Area of Operations for Sydney Water is listed in Schedule 2 of this Licence. Section 10 of the Act states that subject to certain requirements the Governor may vary the Area of Operations by order published in the NSW Government Gazette. Such order does not take effect until after the notice of the order has been laid before Parliament.]

4.4 Connection of Services

- 4.4.1 Subject to Sydney Water continuing to be in compliance with any applicable law, Sydney Water must ensure that its Services are available for connection on request to any land situated in the Area of Operations.
- 4.4.2 Connection to the Services is subject to any conditions Sydney Water may determine to ensure the safe, reliable and financially viable supply of Services to land in the Area of Operations in accordance with this Licence. Satisfactory

compliance with the conditions of connection is to be taken as forming an essential requirement for gaining Sydney Water's approval for connection of the land to a water main or sewer main under section 56(2) of the Act.

4.5 Non-exclusive licence

This Licence does not prohibit another person from providing services in the Area of Operations that are the same as or similar to the Services, if the person is lawfully entitled to do so.

CUSTOMER & CONSUMER RIGHTS

5.1 Customer contract

- 5.1.1 The Customer Contract may only be varied in accordance with section 59 of the Act.

[Note: The Customer Contract is set out in Schedule 1 of this Licence. Division 7 of Part 6 of the Act contains various provisions in relation to the Customer Contract.]

[Note: Section 59 of the Act requires that a variation of the Customer Contract must be published in a daily newspaper circulating in the Area of Operations at least 6 months before the variation becomes effective, or a shorter period of notice approved by the Minister. A copy of the notice must also be given to the Customer. Section 59 does not apply to an alteration of fees or charges where the alteration is in accordance with an IPART determination.]

- 5.1.2 Subject to section 56 of the Act, the Customer Contract automatically applies to persons specified in section 55(1) of the Act.
- 5.1.3 The Customer Contract sets out the rights and obligations of Customers and Sydney Water in relation to the Services provided through Systems required under this Licence. These rights and obligations are in addition to the rights and obligations conferred by the Act and any other law.
- 5.1.4 A copy of the Customer Contract, and any variations to it must be posted on Sydney Water's website on the internet for downloading free of charge and made available at its premises for access or collection by any member of the public, also free of charge.
- 5.1.5 Unless otherwise required by the Minister, Sydney Water must initiate an independent review of the Customer Contract to be carried out within 12 months of the Commencement Date. The review must have regard to the system performance standards in clause 7.1.1 or as determined by the Minister under clause 7.3 of this Licence.
- 5.1.6 The person undertaking the review must produce a report setting out its findings and recommendations. A copy of the report must be provided to the Minister upon its production.
- 5.1.7 Within 3 months of the completion of the review of the Customer Contract, Sydney Water must take all

steps necessary to issue a new Customer Contract that addresses the recommendations of the review report.

- 5.1.8 Within 3 months of review of the Customer Contract under clause 5.1.5, Sydney Water must prepare a pamphlet that:
- provides a brief explanatory introduction to the Customer Contract;
 - summarises the key rights and obligations of Customers under the Customer Contract; and
 - contains a list of Sydney Water's local offices and emergency contact numbers in its Area of Operators.
- 5.1.9 The pamphlet prepared under clause 5.1.8 must be updated when changes are made to the Customer Contract and must be disseminated by Sydney Water free of charge:
- by placing sufficient copies with the Rental Bond Board for collection by interested persons and where reasonably possible for despatch by the Rental Bond Board in correspondence sent to tenants;
 - to customers, at least once annually with their quarterly or other bills; and
 - to any other person on request.
- 5.1.10 As provided by and subject to section 57 of the Act, Sydney Water may enter into other contracts or arrangements for the supply of Services. The terms of any such contract or arrangement are such as may be negotiated between Sydney Water and any such person.

5.2 Consumers

- 5.2.1 Sydney Water must fulfil its obligations under the Customer Contract relating to complaint handling and complaint resolution procedures as if those obligations also extended to Consumers.

5.3 Code of practice & procedure on debt & disconnection

- 5.3.1 Within 6 months of the Commencement Date, Sydney Water must develop a code of practice and procedure on debt and disconnection.

- 5.3.2 The code of practice and procedure on debt and disconnection must:
- (a) provide for deferred payment or payment by instalment options for consumption bills; and
 - (b) provide for the payment options referred to in (a) to be advised in consumption bills.
- 5.3.3 Sydney Water must include the code of practice and procedure on debt and disconnection in its Customer Contract.
- 5.3.4 Sydney Water must disseminate free of charge information on its code of practice and procedure on debt and disconnection:
- (a) by placing sufficient copies with the Rental Bond Board for collection by interested persons;
 - (b) to Customers at least once annually with their quarterly or other bills; and
 - (c) to any other person on request.
- 5.4 Customer councils**
- 5.4.1 In accordance with section 15 of the Act, Sydney Water must establish and regularly consult with one or more Customer Councils to enable community involvement in issues relevant to the performance of Sydney Water's obligations under this Licence.
- 5.4.2 A Customer Council may be utilised by Sydney Water, among other things, to provide it with high quality advice on the interests of Customers and Consumers of Sydney Water and on the Customer Contract, in accordance with the terms of the relevant Customer Council Charter, and on such other key issues related to Sydney Water's planning and operations as Sydney Water may determine.
- 5.4.3 The first Customer Council under this Licence in respect of the period after the Commencement Date must be established within 3 months of the Commencement Date. However, if Sydney Water has appointed members to its Customer Councils since 1 January 2000 substantially in accordance with clauses 5.4.5 to 5.4.11 (inclusive), Sydney Water will be taken to have complied with this clause 5.4.3.
- 5.4.4 Sydney Water must appoint the members of a Customer Council, consistent with this Licence.
- 5.4.5 At all times, the membership of one or more Customer Councils must between them include a representative from at least each of the following:
- (a) business and consumer groups;
 - (b) low income households;
 - (c) people living in rural and urban fringe areas;
 - (d) residential consumers;
 - (e) environmental groups;
 - (f) local government; and
 - (g) the Ethnic Communities Council.
- 5.4.6 Sydney Water may require a representative under clause 5.4.5 to serve on so many Customer Councils as it considers appropriate to best discharge the tasks assigned to him or her.
- 5.4.7 Subject to clause 5.4.10, the term of a member of a Customer Council will expire 2 years after his or her appointment.
- 5.4.8 Subject to clause 5.4.11, at least half of the persons appointed as members of a Customer Council must be new members. That is, they must not be persons who were members of a Customer Council at any time during the period of 2 years before the date of their appointment.
- 5.4.9 Subject to clause 5.4.11, no person may be appointed as a member of a Customer Council for more than 2 consecutive terms (including, without limitation, any term served as a replacement member under clause 5.4.10).
- 5.4.10 If a member's place becomes vacant before the expiration of his or her term, Sydney Water may appoint a suitable replacement for the remainder of that member's term.
- 5.4.11 If Sydney Water chooses to establish one or more Customer Councils the majority of members of which are not individuals, clauses 5.4.8 and 5.4.9 do not apply to those Customer Councils.

CONSUMER & CUSTOMER RIGHTS CONT.

[Note: For example, Sydney Water might choose to establish a corporate Customer Council, the majority of members of which might be industry peak bodies. In this case, it is not desirable to refuse to reappoint these bodies after they have been members for 2 consecutive terms because Sydney Water would then lose the input of these bodies and the industries they represent. The selection criteria for membership on these Customer Councils must be addressed in the relevant Customer Council's Charter under clause 5.4.12(b).]

- 5.4.12 Subject to clause 5.4.13, within 3 months of establishing the Customer Councils or the Commencement Date (whichever is the later) Sydney Water must develop in consultation with members of the Customer Council, a Customer Council Charter that addresses the following issues:
- (a) the role of the Customer Councils;
 - (b) selection criteria on how members will be appointed;
 - (c) information on how the Customer Council will operate;
 - (d) a description of the type of matters that will be referred to the Customer Council;
 - (e) procedures for the conduct of Customer Council meetings, including the appointment of a chairperson;
 - (f) communicating the outcome of the Customer Council's work to Sydney Water;
 - (g) procedures for tracking issues raised and ensuring appropriate follow-up of those issues; and
 - (h) funding and resourcing of the Customer Council by Sydney Water.
- 5.4.13 If Sydney Water:
- (a) has appointed members to its Customer Councils since 1 January 2000 and is taken to have complied with clause 5.4.3; and
 - (b) has developed in consultation with members of those Customer Councils a Customer Council Charter substantially in accordance with clause 5.4.12,
- Sydney Water will be taken to have complied with clause 5.4.12.
- 5.4.14 There must be a Customer Council Charter for each Customer Council. However a single Customer Council Charter may be expressed to apply to more than one Customer Council.
- 5.4.15 Sydney Water must provide a Customer Council with information within its possession or under its control necessary to enable the Customer Council to discharge the tasks assigned to it, other than information or documents over which Sydney Water or another person claims confidentiality or privilege.
- 5.4.16 A copy of each Customer Council Charter must be posted on Sydney Water's website on the internet for downloading free of charge and made available at its offices for access or collection by any member of the public, also free of charge.
- 5.4.17 As part of the End of term review, the Licence Review Body must evaluate and report on the effectiveness of Customer Councils and compliance with the Customer Council Charter.

WATER QUALITY

6.1 Interpretation

In this Part:

aesthetic guideline values means the concentration or measure of a physical characteristic of water quality (a physical or chemical property) that is associated with good water quality. Some examples include appearance, pH, taste and odour.

health guideline values means the concentration or measure of a physical characteristic of water quality (a physical, chemical, biological or radionuclide property) that, based on present knowledge, does not result in any significant risk to the health of a person over a lifetime of consumption.

Physical characteristics of Drinking water means those physical characteristics of Drinking water specified in the NHMRC and ARMCANZ Australian Drinking Water Guidelines 1996 including dissolved oxygen, hardness, pH, taste and odour, total dissolved solids, true colour and turbidity.

Potable water backflow prevention devices are plumbing cross connections designed, installed and maintained to prevent contamination of drinking water.

6.2 Drinking Water Quality - Standards

6.2.1 Sydney Water must comply with the following relating to Drinking water:

- (a) the NHMRC and ARMCANZ Australian Drinking Water Guidelines 1996 ("1996 Guidelines") relating to health guideline values;
- (b) any amendments updates or supplements of the 1996 Guidelines ("Updated Guidelines") relating to health guideline values specified by NSW Health;
- (c) the aesthetic guideline values of the 1996 Guidelines specified by the NSW Minister for Health following consultation with the Minister; and
- (d) the aesthetic guideline values of the Updated Guidelines specified by the NSW Minister for Health following consultation with the Minister.

[Note: A significant aim of the Drinking water quality standards is to ensure that Sydney Water achieves appropriate public health outcomes.]

6.2.2 In delivering the Services, Sydney Water must have regard to the concepts of risk minimisation practices and system management of public water supplies in the 1996 Guidelines and Updated Guidelines (including in relation to *Cryptosporidium* and *Giardia*).

[Note: In releasing draft guidelines on Cryptosporidium and Giardia, NHMRC has stated that it is not possible to set guideline levels for Cryptosporidium and Giardia in drinking water because there is a lack of a suitable method to identify organisms in drinking water that cause human infection.]

6.2.3 Sydney Water must commission an independent study of the costs and benefits of Sydney Water complying with the aesthetic guideline values of the NHMRC and ARMCANZ Australian Drinking Water Guidelines 1996 and must report to the Licence Review Body on the results of that study by no later than 31 January 2002, to enable the Licence Review Body to report on the matter as part of the Mid-term review. Sydney Water must ensure that the process of conducting the independent study includes public consultation in accordance with clause 1.2.2 on a discussion paper before the study is finalised.

6.3 Drinking Water Quality - Monitoring

6.3.1 Sydney Water must prepare, to the satisfaction of NSW Health, a comprehensive Annual Drinking Water Quality Monitoring Plan for the Water supply system by 30 June 2000 and then by 31 March in each subsequent year, for the duration of this Licence.

6.3.2 The Annual Drinking Water Quality Monitoring Plan for the Water supply system must include system performance monitoring and regular sampling, laboratory testing and processes to ensure quality control. The monitoring of Drinking water quality must include:

- (a) the health guideline values for which compliance is required under clauses 6.2.1 (a) and (b); and

- (b) the aesthetic guideline values for which compliance is required under clauses 6.2.1 (c) and (d).
- 6.3.3 Sydney Water must monitor Drinking water quality for the aesthetic guideline values of the 1996 Guidelines that apply to the Physical characteristics of Drinking water.
- 6.3.4 The Drinking water quality monitoring must assess the quality of Drinking water in Sydney Water's Water supply system. The sampling frequency and the locations chosen for the monitoring should be such that the results are representative of the quality of water supplied to Customers and Consumers.
- 6.3.5 Sydney Water must undertake the Drinking water quality monitoring for the period from the Commencement Date to 30 June 2001 and after that for each subsequent financial year.

[Note: The requirement for an annual drinking water monitoring plan is also found in the Memorandum of understanding between NSW Health and Sydney Water, July 1999.]

6.4 Drinking Water Quality - Reporting

- 6.4.1 Sydney Water's water quality monitoring test results must be placed on its website on the internet for downloading by the public, free of charge and made available at its offices for access or collection by any person, also free of charge.
- 6.4.2 Sydney Water must produce an Annual Drinking Water Quality Report that reports on the Water supply system in relation to:
 - (a) the health guideline values for which compliance is required under clauses 6.2.1 (a) and (b);
 - (b) the aesthetic guideline values for which compliance is required under clauses 6.2.1 (c) and (d); and
 - (c) the aesthetic guideline values of the 1996 Guidelines that apply to the Physical characteristics of drinking water.
- 6.4.3 The Annual Drinking Water Quality Report must also include a summary of monitoring information, indicating water quality trends and problems, and a summary of system failures (significant and major water quality incidents) over the previous year and action taken to resolve them and how public health was protected.

- 6.4.4 The Annual Drinking Water Quality Report must be prepared by 30 November each year and must be placed on Sydney Water's website on the internet for downloading by the public free of charge and made available at its offices for access or collection by any person, also free of charge.

6.5 Drinking Water - Planning

- 6.5.1 Sydney Water must prepare, to the satisfaction of NSW Health, a Five-Year Drinking Water Quality Management Plan within 5 months after the Commencement Date. Sydney Water must release a discussion paper in relation to the Five-Year Drinking Water Quality Management Plan within 2 months after the Commencement Date and must engage in public consultation in accordance with clause 1.2.2 on the discussion paper.
- 6.5.2 The Five-Year Drinking Water Quality Management Plan must include strategies for the comprehensive management of the quality of Drinking water in Sydney Water's Water supply system, the aim of which is to reduce risk to public health and meet any aesthetic guideline values extended to Sydney Water in or by this Licence. It must also include an audit program for Potable water backflow prevention devices.
- 6.5.3 Sydney Water must prepare, to the satisfaction of NSW Health, an Annual Drinking Water Quality Improvement Plan for the Water supply system within 1 month after the Commencement Date and after that by 31 March in each year, unless otherwise specified following the review under clause 6.5.5.

[Note: The requirement for a long term water quality management strategy is also found in the Memorandum of understanding between NSW Health and Sydney Water, July 1999.]

- 6.5.4 The Annual Drinking Water Quality Improvement Plan must incorporate system and operational changes needed to address problems identified through drinking water quality monitoring data and through periodic system inspections and evaluations, the aim of which is to reduce risks to public health and meet any aesthetic guideline values extending to Sydney Water in or by this Licence.

- 6.5.5 The Annual Drinking Water Quality Improvement Plan must be reviewed as part of the Mid-term review under clause 2.3.1 to assess its continued effectiveness and whether there is a continued need for the plan each year.

[Note: The requirement for an annual drinking water quality improvement plan is also found in the Memorandum of understanding between NSW Health and Sydney Water, July 1999.]

- 6.5.6 Sydney Water must prepare, to the satisfaction of NSW Health, a Drinking Water Incident Management Plan, within 1 month after the Commencement Date which must remain in place until any new plan is developed in agreement with NSW Health.
- 6.5.7 The Drinking Water Incident Management Plan must contain, or incorporate by reference, procedures and protocols for the coordinated management of Drinking water incidents including media and stakeholder liaison and any notification of public health advice received from NSW Health to Customers.

[Note: The requirement for a comprehensive incident management plan is also found in the Memorandum of understanding between NSW Health and Sydney Water, July 1999.]

6.6 Environmental Water Quality

Sydney Water must meet the environmental water quality requirements for any discharges or water releases required by licences issued to it by the EPA or the Department of Land and Water Conservation.

6.7 Other Grades of Water

- 6.7.1 Other Grades of water supplied by Sydney Water must be supplied according to relevant guidelines and requirements prescribed by EPA, NSW Health, the Department of Land and Water Conservation, the Department of Agriculture, other relevant government agencies and the NSW Recycled Water Coordination Committee.

[Note: The NSW Recycled Water Coordination Committee has produced the NSW Guidelines for Urban and Residential Use of Reclaimed Water, May 1993.]

- 6.7.2 Minimum standards and guidelines to regulate the supply of Other Grades of water must be identified in the Mid-term review. Where the Minister is of the opinion that the minimum standards and guidelines for the supply of Other Grades of water identified in the Mid-term review are appropriate, such standards and guidelines must be observed by Sydney Water as a condition of this Licence.
- 6.7.3 Where there is a conflict between any of the guidelines, requirements or standards applying to Sydney Water under clause 6.7 the Minister's decision will prevail.

7

SYSTEM PERFORMANCE

7.1 Compliance with performance standards

7.1.1 Sydney Water must ensure that its Systems comply with the standards for continuity, water pressure and sewage overflows in Schedule 4 or such other standards determined by the Minister under clause 7.3.

7.2 Standards in respect of low pressure areas

7.2.1 Within 1 month after the Commencement Date, Sydney Water must develop standards that establish the minimum level of water pressure required for the following low pressure areas in Schedule 4:

- (a) Urban areas adjacent to reservoirs in the Blue Mountains.
- (b) Non-urban properties in Bayview, West Camden, Llandilo, Berkshire Park, Castlereagh, North Richmond, Oakville, Riverstone, Schofields and the Blue Mountains.

7.2.2 Sydney Water must comply with the standards developed under clause 7.2 or such other standards determined by the Minister under clause 7.3.

7.3 Review of performance standards

7.3.1 Within 12 months of the Commencement Date, a person nominated by the Minister must consult with Sydney Water and other stakeholders and report to the Minister on whether the standards referred to in clauses 7.1 and 7.2 should be amended, and if so the nature of the amendments.

7.3.2 The report under clause 7.3.1 must include an analysis of the benefits and costs of amendments to the performance standards.

7.3.3 Following receipt of the report the Minister, or a person appointed by the Minister, may publish a notice which lists the amendments to the performance standards that must be adopted by Sydney Water.

7.3.4 Any amendments to the performance standards that must be adopted by Sydney Water under clause 7.3.3 must be incorporated into the Customer Contract as soon as reasonably possible and also considered by any review of the Customer Contract and the Mid-term review of this Licence.

7.4 Keeping of records on discontinuity, low pressure & sewage overflow

7.4.1 In this clause:

Delivery system means the geographical classification used by Sydney Water for its own internal purposes which is based on geographic regions employed as part of the Water supply system or Sewerage system.

7.4.2 Sydney Water must keep records of the nature of incidents of discontinuity, low pressure and sewage overflows occurring each year and classified according to Delivery system.

7.4.3 From the Commencement Date, Sydney Water's record keeping systems must permit the reporting of incidents by Delivery system and by the commencement of the Mid-term review, also by Suburb.

7.4.4 Sydney Water must maintain record systems that are sufficient to enable it to measure compliance with the standards on discontinuity, low pressure and sewage overflows in Schedule 4.

7.4.5 Sydney Water's records must include details of any complaints concerning discontinuity, low pressure and sewage overflows regardless of whether they have been received from Customers, Consumers and real estate agents or other persons on behalf of Consumers.

7.4.6 Sydney Water must record multiple incidents of discontinuity, low pressure and sewage overflow occurring each year as separate incidents. In particular each incident of discontinuity affecting the one Customer or Consumer is to be recorded as one incident.

7.4.7 From the later of the Commencement Date and 1 July 2000, Sydney Water must also record the length of incidents of discontinuity, indicating whether the period of discontinuity has lasted for more than 6 hours, more than 12 hours, or more than 24 hours.

7.4.8 Sydney Water must also record the respective number of planned and unplanned interruptions to its Water supply system or to the supply of Drinking water.

7.5 Annual reporting on compliance with performance standards

- 7.5.1 By no later than 1 September each year, Sydney Water must report to the Licence Regulator on its compliance with the performance standards required to be compiled under clauses 7.1 and 7.2 for the previous 12 months, to enable the Licence Regulator to consider and report on the matter as part of the Annual audit.
- 7.5.2 As part of its report, Sydney Water must provide the Licence Regulator with physical or electronic access to the records kept by Sydney Water under clause 7.4.

WATER CONSERVATION & DEMAND MANAGEMENT

8.1 Water Conservation Target

8.1.1 Sydney Water must take action to reduce the quantity of water (other than Re-use water) it draws from all sources to the following target levels (“water conservation targets”):

- (a) 364 litres per capita per day by 2004/5 (being a reduction of 142 litres per capita per day or 28% from the 1990/1991 baseline);

[Note: The 1990/1991 baseline is 506 litres per capita per day.]

- (b) 329 litres per capita per day by 2010/2011 (being a reduction of 177 litres per capita per day or 35% from the 1990/1991 baseline);
- (c) Such target level for 2014/2015 as determined as part of the Mid-term review of this Licence conducted under clause 2.3.1.

8.1.2 The following principles and parameters must be applied by Sydney Water in assessing compliance with the water conservation targets:

- (a) assessment of performance against water conservation targets is to be adjusted for the effects of weather on water usage; and
- (b) the water conservation targets in clause 8.1.1 are for an average year.

8.1.3 By no later than 1 September each year, Sydney Water must report to the Licence Regulator on its progress in complying with the water conservation targets in clause 8.1.1 (which may include any targets for Unaccounted water losses), to enable the Licence Regulator to consider and report on the matter as part of the Annual audit.

8.2 Demand Management Strategy

8.2.1 In this clause:

Demand Management Strategy means the 1995 Demand Management Strategy updated from time to time by Sydney Water or as required by the Minister.

[Note: The 1995 Demand Management Strategy was released by Sydney Water in October 1995. Following the 1998 operational audit, the Minister required Sydney Water to produce a revised Demand Management Strategy by 31 December 1999.]

8.2.2 Sydney Water must give priority consideration to demand side management as the basis for planning the future provision of its Services, including addressing Unaccounted water losses.

8.2.3 By no later than 1 September each year, Sydney Water must provide a report (the “Demand Management Strategy Implementation Report”) to the Licence Regulator on implementation of Sydney Water’s Demand Management Strategy for the previous 12 months, to enable the Licence Regulator to consider and report on the matter as part of the Annual audit.

8.2.4 The Demand Management Strategy Implementation Report is to:

- (a) contain an estimate of past, current and projected water uses and distinguish between residential, industrial, commercial and government uses;
- (b) describe the frequency and magnitude of expected supply deficiencies, including those arising as a result of wastage or loss, drought or emergency;
- (c) identify conservation measures currently adopted and being practised;
- (d) describe, cost and evaluate additional conservation measures;
- (e) describe future plans for water reclamation and strategies to alter water use practices, including those relating to the installation of more efficient water appliances and devices by users;
- (f) evaluate these plans in terms of their cost and contrast with the cost of alternative water supplies;
- (g) prioritise and schedule the implementation of courses of action found to be cost effective; and
- (h) identify strategies for reducing Unaccounted water losses.

- 8.2.5 Sydney Water must engage a suitably qualified third party to verify the accuracy and soundness of its mathematical models for projecting future demands for water usage and report the results to the Licence Regulator within 1 month after the Commencement Date.

8.3 Reducing Discharges

- 8.3.1 Sydney Water must take action to re-use, intercept or otherwise prevent from discharge into the ocean, waterways and other waters, sewage or effluent of Customers and Consumers by way of non-potable re-use. Sydney Water is to meet the targets set by the Minister from time to time.

[Note: A re-use target of 58 megalitres per day was gazetted on 30 June 1995 under section 27(2) of the Act. Following the 1998 Operational Audit the Minister has required Sydney Water to develop, by 31 December 1999, a re-use strategy for the next five and ten years.]

- 8.3.2 By no later than 1 September each year, Sydney Water must report to the Licence Regulator on its progress in meeting the re-use target required under clause 8.3.1 for the previous 12 months, to enable the Licence Regulator to consider and report on the matter as part of the Annual audit.

8.4 Water Conservation Rating and Labelling

- 8.4.1 Sydney Water, through continuing support for the National Water Conservation Rating and Labelling Scheme, is to encourage manufacturers of water appliances to improve the water use efficiency of these appliances where consistent with Sydney Water's objectives.
- 8.4.2 By no later than 1 September each year, Sydney Water must report to the Licence Regulator on its performance under clause 8.4.1 for the previous 12 months, to enable the Licence Regulator to consider and report on the matter as part of the Annual audit.

ENVIRONMENT – INDICATORS & PLANS

9.1 Environmental Indicators

- 9.1.1 In accordance with section 14(1)(d) of the Act, Sydney Water must monitor and compile data on indicators of the direct impact of its activities on the environment, whether such activities are carried out by or on behalf of Sydney Water.
- 9.1.2 Except for those indicators solely applicable to the Catchment Authority, the environmental indicators used are to accord with those published in the Government Gazette on 15 December 1995.
- 9.1.3 By no later than 1 September each year, Sydney Water must report to the Licence Regulator on its performance in relation to the indicators compiled under clause 9.1.1 for the previous 12 months, to enable the Licence Regulator to consider and report on the matter as part of the Annual audit.
- 9.1.4 The yearly report provided by Sydney Water must provide information which enables a year to year comparison in relation to Sydney Water's performance in this area. In particular, Sydney Water is to use the indicators with historical annual values over at least the previous 10 years where comparable data permits such a compilation.
- 9.1.5 The yearly report is to be made available to the public by Sydney Water within 1 month after receipt by the Licence Regulator. Copies are to be made available from Sydney Water's offices on request free of charge and posted on Sydney Water's website on the internet for downloading by any person also free of charge. A reasonable number of copies are to be made available from Sydney Water offices and lodged with environmental centres and public libraries in the Area of Operations.
- 9.1.6 The environmental indicators in clause 9.1.2 are to be reviewed as part of the End of term review.

9.2 Ecologically Sustainable Development Indicators

- 9.2.1 Sydney Water must develop measures to indicate the degree to which its activities and Services comply with the principles of Ecologically Sustainable Development or ESD.

- 9.2.2 Sydney Water must develop a draft list of ESD Indicators within 1 month after the Commencement Date. The draft list must have regard to:
- corporate management (including corporate policy and planning, and corporate asset management);
 - management of the System; and
 - the planning, design and construction of
 - new Systems;
 - the upgrading of existing Systems; and
 - depots.
- 9.2.3 The draft list developed by Sydney Water must undergo public consultation where the public have at least 20 days to provide their comments. Specific comments must also be invited from EPA, the Department of Land and Water Conservation, National Parks and Wildlife, NSW Fisheries, SEDA and peak environment non-governmental organisations.
- 9.2.4 Within three months of the close of submissions, following public consultation under clause 9.2.3, Sydney Water must present a final list of ESD Indicators to the Minister for approval and, if approved, for publication in the Gazette.
- 9.2.5 Sydney Water must commence monitoring and compiling data on the ESD Indicators from the later of the Commencement Date and 1 July 2000.
- 9.2.6 By no later than 1 September each year, Sydney Water must report to the Licence Regulator on its performance in relation to the ESD Indicators compiled under clause 9.2.4 for the previous 12 months, to enable the Licence Regulator to consider and report on the matter as part of the Annual audit.
- 9.2.7 The yearly report provided under clause 9.2.6 is to be made available by Sydney Water to the public within 1 month after receipt by the Licence Regulator. Copies are to be made available from Sydney Water offices and lodged with environmental centres and public libraries in the Area of Operations.
- 9.2.8 The ESD Indicators in clause 9.2.4 are to be reviewed as part of the End of term review.

9.3 Environment Plan

- 9.3.1 Sydney Water must produce a five-year Environment Plan by the later of the Commencement Date and 30 September 2000. After that Sydney Water must produce further five-year Environment Plans every 5 years.
- 9.3.2 Sydney Water must engage in public consultation in developing the Environment Plan.
- 9.3.3 The Environment Plan must:
- contain details of Sydney Water's water, waste water and stormwater strategies, as well as the environmental aspects of its other activities such as waste minimisation and heritage;
 - endorse ESD principles; and
 - be recognised in Sydney Water's business plans.
- 9.3.4 The Environment Plan must set targets and time tables for compliance by Sydney Water with those targets over the term of the Environment Plan. These targets must utilise the environmental and ESD indicators in clauses 9.1 and 9.2 and also the targets and indicators in clauses 9.6 and 9.7.
- 9.3.5 The Environment Plan must be posted on Sydney Water's website on the internet for downloading free of charge, made available at its premises for access or collection by any member of the public and lodged with environmental centres and public libraries in the Area of Operations, in each case also free of charge.
- 9.3.6 The report detailing Sydney Water's progress in meeting the Environment Plan, and in particular, in complying with the targets and timetables in clause 9.3.4 are to be compiled on an a yearly basis. Within one month of its completion, the report must be posted on Sydney Water's website on the internet for downloading free of charge, made available at its premises for access or collection by any member of the public and lodged with environmental centres and public libraries in the Area of Operations, in each case also free of charge.
- 9.3.7 Amendments may only be made to the Environment Plan following public consultation.

9.4 Energy Management

- 9.4.1 In this clause:
- Energy Management Policy** means the energy management policy of the NSW Government released by the NSW Department of Energy (now the Ministry of Energy and Utilities) in 1998 and updated from time to time.
- 9.4.2 Sydney Water must adopt the following targets in the Energy Management Policy for energy consumption of buildings:
- 15% reduction from the 1995 level by 2001;
 - 25% reduction from the 1995 level by 2005; and
 - any subsequent targets set by the Energy Management Policy.
- 9.4.3 By no later than 1 September each year, Sydney Water must report to the Licence Regulator on its performance in relation to clause 9.4.2 for the previous 12 months, to enable the Licence Regulator to consider and report on the matter as part of the Annual audit.

9.5 Botany Wetlands

- 9.5.1 In this clause:
- Botany Wetlands Plan** means the plan of management for the area known as Botany Wetlands, issued by Sydney Water in December 1997.
- 9.5.2 Sydney Water is to implement the Botany Wetlands Plan in conjunction with other appropriate persons.
- 9.5.3 By no later than 1 September each year, Sydney Water must report to the Licence Regulator on its compliance with the Botany Wetlands Plan for the previous 12 months, to enable the Licence Regulator to consider and report on the matter as part of the Annual audit.
- 9.5.4 Prior to commencement of the End of term review, Sydney Water must review the Botany Wetlands Plan in consultation with EPA, the Department of Land and Water Conservation, National Parks and Wildlife, and peak environmental non-governmental organisations for the purpose of advising the Minister whether any amendments are required to the Plan.

ENVIRONMENT – INDICATORS & PLANS CONT.

9.6 Pollution reduction targets

Where pollution reduction targets are set under section 23 of the Act, the results are to be published each year and made available to EPA and members of the public for the purposes of section 23(7) of the Act, and may be included in a report on environmental indicators required to be compiled and published under Part 9.1.

9.7 Trade waste

- 9.7.1 Sydney Water must prepare a trade waste policy and management plan, which must include trade waste water objectives and performance indicators. Sydney Water must ensure that the process of preparing the trade waste policy and management plan includes public consultation in accordance with clause 1.2.2 on a discussion paper before the plan is finalised.
- 9.7.2 By no later than 1 September each year, Sydney Water must report to the Licence Regulator on its progress in satisfying the objectives and indicators under clause 9.7.1 for the previous 12 months, to enable the Licence Regulator to consider and report on the matter as part of the Annual audit.

OPERATIONAL AUDITS OF THIS LICENCE

10.1 Commission of audits

10.1.1 The Licence Regulator must initiate an operational audit of Sydney Water as soon as practicable after 30 June each year covering the preceding 12 months, as required by this Part (the "Annual audit"). However the first Annual audit under this Licence will cover the period from 1 January 2000 to 30 June 2001.

[Note: The Licence Regulator is to arrange for the conduct of an operational audit covering the calendar year 1999.]

10.1.2 The Annual audit must be conducted by the Licence Regulator or by a person, other than Sydney Water or its Subsidiary, that the Licence Regulator considers is suitably qualified to perform the Annual audit.

10.1.3 As part of the Annual audit, the Licence Regulator must invite members of the public to make submissions to it. The Licence Regulator may also undertake any other public consultation it considers appropriate.

10.2 What the audit is to report on

10.2.1 The Licence Regulator or the person undertaking the Annual audit must investigate and prepare a report on the following:

- (a) on-going compliance by Sydney Water with its Customer Contract and specific areas of non-compliance;
- (b) Sydney Water's compliance with its code of practice and procedure on debt and disconnection under clause 5.3.2 and any similar initiatives developed by Sydney Water;
- (c) compliance by Sydney Water with its obligations under Part 6 of this Licence;
- (d) compliance by Sydney Water with the performance standards under clauses 7.1 and 7.2;
- (e) compliance by Sydney Water with the water conservation targets under clause 8.1.1;
- (f) Sydney Water's performance in relation to implementation of the demand management strategy under clause 8.2;
- (g) progress by Sydney Water in meeting the re-use target required under clause 8.3.1;
- (h) progress by Sydney Water in relation to the

implementation of the National Water Conservation Rating and Labelling Scheme under clause 8.4.1;

- (i) Sydney Water's performance in relation to the environment indicators under clause 9.1;
- (j) Sydney Water's performance in relation to the ESD Indicators compiled under clause 9.2.5;
- (k) compliance by Sydney Water with the Environment Plan under clause 9.3;
- (l) compliance by Sydney Water with the targets in the Energy Management Policy for energy consumption of buildings in clause 9.4.2;
- (m) compliance by Sydney Water with the Botany Wetlands Plan under clause 9.5;
- (n) compliance by Sydney Water with the trade waste objectives and performance indicators under clause 9.7;
- (o) the effectiveness of Sydney Water's internal dispute resolution scheme under clause 12.1;
- (p) the effectiveness of Sydney Water's external dispute resolution scheme under clause 12.2;
- (q) complaints made against Sydney Water to a court or tribunal under clause 12.3; and
- (r) any other matter required by this Licence or the Act to be assessed or considered as part of the Annual audit.

10.2.2 Despite clause 10.2.1, neither the Licence Regulator nor the persons undertaking the Annual audit may investigate a matter under clause 10.2.1 if the investigation of that matter is ordinarily within the regulatory activities of the EPA, NSW Health or the Department of Land and Water Conservation and the relevant agency has undertaken an investigation of the matter. However, the Licence Regulator may, as part of the Annual audit:

- (a) report on Sydney Water's implementation of any Memorandum of Understanding referred to in clause 3.3.1;
- (b) satisfy the requirement in clause 10.2.1 to investigate and report on a matter under clause 10.2.1 by including in its report consideration of the findings, the situation at the end of the licence audit period and Sydney Water's response to the findings, of any investigation of the matter by the EPA, NSW Health or the Department of Land and Water Conservation; and

OPERATIONAL AUDITS OF THIS LICENCE CONT.

- (c) request Sydney Water to provide information relating to an investigation of a matter by the EPA, NSW Health or the Department of Land and Water Conservation which is ordinarily within their regulatory activities, in accordance with clause 10.5.
- 10.2.3 The Licence Regulator must ensure that, subject to clause 10.2.2, the report of the Annual audit addresses the matters in clause 10.2.1 and advises the Minister on the following matters:
- (a) areas in which Sydney Water's performance under this Licence may be improved;
 - (b) any changes to the Licence and the Customer Contract that the Licence Regulator considers necessary;
 - (c) any penalties or remedial action required as a result of Sydney Water's performance under the Licence;
 - (d) whether the Minister should recommend that Sydney Water's Licence be cancelled by the Governor under section 20 of the Act for reasons identified in the annual audit report; and
 - (e) any other matter relating to the annual audit or the Licence Regulator's functions that it considers appropriate.

10.3 Reporting of audit

- 10.3.1 The Licence Regulator must ensure that the report of the Annual audit is presented to the Minister within 1 month after its receipt of the audit under section 32 of the Act.
- 10.3.2 Where the Annual audit report has identified non-compliance with this Licence, in addition to whatever other action is taken or required to be taken, the Minister may require Sydney Water to promptly advertise publicly and notify Customers and Consumers, of the areas in which its performance has not complied, the reasons why and the measures that will be taken by it to address the non-compliance. Such advertisements and notices are to be in a form reasonably acceptable to the Licence Regulator.

10.4 Additional audits

- 10.4.1 The Licence Regulator must initiate additional audits of Sydney Water if required by the Minister.
- 10.4.2 An additional audit may address one or more of the matters in clause 10.2.1 or any other matter required by the Minister.
- 10.4.3 The provisions of this Part applying to the Annual audit will apply equally to additional audits under clause 10.4.1 (all necessary changes having been made), to the extent that those provisions are relevant.

10.5 Provision of Information

- 10.5.1 Sydney Water must provide the Licence Regulator and the person appointed by the Licence Regulator under clause 10.1.2 with all information within its possession or under its control (subject to clause 10.5.4) necessary to the conduct of the Annual audit or an additional audit, including whatever information is requested by the Licence Regulator or the person appointed by the Licence Regulator.
- 10.5.2 The information sought under clause 10.5.1 must be made available within a reasonable time of it being requested.
- 10.5.3 For the purposes of an audit, Sydney Water must, within a reasonable time of being required by the Licence Regulator or a person appointed by the Licence Regulator, permit the Licence Regulator or the person appointed:
- (a) to have access to any works, premises or offices occupied by Sydney Water;
 - (b) to carry out inspections, measurements and tests on, or in relation to, any such works, premises or offices;
 - (c) to take on to or into any such premises, works or offices any other persons or equipment as necessary for the purposes of performing the audit;
 - (d) to inspect and make copies of, and take extracts from, any books and records of Sydney Water that are maintained in relation to the performance of Sydney Water's obligations in accordance with this Licence; and
 - (e) to discuss matters relevant to the audit with Sydney Water's employees.

- 10.5.4 For the purpose of an audit, the information to be provided by Sydney Water or a third party under clause 10.5.5 to the Licence Regulator or the person appointed by the Licence Regulator will include information over which Sydney Water, such a third party or other person claims confidentiality or privilege. The Licence Regulator or the person appointed by the Licence Regulator is required to enter into reasonable arrangements with Sydney Water or such third party to ensure that the confidential or privileged information is kept confidential.
- 10.5.5 If Sydney Water contracts out any of its activities to third parties (including a Subsidiary) it must take all reasonable steps to ensure that, if required by the Licence Regulator, any such third parties provide information and do the things specified in this Part that extend to Sydney Water as if that third party were Sydney Water.



PRICING

Sydney Water must set the level of fees, charges, and other amounts payable for its services subject to the terms of this Licence, the Act and the maximum prices and methodologies for Sydney Water's Services determined from time to time by IPART.

[Note: Division 8 of Part 6 of the Act governs the nature of fees and charges which may be imposed by Sydney Water. Under the terms of the Independent Pricing and Regulatory Tribunal Act, Sydney Water is a government agency for which IPART has standing reference to conduct investigations and report on the determination of pricing for services supplied and pricing policies.]

DISPUTE RESOLUTION SCHEME

12.1 Internal Dispute Resolution Process

- 12.1.1 Sydney Water must establish internal complaints handling procedures for receiving, responding to and resolving complaints by Customers and Consumers against Sydney Water.
- 12.1.2 The internal complaints handling procedures of Sydney Water must be based on the Australian Standard AS4269-1995 Complaint Handling.
- 12.1.3 Sydney Water must make available to Customers and Consumers information concerning its internal complaints handling procedures which explains how to make a complaint and how the procedure works.
- 12.1.4 Sydney Water must provide information of the nature described in clause 12.1.3 to Customers through their quarterly, or other, bills at least once annually.
- 12.1.5 The Customer complaint handling, complaint resolution process and Customer redress provided to Customers under the Customer Contract must be reviewed and amended where necessary by Sydney Water to ensure that it is based on the Australian Standard AS4269-1995 Complaint Handling.
- 12.1.6 Sydney Water must report each year to the Licence Regulator as part of the Annual audit on the following details concerning complaints made against Sydney Water which are handled by its internal complaints handling process:
- (a) the number and types of complaints received on a month by month basis, classified by Suburb into one or more of the following categories:
 - (i) water quality, including health and aesthetic parameters;
 - (ii) continuity of water supply;
 - (iii) water pressure;
 - (iv) sewage odour;
 - (v) sewage overflow;
 - (vi) stormwater and drainage services; and
 - (vii) billing including availability charges payable under the Act.

- (b) the number and type of complaints resolved or not resolved (on a month by month basis) in sufficient detail and using sufficient classifications to enable the Licence Regulator to gain a reasonable understanding of how and how well those complaints were resolved or why complaints were not resolved, as the case may be; and
- (c) any problems of a systemic nature arising from the complaints.

12.2 External Dispute Resolution Scheme

- 12.2.1 Within 1 month after the Commencement Date, Sydney Water must establish a Dispute Resolution Scheme for the resolution by a Dispute Resolution Body of disputes between Sydney Water and its Customers and between Sydney Water and Consumers of the nature described in 12.2.3.
- 12.2.2 The Dispute Resolution Scheme so established by Sydney Water is subject to the Minister's approval.
- 12.2.3 The Dispute Resolution Body is to hear disputes relating to complaints made by Customers and Consumers in relation to the following issues:
- (a) water quality, including health and aesthetic parameters,
 - (b) continuity of water supply,
 - (c) water pressure,
 - (d) sewage odour,
 - (d) sewage overflow,
 - (e) stormwater and drainage services, and
 - (f) billing, including availability charges payable under the Act.
- 12.2.4 The Dispute Resolution Scheme must comply with the minimum standards, so far as applicable, specified in the Benchmarks for Industry-based Consumer Dispute Resolution Schemes released by the Commonwealth Minister for Customs and Consumer Affairs in August 1997.
- 12.2.5 The Dispute Resolution Scheme must have the following features:
- (a) the decision-making process of the Dispute Resolution Body and administration of the scheme is to be

- independent from Sydney Water and Subsidiaries of Sydney Water;
- (b) Sydney Water agrees to abide by the decisions of the Dispute Resolution Body in relation to disputes referred to it for resolution;
- (c) the Dispute Resolution Scheme must adopt informal proceedings which discourage a legalistic adversarial approach;
- (d) decisions of the Dispute Resolution Body should be fair and be seen to be fair, by observing the principles of procedural fairness, by making its decisions based upon the information before it, and by having specific criteria upon which its decisions are based;
- (e) the Dispute Resolution Scheme is to operate efficiently by keeping track of disputes referred to it, ensuring complaints are dealt with by the appropriate process and by the Dispute Resolution Body regularly reviewing the operation of the Dispute Resolution Scheme; and
- (f) the Dispute Resolution Scheme is to be free of cost to Customers and Consumers and is to be funded by Sydney Water.
- 12.2.6 Sydney Water must prepare a pamphlet that explains how the Dispute Resolution Scheme operates and how it can be accessed.
- 12.2.7 Sydney Water must provide the pamphlet to Customers through their quarterly or other bills, at least once annually.
- 12.2.8 Sydney Water must provide the Licence Regulator with written reports of the determinations made by the Dispute Resolution Body based on information available to Sydney Water and information reasonably obtained from the Dispute Resolution Body. Where considered appropriate by Sydney Water and the Dispute Resolution Body, confidentiality arrangements are to be made so as not to disclose the Customer or Consumer's identity in such reports.
- 12.2.9 Sydney Water must produce a yearly report to the Licence Regulator based on information available to Sydney Water and information reasonably obtained from the Dispute Resolution Body. The report must contain the following information:
- (a) how the scheme works,
- (b) the number and types of complaints received by the Dispute Resolution Body, classified by Suburb into one or more of the following categories:
- (i) water quality including health and aesthetic parameters;
- (ii) continuity of water supply;
- (iii) water pressure;
- (iv) sewage odour;
- (v) sewage overflow;
- (vi) stormwater and drainage services; and
- (vii) customer billing, including availability charges payable under the Act
- (c) the outcome of those complaints,
- (d) the time taken to resolve complaints,
- (e) the procedure for resolving complaints,
- (f) any problems of a systemic nature arising from the complaints,
- (g) any other relevant information required by the Licence Regulator to be included in the report.
- 12.2.10 The report referred in clause 12.2.9 is to be made available to the public free of charge.
- ### 12.3 Complaints to other bodies
- Sydney Water must report to the Licence Regulator by no later than 1 September each year (for consideration and reporting by the Licence Regulator as part of the Annual audit) on complaints made against Sydney Water to a court or tribunal, such as the Fair Trading Tribunal, (based on information available from these bodies and Sydney Water itself as a party to the complaint) containing the following details:
- (a) the number and types of complaints received by such other bodies,
- (b) the outcome of complaints,
- (c) how the complaints were resolved,
- (d) any problems of a systemic nature arising from the complaints, and
- (e) any other relevant information required by the Licence Regulator to be included in the annual report.
- [Note: Section 58 provides that the jurisdiction of the Fair Trading Tribunal under the Consumer Claims Act 1998 extends to the hearing and determination of a consumer claim within the meaning of that Act relating to a service supplied by Sydney Water under a Customer Contract. The Consumer Claims Act provides that any consumer (which would include any Customer) may apply to the Tribunal for determination of a consumer claim.]*

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LIABILITY ISSUES

13.1 Contracting out

- 13.1.1 Sydney Water may contract out the provision, construction, operation, management or maintenance of any of the Systems and Services that are the subject of this Licence in accordance with section 91 of the Act.

[Note: Section 91 of the Act permits Sydney Water to enter into contracts or arrangements with any person for such purposes.]

- 13.1.2 Contracting out under clause 13.1.1 does not relieve Sydney Water of its responsibility to comply with its obligations under this Licence.

13.2 Damage and Compensation to Persons

Sydney Water is required by section 41 of the Act to do as little damage as practicable in exercising its functions under Division 4 of Part 6 of the Act, and in circumstances specified in that provision, to compensate persons who suffer damage by the exercise of those functions.

13.3 Competitive Neutrality

- 13.3.1 Subject to the Act, the SOC Act and any applicable law, Sydney Water must comply, and must ensure that its Subsidiaries comply, with the competitive neutrality policies and guidelines adopted by New South Wales under clause 3 of the Competition Principles Agreement.

- 13.3.2 This Part is in addition to any obligations of Sydney Water under the *Trade Practices Act 1974* and the *Competition Code* of NSW and other States and Territories as applicable.

[Note: For example Section 46 of the Trade Practices Act 1974 prohibits a corporation that has a substantial degree of power in a market from taking advantage of that power for the purpose of:

- (a) eliminating or substantially damaging a competitor of the corporation or of a body corporate that is related to the corporation in that or any other market;*
- (b) preventing the entry of a person into that or any other market; or*
- (c) deterring or preventing a person from engaging in competitive conduct in that or any other market.]*

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NOTICES

Any notice or other communication given under this Licence is to be made in writing addressed to the intended recipient at the address shown in Schedule 3, or the last address notified by the recipient.

CUSTOMER CONTRACT

The Customer Contract is published as a separate document.

AREA OF OPERATIONS

Areas of Operations means the local government areas specified below, the islands in Sydney Harbour, the deemed areas described below, any special area or deemed special area under section 21 of the *Water Board Act 1987* deemed to be a controlled area by section 88(3) of the Act or any special area, deemed special area or controlled area which continues in force by virtue of Part 2, Schedule 9 of the Act, as well as areas declared from time to time to be controlled in accordance with section 88 of the Act and any variation to the Area of Operations made by the Governor in accordance with section 10 of the Act.

Local Government Areas

Ashfield	Liverpool (City)
Auburn	Manly
Bankstown (City)	Marrickville
Baulkham Hills	Mosman
Blacktown (City)	North Sydney
Blue Mountains (City)	Parramatta (City)
Botany	Penrith (City)
Burwood	Pittwater
Camden	Randwick
Campbelltown (City)	Rockdale
Canterbury	Ryde
Concord	Shellharbour
Drummoyne	South Sydney (City)
Fairfield (City)	Sutherland
Hawkesbury (City)	Strathfield
Holroyd	Sydney (City)
Hornsby	Warringah
Hunter's Hill	Waverley
Hurstville (City)	Willoughby
Kiama	Wingecarribee (Part)
Kogarah	Wollondilly
Ku-ring-gai	Wollongong (City)
Lane Cove	Woollahra
Leichhardt	

Deemed Areas

Any land under the waters of Port Jackson and adjoining the boundaries of the City of Sydney upon which there is erected any wharf, pier, jetty, building, or other structure shall be deemed to be within the Area of Operations of Sydney Water.

[Note: Under section 10(1) of the Act, the Area of Operations for Sydney Water is the same as the area current for the Water Board as at the date of corporatisation. The Area of Operations for the Water Board was identical in extent to the Area of Operations proclaimed under the Metropolitan Water Sewerage & Drainage Board Act 1924.]

ADDRESS FOR NOTICES

Sydney Water Corporation

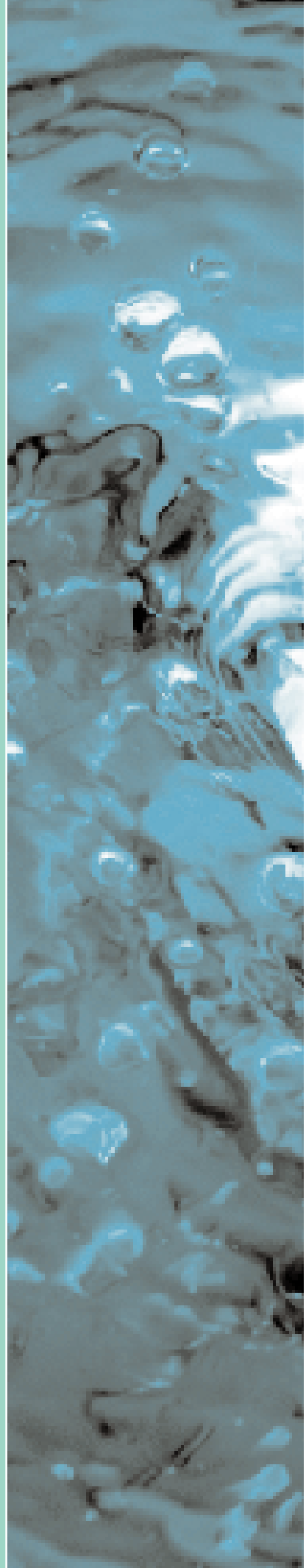
Managing Director
Sydney Water Corporation
115-123 Bathurst St
Sydney NSW 2000

Licence Regulator

The Licence Regulator
Level 6, 29-57 Christie St
St Leonards NSW 2065

SYSTEM PERFORMANCE STANDARDS

Section 1 Licence reference	Section 2 Levels of service	Section 3 Standard	Section 4 How standard is measured
Clause 7.1.1	Drinking Water – continuity	Sydney Water must ensure that, on an annual basis, 95% of all properties connected to its Water supply system will not have that connection affected by an interruption of water supply exceeding 6 hours.	<p>The number of interruptions exceeding 6 + 10 hours divided by total number of properties expressed as a percentage and then subtracted from 100.</p> <p>Where an interruption occurs again in the reporting period, each property is to be counted each time it experiences an interruption, regardless of the number of times the service is so affected.</p> <p>The duration of the interruption is to be measured from the time Sydney Water is advised and ends when the supply to the property is reinstated.</p>
Clause 7.1.1	Drinking water – pressure	<p>Sydney Water must ensure that, on an annual basis, 98% of all properties connected to its Water supply system will have water pressure at the main tap in excess of 15 metres head except in the following low pressure areas:</p> <ul style="list-style-type: none"> • Urban areas adjacent to reservoirs in the Blue Mountains • Non-urban properties in Bayview, West Camden, Llandilo, Berkshire Park, Castlereagh, North Richmond, Oakville, Riverstone, Schofields and the Blue Mountains 	<p>The number of instances where pressure is less than 15 metres head (excluding exemptions) divided by total number of properties expressed as a percentage and then subtracted from 100.</p> <p>Where pressure of less than 15 metres head occurs again in the reporting period, each property is to be counted each time, regardless of the number of times the pressure service is so affected.</p>
Clause 7.1.1	Sewage Overflows	Sydney Water must ensure that, on an annual basis, 96% of all properties connected to its Sewerage system will not have their land affected by a sewage overflow on their land from, or as a result of a sewer owned or operated by Sydney Water.	<p>Number of properties affected by a sewage overflow divided by total number of properties, expressed as a percentage and then subtracted from 100.</p> <p>Where a sewage overflow occurs again in the reporting period, the property is to be counted each time it experiences an overflow regardless of the number of times any property is so affected.</p>



APPENDIX C
Ministerial Requirements

Summary of Ministerial Requirements arising from the Review of System Performance Standards⁴

Area	Requirement
System Performance Standards	6. <i>"...I require Sydney Water to report to me by 1 July 2002 on its program of capital works to bring the Designated Low Water Pressure Areas in urban areas up to the amended pressure standard. The program should also reflect any of Sydney Water's existing arrangements with regard to the provision of water services to these areas."</i>
	7. <i>"...I require Sydney Water to work with the Sydney Catchment Authority with a view to develop performance measures for water reliability for further consideration at the end of term review of both Operating licences."</i>
	8. <i>"...I now require Sydney Water to incorporate the Tribunal's findings regarding repeat continuity and repeat sewage overflow events into its Asset Management Framework and to provide the Framework to the Minister of Energy and Utilities for comment."</i>
	9. <i>"Sydney Water is to update its Asset Management Framework by 1 January 2002"</i>
Performance Indicators	10. <i>"I support the use of performance indicators to provide further insight into performance against system performance standards. Accordingly, I require Sydney Water to collect and report data on those performance indicators that relate to the amended standards for drinking water pressure, drinking water continuity and sewerage overflows on private land."</i>
	11. <i>"Performance indicators are to be reported to the Tribunal by 1 September each year with the first report due to the Tribunal on 1 September 2002."</i>
Customer Service	12. <i>"While I am satisfied that negotiations between Sydney Water and the Tribunal have begun, I would like Sydney Water to commence collection of data on the customer service indicators in Attachment 3 from 1 July 2001."</i>
Monitoring and Reporting Protocol	13. <i>"I require Sydney Water to finalise this Protocol in consultation with the Tribunal as soon as possible, so that data collected during the audit period commencing 1 July 2002 is covered by the new arrangements"</i>

⁴ Letter from the Minister for Energy to the Chairman, Sydney Water, 22 Aug 2001.

ATTACHMENT 1 SUMMARY OF MINISTERIAL REQUIREMENTS AND AUDIT RECOMMENDATIONS FROM THE 2000/2001 OPERATIONAL AUDIT

Summary of Ministerial Requirements arising from the 2000/2001 Operational Audit³

Area	Requirement
Demand Management	1. <i>"In the interim, and so that I remain informed of the Corporation's progress in terms of its water conservation and demand management programs, I expect a continuation of the six monthly Demand Management Strategy Progress reports."</i>
Drinking Water Quality	2. <i>"...I require that Sydney Water include in future Annual Drinking Water Quality Monitoring Plans, submitted to NSW Health, reference to the selection and frequency of testing of the drinking water characteristics."</i>
	3. <i>"...I require Sydney Water to implement a system to track adherence by the SCA to the water quality aspects of the Bulk Water Supply Agreement by 1 September 2002."</i>
Dispute Resolution	4. <i>"...I require Sydney Water to seek from EWON annual confirmation that it continues to meet the requirements of the Operating Licence clauses relevant to its role."</i>
	5. <i>...I also require that, for future reporting to IPART, Sydney Water include information it already receives from EWON on those contracts from customers where the costs for reparations place the matters outside EWON's jurisdiction."</i>

³ Letter from the Minister for Energy to the Chairman, Sydney Water, 12 April 2002.

APPENDIX D

Memoranda of Understanding

**MEMORANDUM OF UNDERSTANDING
BETWEEN
SYDNEY WATER CORPORATION
AND
ENVIRONMENT PROTECTION AUTHORITY**



Memorandum of Understanding Between Sydney Water Corporation and the Environment Protection Authority

Published by:

Environment Protection Authority

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EPA 96/121

December 1996

Introduction

This Memorandum of Understanding was prepared by the Environment Protection Authority and the Sydney Water Corporation, in keeping with the requirements of the Water Board (Corporatisation) Act 1994. Section 35 of the Act requires the Corporation to enter into a separate Memorandum of Understanding with each of its regulators, including the Environment Protection Authority.

The Memorandum of Understanding is designed to facilitate effective interaction between our two organisations and ensure environment protection, restoration and enhancement at the least overall cost to the community.

The Memorandum outlines the:

- * principles governing the responsibilities and accountabilities of Sydney Water Corporation Limited and the Environment Protection Authority
- * regulatory framework and instruments for environment protection
- * consultative processes between the EPA and SWC to consider operational and regulatory issues and longer term strategic planning
- * data sharing arrangements, and
- * dispute resolution mechanisms.

The EPA exhibited a draft Memorandum for public comment in August 1996. The comments and submissions received were considered by the EPA, in consultation with Sydney Water, and resulted in a number of amendments to the terms of the draft Memorandum of Understanding.

The Memorandum of Understanding was executed in Sydney on 26 November 1996.

**MEMORANDUM OF UNDERSTANDING
BETWEEN
SYDNEY WATER CORPORATION
AND ENVIRONMENT PROTECTION AUTHORITY**

1. INTRODUCTION

- 1.1 This Memorandum of Understanding (MOU) sets the framework for interaction between the NSW Environment Protection Authority (EPA) as the environmental regulator and the Sydney Water Corporation Limited ACN 063 279 649 (Sydney Water) as a major operator in the field of water and sewerage provision and some drainage services.
- 1.2 The EPA has the responsibility to protect the environment in NSW taking into account community values, scientific and expert knowledge, best practice environmental regulation and economic considerations. As such, it develops environmental policy and programs, carries out regulatory functions and provides environmental education.
- 1.3 Sydney Water's accountabilities are to operate at least as efficiently as any comparable business supplying potable water; transporting wastewater; treating wastewater; recycling effluent; returning effluent, biosolids and other treatment byproducts to the environment; providing some drainage and stormwater services; and providing related products and services, in line with its Operating Licence and Customer Contract and relevant legislation.

2. PURPOSE

The purpose of this MOU between the Chief Executive Officers (CEOs) of Sydney Water and the EPA is:

- 2.1 To facilitate effective interaction between the two organisations;
- 2.2 To provide an agreed set of principles which guide the responsibilities and accountabilities of the two organisations, identify regulatory approaches and encourage a mix of regulatory, economic and educational instruments to assess and enhance environmental performance;
- 2.3 To set out effective processes and cooperative arrangements between Sydney Water and the EPA to achieve sound environmental outcomes in the context of the commercial operations of the Corporation; and
- 2.4 To provide a sound platform upon which to progress the achievement of environmental goals relevant to Sydney Water's operations.
- 2.5 This Memorandum accords with the requirements of the EPA's and SWC's governing legislation and, accordingly, it is not necessary to restate all the specific provisions



here. Also, nothing in this Memorandum alters any legislative obligation imposed on Sydney Water or the EPA, for example, under the *State Owned Corporations Act 1989*, *Water Board (Corporatisation) Act 1994* (WBC Act), environment protection legislation as defined in Section 3 (1) of the *Protection of the Environment Administration Act 1991* (POEA Act), or instruments issued pursuant to that legislation.

3. TERM

- 3.1 The duration of the MOU will be consistent with and expire at the same time as the Operating Licence granted to Sydney Water by the Governor.

4. PRINCIPLES

4.1 Responsibilities and accountabilities

- 4.1.1 Each organisation will manage its activities to meet its objectives as set out in Section 21 (1) of the WBC Act and Section 6 (1) of the POEA Act.

Sydney Water's principal objectives are to be a successful business, protect the environment by operating according to the principles of ecologically sustainable development and to protect public health by supplying safe drinking water.

The EPA's principal objectives are to protect and enhance the environment having regard to ecologically sustainable development and to reduce the risks to human health and prevent degradation of the environment.

- 4.1.2 It is recognised both organisations have a public health charter. Mutually supportive approaches, consistent with public health and environment protection objectives should be developed accordingly, in consultation with the NSW Department of Health.

- 4.1.3 Sydney Water is subject to an Operating Licence (which is distinct from pollution control licences), and compliance with aspects of the Operating Licence are audited separately by the Licence Regulator, a statutory body established under the WBC Act. The EPA agrees to verify information provided by Sydney Water to the Licence Regulator pertaining to matters relating to the EPA's interaction with and regulation of Sydney Water.

4.2 Regulatory Framework

- 4.2.1 Sydney Water must comply with all relevant requirements of NSW environmental law. *(Sydney Water currently operates water treatment plants and wastewater treatment systems and holds pollution control licences under the Pollution Control Act 1970 and licences and certificates of registration under the Waste Minimisation and Management Act. By these means, Sydney Water is subject to EPA regulation of the operation of its plants and systems. Sydney Water has also applied for licences under*

the Pollution Control Act for the operation of overflow points in its sewerage systems).

- 4.2.2 The EPA will apply the environmental regulatory framework equally to Sydney Water and other dischargers in terms of the application of regulations, licence fee systems, and other relevant matters. The maximum prices and pricing methodology for Sydney Water's services are determined from time to time by the NSW Independent Pricing and Regulatory Tribunal.
- 4.2.3 The EPA will endeavour to base its regulatory decisions on environmental outcomes, rather than relying merely on inputs or technology-based standards. Notwithstanding, it is acknowledged by both parties that while performance-based regulation is the goal, in the short term, technology-based limits may need to be utilised where environmental outcomes are not easily defined or measured and where environmental risks may be significant.

Licence Conditions and Monitoring

- 4.2.4 Compliance monitoring and reporting by Sydney Water is to be undertaken as specified in licences, approvals and certificates of registration issued by the EPA. Compliance with relevant environmental legislation and requirements in EPA licence conditions, approvals and certificates of registration will be independently audited by the EPA.
- 4.2.5 Licence, approval and certificate of registration conditions should make reasonable provision for unforeseeable emergency conditions.
- 4.2.6 For existing STPs, licence conditions should reflect the capability of the installed facilities; longer term PRPs¹ are to be used in upgrading that capability where warranted, consistent with environmental needs and agreed system-based priorities. Licence conditions for new STPs will recognise environmental, social and economic needs.
- 4.2.7 Litigation, where warranted, will be conducted by the EPA in line with the EPA's *Prosecution Guidelines*.

1. Pollution Reduction Programs (PRPs) are negotiated with licensees to allow strategically focused environmental improvement programs to be implemented over a longer period than the annual licence.

Water Quality and Quantity

- 4.2.8 The EPA and Sydney Water recognise the importance of having water quality objectives which are linked to river flow objectives and which set the context for both catchment plans and for environmental regulation.

The Government has established a two stage process for setting these water quality and river flow objectives. Interim water quality and river flow objectives will be set by Government, based on advice coordinated by the EPA. The EPA agrees to consult Sydney Water in the development of this advice. The Government has established an

independent public inquiry process under Section 23 of the *Pollution Control Act* to provide more detailed advice to Government. Both the EPA and Sydney Water will participate actively in this public inquiry process and take action to achieve the Government's set water quality objectives and river flow objectives.

4.2.9 Sections 23-27 of the WBC Act impose obligations on Sydney Water to conduct ecological risk assessments. The Act imposes requirements on the EPA to approve methodologies and set pollution reduction targets for scheduled substances. The Act requires Sydney Water to meet pollution targets set by the EPA for reduction of substances listed in Schedule 10 of the Act. Determination by the EPA of the targets will take into account, as far as possible, relevant water quality and flow objectives. Similarly, Sydney Water's requirement to conduct an Environmental Impact Statement on environmental flows in the Hawkesbury-Nepean, Shoalhaven and Woronora rivers (Operating Licence clause 1.6) will be coordinated with the framework described in 4.2.8 above for water quality objectives and river flow objectives.

4.2.10 To ensure consistent understanding between the two organisations, the terms "environmental values", "criteria", "guidelines" and "standards" are defined as in the glossary of the *Australian Water Quality Guidelines for Fresh and Marine Waters* printed by ANZECC in 1992 (which are currently being reviewed). The legal definitions of the *NSW National Environment Protection Council Act* relating to national environment protection measures will also apply.

4.3 Instruments of Environment Protection

4.3.1 Interactions between Sydney Water and the EPA are intended to ensure environmental protection, restoration and enhancement at least overall cost to the community viz. that there is an overall net benefit to society taking into account the environmental, social and economic needs of current and future generations. To this end, the full range of regulatory, education and economic tools need to be considered in designing regulatory frameworks to achieve identified environmental goals and prioritise works.

4.3.2 Both organisations encourage environmental management on a catchment basis, taking into account diffuse and point source pollution.

4.3.3 The linkages between potable water management, wastewater management and the natural water cycle should be considered in applying regulatory regimes, as well as in designing the water and wastewater system.

4.3.4 It is recognised that water is a valuable resource and effluent reuse will be an integral part of effective water cycle management, wherever possible, and will be promoted. In pursuing increased reuse, public health must not be compromised, the environment must be protected and the activity must be commercially viable in the long term. The principles also apply to biosolids and other treatment byproducts.

4.3.5 The operation of the water, wastewater and drainage systems and the regulation of those systems should include the consideration of risk management principles and the costs and benefits of environmental objectives.

- 4.3.6 Where any price paid by Sydney Water's customers is to have a non-cost-reflective "environmental tax" component (e.g. for trade waste), the EPA will be primarily responsible for advising the Government on the level of this component (but will consult with Sydney Water on the effect on customers).
- 4.3.7 Both the EPA and Sydney Water are concerned to ensure that toxic substances and substances which may cause harm to the environment do not enter the environment through the sewerage system. It is recognised that some substances in the sewer are sourced from domestic or diffuse sources as well as from industrial sources discharging trade waste for treatment. For those substances to be discharged to the system Sydney Water will be responsible for determining whether the best, most cost effective way of meeting Sydney Water's licence conditions is through source control or additional levels of treatment. The EPA has responsibility for determining pollution reduction targets to effect significant reductions of Schedule 10 substances by 30 June 2000 and ensuring that the licence conditions it attaches are conducive to Sydney Water meeting or exceeding the targets.

5. STRUCTURES AND PROCESSES

- 5.1 The environmental regulatory regime is defined in environment protection legislation. In many cases, the timeframes specified in relevant environment protection legislation do not coincide with the timeframes established for operation of a State Owned Corporation or for determining necessary long term capital investment programs.

The Operating Licence establishes a 5 year timeframe while the separate pollution control licences are limited to an annual timeframe by statute. As a result an agreed framework for defining the environmental requirements to be applied to Sydney Water is needed to allow for a longer term strategic planning focus. Such a framework is outlined below.

5.2 CEO Meetings

Regular CEO level meetings will establish and confirm the broad principles, directions and policies underlying investigations and negotiations between the EPA and Sydney Water and will address any major issues referred by either the Strategic Liaison Group or the Operational Policy Committee (the responsibilities of which are set out below). Meetings of CEOs can be called by either party as required.

All agreements that are formally ratified by the CEOs between Sydney Water and the EPA will be in the public domain.

5.3 Strategic Liaison Group (SLG)

The Strategic Liaison Group has been established to consider longer term strategic issues and policies and to define and implement processes for the interchange of strategic planning information. The Group will also assist in the development of innovative regulatory approaches as they affect Sydney Water.

The SLG is to maintain a longer term perspective. It is to provide a forum for consideration of strategic environmental issues and options for improving interaction between the EPA and Sydney Water in relation to licensed operations, pollution prevention and control strategies, taking into account the principles upon which this MOU is based. The SLG will have the capacity to establish data sharing programs and joint investigations and studies to assist it in carrying out its functions and may establish special Working Groups as required. The concepts and approaches agreed by the SLG will provide a frame of reference for providing detailed development of operational policy.

The SLG will also consider regulatory approaches being considered by the EPA involving third parties where the impact of those decisions will affect Sydney Water's operations (e.g. a decision by the EPA to regulate stormwater discharges has the potential to increase discharge to the Corporation's systems).

If required, the SLG will consider overall and relative priorities arising from Pollution Reduction Programs (PRPs) negotiated by regional directors of the EPA and relevant Sydney Water officers (see Section 5.4).

5.3.1 Membership of the SLG will depend on the issues but will normally include:

From Sydney Water:

- Group General Manager TransWater;
- General Manager Corporate Services;
- Group General Manager Utilities;
- Manager Waste Water Systems Planning; and
- Manager Environment Branch.

From the EPA:

- Assistant Director General;
- Executive Director Operations;
- Director Environmental Policy
- Director Economics and Environmental Reporting; and
- Director Environmental Science.

The above list of members can be altered unilaterally to reflect changes of title or structure within the EPA or Sydney Water. The SLG is at liberty to invite other officers to attend meetings, as necessary.

5.3.2 Meetings of the SLG can be called by either party but will usually be held at least twice yearly. The meetings will be chaired alternately by the EPA and Sydney Water. The SLG will be entitled to consider issues raised by either party.

5.4 Operational Policy Committee (OPC)

The Operational Policy Committee (formerly known as Joint Officers Committee) has been established to consider operational and regulatory issues. Its principal responsibilities will be to:

- ensure a consistent approach to the regulation of Sydney Water facilities



including the renewal of pollution control licences and negotiation of PRPs

- EPA Regional Directors will finalise the PRPs negotiated with Sydney Water officers. PRPs so finalised will then be considered to be agreed when endorsed by one of the following Sydney Water managers:
 - Group General Manager Utilities; or
 - Group General Manager TransWater; or
 - the Managing Director.

5.4.1 Unresolved matters of significance, which may include those arising out of the process of negotiating PRPs, will be referred to the SLG for consideration.

5.4.2 The OPC will consist of senior officers of both organisations. While attendance may vary from meeting to meeting as required, there will be alternate chairing of meetings by the Executive Director Operations (EPA) and Manager Ocean Wastewater (Sydney Water). The OPC will meet approximately six times per year. Both organisations will seek to ensure continuity of representation.

5.5 The interactions of the OPC and SLG and related investigations and negotiations must be carried out in a way that does not compromise the independence of the EPA nor the community's confidence in environmental regulation.

5.6 Sydney Water may need to seek submissions from the EPA from time to time to assist it in meeting requirements under the WBC Act or Operating Licence. Sydney Water will endeavour to provide adequate timeframes for review and comment. The EPA will endeavour to respond to requests for comment on such submissions within the established timeframe. If, in the opinion of either the Director-General of the EPA or the Managing Director of Sydney Water, it is felt there is a risk of either party not complying with the spirit of these obligations, such concern is to be conveyed in writing.

5.7 Open Communication

The EPA and Sydney Water are committed to open communication and consultation with the community on key strategic issues affecting the regulation of Sydney Water, for example, load-based licensing and sewer overflow licensing. Opportunities will be provided for this through appropriate existing forums such as the EPA's State Community Consultation Forum and Sydney Water's Customer Councils.

6. DATA SHARING

6.1 Compliance data will be made available by Sydney Water to the EPA in line with EPA licence requirements and the conditions of the Corporation's Act and Operating Licence. This will include:

- Publication of an annual environment report (Clause 5.12 and Section 14(1)(d) of the WBC Act) which includes reporting against:
 - monitoring of the environmental indicators (Operating Licence clauses

5.11 and 5.12);

- the pollution reduction targets set in accordance with Section 23 of the WBC Act (and the results of the Ecological Risk Assessments required to be compiled under that section);
 - progress of achievement of Sydney Water's "special objectives" set out in Section 22(7) of the WBC Act;
 - Sydney Water's progress against targets for reducing the amount of water drawn from storages; and
 - Sydney Water's performance against the trade waste objectives.
- Any monitoring required by conditions of pollution control licences or by notice.

6.2 Other data gathered or collated by the Corporation may also be available to the EPA depending upon circumstances. In reaching a decision as to whether data can be provided, the following matters need to be considered:

- (i) whether the data has been gathered by Australian Water Technologies (Sydney Water's trading arm) for an external client;
- (ii) whether the data requested is commercially confidential;
- (iii) whether the data requested is still in draft form or is "raw data", not having been quality controlled.

Disputes between the EPA and Sydney Water as to the availability of data that has not been quality controlled will be referred to the SLG for resolution, or to the CEOs, if necessary.

6.3 Where data are:

- not related to Sydney Water's compliance; and
- have a commercial value;

Sydney Water could expect payment for the data or may supply the data free of charge, subject to negotiations. Where negotiations are required, they are to be completed expeditiously.

6.4 The EPA will be similarly expected to share data gathered by it with Sydney Water, subject also to points (ii) and (iii) in 6.2 above. Subject to the same provisos as in Clause 6.3, the EPA could expect payment for the data or may supply the data free of charge, subject to negotiations which should be completed expeditiously.

6.5 It is noted that the Strategic Liaison Group has the capacity to establish data sharing arrangements (see 5.3 above).

6.6 This MOU does not affect the operation of section 26 of the *Pollution Control Act* relating to the disclosure of information or section 32 of the *Freedom of Information Act* concerning documents affecting business affairs, or any other relevant statutory requirement relating to the disclosure of information.

7. **DISPUTE RESOLUTION**


Where an issue or matter of long term strategic significance cannot be resolved by the OPC, the matter is to be referred to the SLG for further consideration. Such matters unresolved by the SLG will be referred to CEO level for resolution.

8. **AMENDMENT**

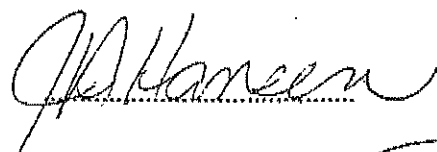
Any amendments to this MOU are required under Section 36 of the *Water Board (Corporatisation) Act 1994* to be publicly exhibited.

This Memorandum of Understanding is made at Sydney on the 26th day of November 1996.

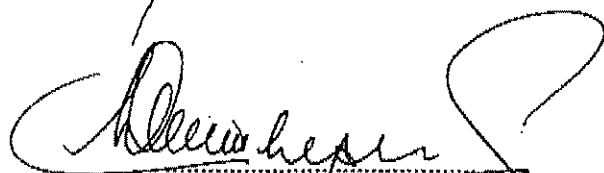
SIGNED for and on behalf of
SYDNEY WATER CORPORATION LIMITED
ACN 063 279 649 ("the Corporation")


.....
PAUL A BROAD
(Managing Director)

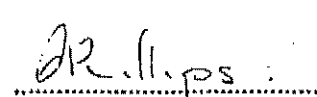
WITNESS to the above signature:
Name: JAHansen
Address: Sydney Water Corporation


.....

SIGNED for and on behalf of
ENVIRONMENT PROTECTION AUTHORITY
("the Regulatory Agency")


.....
NEIL SHEPHERD
(Director-General)

WITNESS to the above signature:
Name: Lorraine Phillips
Address: 12/2A Forsyth St
Glebe, NSW, 2037


.....

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COPY FOR YOUR
INFORMATION

MEMORANDUM
OF
UNDERSTANDING

Between

SYDNEY WATER CORPORATION LIMITED

and the

*WATER ADMINISTRATION
MINISTERIAL CORPORATION*

MEMORANDUM OF UNDERSTANDING

*Between SYDNEY WATER CORPORATION LIMITED
and the WATER ADMINISTRATION MINISTERIAL CORPORATION*

PREAMBLE

This Memorandum of Understanding (MOU) sets out the intended relationship between the Water Administration Ministerial Corporation ("the Ministerial Corporation"), as manager of the State's water resources, and the Sydney Water Corporation Limited ACN 063 279 649 ("Sydney Water"), as the primary user of water within the region which includes, but is not limited to, the Hawkesbury-Nepean, Woronora and Shoalhaven River systems. This agreement will address issues relating to the use and management of both surface and groundwater resources pending the development of a Water Use Licence. The necessary involvement of the Environment Protection Authority (EPA) is acknowledged in developing key components of a Water Use Licence.

It is recognised that a range of rights and interests in water exist and will continue to exist within these river systems. They include the rights of Sydney Water and the Department of Land and Water Conservation ("the Department"), as agent for the Ministerial Corporation, as well as the rights and interests of the community, the environment and other water extractors licensed by the Department under the Water Act, 1912.

The Council of Australian Government's water reform framework requires reforms in a number of areas: institutional role separation; consumption based cost recovery pricing; comprehensive water allocation systems; trading in water entitlements; effective performance monitoring; integrated natural resource management; stormwater and wastewater reuse; and groundwater management. Several of these elements are important components of this MOU.

The New South Wales Government's 1995 water reform package introduced water pricing reform including the introduction of a Resource Management Charge (\$1.80/megalitre for urban water authorities); and introduced processes to achieve improved flow and water quality outcomes for the State's river systems.

A key part of the reform package was the appointment of the Commissioner for Healthy Rivers who will lead independent inquiry processes into the State's catchments. The Government has identified the Hawkesbury-Nepean as a priority catchment. Recommendations by the Healthy Rivers Commission, as adopted by the Government, may require amendment of the MOU, particularly in regard to establishment of environmental flow requirements below the Corporation's storages.

This MOU represents a step in the process of further formal role separation and of formally defining the rights and accountabilities of Sydney Water in relation to access to, use and management of water resources and the duties and obligations of the Ministerial Corporation in relation to management of the State's water resources. The MOU will be the foundation for the development of a Water Use Licence to be issued by the Ministerial Corporation. The Water Use Licence will specify Sydney Water's rights and obligations, as well as the criteria by which Sydney Water's water resource management performance is to be assessed.

The parties acknowledge that to draft a licence which formalises and specifies the rights and obligations of Sydney Water in these river systems, and to give effect to the policies and obligations mentioned above, better information is needed on the characteristics and behaviour of critical elements of the water resources and the impacts of operations of Sydney Water and other water users.

Consequently, the parties agree to undertake a program of studies and reporting, to be jointly undertaken and jointly resourced, so as to determine the current condition and future management of the water resources. The impact of Sydney Water's operations and the activities of others will be assessed, as well as any potential modifications to those operations and activities to protect the environmental and social values of the resources. In undertaking this work the paramount responsibilities of Sydney Water to meet the water supply needs of the community, the commercial requirements of government, environmental obligations and the needs of the broader community are recognised, as are the duties and obligations of the Ministerial Corporation.

In addition to the Water Use Licence, management plans will provide the framework within which the rights, obligations, and accountabilities of the Department, Sydney Water and others whose activities have an impact upon water resources in these valleys will be established. It is the intention of the Department to develop valley water management plans for extraction of water from the river systems and groundwater resources described above. These plans will be developed in consultation with Sydney Water and other relevant parties, particularly the EPA.

1. *INTRODUCTION AND PURPOSE*

This MOU sets out the relationship between the Ministerial Corporation and Sydney Water consistent with sections 34-36 of the Water Board (Corporatisation) Act 1994 and clause 1.6 of the Sydney Water Operating Licence. The purpose of this MOU is to form the basis of cooperative relationships between the signatories, including agreed areas of study and data exchange. This MOU can be amended subject to the provisions of section 36 of the Water Board (Corporatisation) Act.

This MOU will continue until 31 December 1999 (as specified in clause 1.6 of the Sydney Water Operating Licence) unless it is replaced with a Water Use Licence. It is intended by the Ministerial Corporation that a licence will be issued following the mid term review of the Operating Licence.

This MOU and any subsequent Water Use Licence will be conjunctive to, and consistent with, the Water Board (Corporatisation) Act, 1994, Operating Licence and Memoranda of Understanding with the EPA and Department of Health.

2. *PRINCIPLES*

- 2.1 Sydney Water and the Ministerial Corporation will act in accordance with the requirements of this MOU.
- 2.2 In accordance with sections 12 and 90 of the Water Board (Corporatisation) Act, 1994, Sydney Water may exercise the right to the use and flow, and to the control, of water vested in the Ministerial Corporation by section 12 of the Water Administration Act, 1986.
- 2.3 The existing rights exercised by Sydney Water to operate works which divert, impound, or extract water from surface or sub-surface sources, as transferred to Sydney Water, are acknowledged and agreed.
- 2.4 It is agreed that Sydney Water will manage its day-to-day operations without intervention by the Department except as provided by Section 4 of this MOU.
- 2.5 Sydney Water agrees, during the term of this MOU, to exercise its rights and to operate its works consistent with sustaining the value of water and related resources and with protecting the rights of other water users and the general community.

3. *COOPERATIVE ACTIONS*

3.1 *Objectives*

- 3.1.1 To ensure that the water resources and related resources which are, or may be, affected by Sydney Water's operations are allocated and used efficiently in ways consistent with environmental requirements and to provide the maximum long term benefit to Sydney Water's customers and the State generally.

- 3.1.2 To provide a safe, secure and reliable supply of water for Sydney Water's customers.
- 3.1.3 To assist Sydney Water to operate in a commercial manner consistent with community, environmental and statutory requirements.
- 3.1.4 To support ecologically sustainable water and associated environments.
- 3.1.5 To achieve flood operations procedures that best meet the requirements of the community, the environment and the Dams Safety Committee.
- 3.1.6 To assist Sydney Water to meet its obligations under the Water Board (Corporatisation) Act and Operating Licence, as related to water resources.
- 3.1.7 To undertake such activities as are necessary to enable consideration of the issue of a Water Use Licence after the mid-term Operating Licence review.

3.2 Program of Studies, Reporting and Review

- 3.2.1 The program of studies, as set out in the Schedule, will be jointly supervised by the Department and Sydney Water to meet the implementation plan as shown in the Schedule.

The assistance of the EPA, the Hawkesbury-Nepean Catchment Management Trust and other organisations or individuals will be sought for specific elements of the program of studies and/or reference panels that may be established to oversee specific elements of the program of studies.

- 3.2.2 This MOU, and any licence issued, will be reviewed and will have incorporated, through structures and processes identified in section 5, adopted recommendations or endorsed outcomes from:

- the studies and investigations listed in the Schedule,
- Healthy Rivers Commission reports;
- the EIS for environmental flows identified in the Operating Licence

- 3.2.3 Sydney Water will report on the progress of the program of studies and investigations as part of the operational audits required by clause 5.6 of its Operating Licence.

3.3 Data Exchange

- 3.3.1 Any data/information (including historical data), required by either organisation which is over and above that required for the respective organisations' purposes ie. Sydney Water's business interests or the Department's regulatory/resource management interests that directly affect Sydney Water, will be at a cost to be negotiated. Such cost might cover any additional work, reprocessing or reformatting of data/information.

All other data/information for those river systems which are the subject of this MOU collected or produced by the either organisation will be provided at no cost.

- 3.3.2 Commercial and intellectual property rights are to be maintained and protected. These provisions are to extend to third parties such as consultants who may be given access to the information as part of work commissioned by either agency.
- 3.3.3 All flow data, and such water quality data as agreed for release by the EPA, collected by each organisation is to be exchanged at 3 monthly intervals, to an agreed computer compatible format, where possible. Subject to mutual agreement, historical hydrological data will be provided for specific purposes.
- 3.3.4 All requests for and despatches of data/studies/reports will be through a nominated single point in each organisation.
- 3.3.5 The parties will implement a data use agreement by March, 1997 which provides guidelines concerning release of data within agencies, to third party agencies, and to the public, and the resolution of disputes regarding the exchange of data.

4. RIGHTS AND OBLIGATIONS OF SIGNATORIES

4.1 Joint Rights and Obligations

The parties will enter into an agreement by March 1997, which defines the heads of consideration to guide preparation of the Water Use Licence. These heads of consideration will include water management charges and obligations to downstream water users and the environment.

4.2 Sydney Water's Rights and Obligations

- 4.2.1 Sydney Water's rights to store and extract water from, and to make discharges to, those water resources subject to sections 12 and 90 of the Water Board (Corporatisation) Act, 1994, and to operate the Warragamba flood gates to conform to the H14 Operating Regime, are agreed.
- 4.2.2 In accordance with clause 5.10 of the Sydney Water Operating Licence, Sydney Water will operate its water storages with the aim of ensuring a flow of 50 megalitres of water per day over Penrith Weir.
- 4.2.3 Until a Water Use licence is issued, Sydney Water shall also release sufficient water from the Tallowa Dam storage to enable the Shoalhaven City Council to meet its actual requirements for water at Burrier or the amount that would be available if Tallowa Dam did not exist, whichever is the lesser.
- 4.2.4 Water released from Sydney Water's storages to meet these requirements shall be managed, as far as practicable, to minimise adverse riverine and environmental impacts, to minimise risks to public safety and to minimise risks to property.

4.2.5 Sydney Water will keep the Department informed of any activities which would impact upon the Department's role as the State's water manager. In particular, Sydney Water will inform the Department if it intends to depart from the system management and operation regimes defined in Schedule S1 such that there is a net impact on the resource.

4.3 *Water Administration Ministerial Corporation's Rights and Obligations*

4.3.1 It is acknowledged that the Ministerial Corporation does not have the direct power to control or manage the following activities which could impact on the management of water and related resources:

- existing land use activities
- land use planning and development
- point and diffuse pollutant sources.

However the Ministerial Corporation, through its Department, undertakes with Sydney Water to influence water and land use activities in order to minimise adverse effects on the quality of water entering the water resources described by this MOU.

4.3.2 The Department and Sydney Water will consult with the EPA, the Department of Urban Affairs and Planning, the Hawkesbury-Nepean Catchment Management Trust, NSW Fisheries and such other bodies as may be appropriate to determine options to deal better with and coordinate actions required to fulfil this MOU.

4.3.3 The Department will undertake to assess the number of water users, both licensed and unlicensed, currently extracting from the water resources described by this MOU, determine the annual volumes being extracted, assess the number and extent of dormant licences, and assign priorities and conditions for allocations to licensed extractors in varying climatic regimes.

4.3.4 The Department will review the effect of its current water management policies, including pricing, on the viability of effluent reuse for irrigation and other purposes to replace river water extraction. This assessment will include an exploration of options to improve the viability of reuse proposals.

5. *STRUCTURES AND PROCESSES*

5.1 An agreed framework is needed to address issues and conflicts not specifically covered by this MOU, and the following groups will constitute such a framework.

5.2 Strategic Liaison Group (SLG)

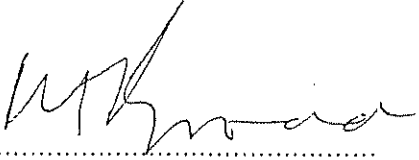
A group will be established to consider longer term issues and policies and to define processes for collection and exchange of planning information. The group would meet twice per year or more frequently if required by either party. The concepts and approaches agreed by the SLG will provide a frame of reference for review of the Department's and Sydney Water's operational outcomes.

5.3 Operational Review Group (ORG).

This group will be established to review data collection and sharing arrangements, monitor the program of studies, and to address issues referred to it by the Strategic Liaison Group.

This Memorandum of Understanding is made at Sydney on the 23 day of December 1996.


SIGNED for and on behalf of
SYDNEY WATER CORPORATION LIMITED
ACN 063 279 649


.....
PAUL A BROAD
(Managing Director)

WITNESS to the above signature:
Name: A. A. DODDS
Address: SYDNEY WATER CORPORATION LIMITED


.....

SIGNED for and on behalf of
WATER ADMINISTRATION MINISTERIAL
CORPORATION FOR THE STATE OF
NEW SOUTH WALES


.....
ROBERT SMITH
(Acting Director-General)

WITNESS to the above signature:
Name: A. A. DODDS
Address: SYDNEY WATER CORPORATION LIMITED.


.....

SCHEDULE

AGREED PROGRAM OF STUDIES TO BE CONDUCTED AND JOINTLY RESOURCED BY SYDNEY WATER CORPORATION LIMITED AND THE DEPARTMENT OF LAND AND WATER CONSERVATION

S 1 System Management and Operations .

This study is to be developed in three parts:

- SWC to provide details of its current water supply operations, predicted requirements and planning criteria
- DLWC to define its potential licence requirements for water abstraction by SWC
- DLWC and SWC to identify options for meeting any inconsistencies between these operations and the potential licence requirements.

The SWC's current operations will be set out in a brief report covering the following aspects;

- background to the current water supply including factors affecting planning and reliability of supply, and the features of the bulk supply system
- commercial and regulatory factors affecting bulk water supply
- main drivers of gross water demand and trends
- managing demand
- options for the future

This report to be completed by 31 March 1997.

The DLWC's potential licence requirements are to cover matters to be subject of the licence, and the current legal status of these requirements or their potential legal status. This report to be completed by 31 March 1997.

SWC and DLWC to jointly identify inconsistencies and means for their resolution, and joint areas for future action.

This report to be concluded by 30 April 1997.

S 2 Flood Operations

Phase One of this study has been to review flood operation strategies for the existing Warragamba Dam so as to best meet the requirements of the community and the environment, consistent with meeting legislated dam safety requirements.

The review has identified a potential flood operation regime (the FORECAST procedure) which may mitigate downstream impacts of small to relatively large floods.

Phase Two involves further assessment of the FORECAST procedure with particular regard to the following:

1. The sensitivity of improved downstream flood management to assumptions made about drawdown of the storage
2. The upstream environmental impacts of the changed gate operations
3. The downstream environmental impacts of the changed gate operations
4. The impact of the changed gate operations on the duration of flooding, warning times and the timing of dam releases with downstream tributary flows
5. The impact of the changed gates operations on the safety of the dam in terms of Imminent Failure Flood: Probable Maximum Flood and the Annual Exceedance Probability of the Imminent Failure Flood.
6. The potential interaction of changed gate operations with other future management options for the storage.

Phase Two investigations are to be undertaken by Sydney Water Corporation in consultation with the Ministerial Corporation. The outcomes of these investigations are expected to contribute to the recommendations to the Government from the proposed Hawkesbury Nepean Flood Management Advisory Committee.

This report to be completed no later than end 1997.

S 3 Riverine and Ecological Water Needs

The objective of this study is to contribute to the development of the water release requirements for the natural systems of the Hawkesbury-Nepean, Woronora and Shoalhaven Rivers.

The processes to determine the riverine and ecological water needs of these rivers will be by way of:

- setting of interim environmental flow objectives by the Government.
- the assessment process undertaken by the Commission for Healthy Rivers
- the environment impact statement for environmental flows that Sydney Water is preparing as part of its Operating Licence.
- in the case of the Shoalhaven River, the assessment will consider the requirements and implications of Shoalhaven City Council's proposed water supply augmentation

To facilitate the above processes, the Department and Sydney Water will jointly identify a program of experimental releases and agreed monitoring of environmental flows. The program will satisfy the requirements for environmental impact assessment and the timing, size and duration of the releases may be subject to rules to maintain the security of the water supply.

For the Hawkesbury Nepean River, this program will be developed by 31 March 1997 for trial, initially over the subsequent 12 months, subject to regulatory approvals.

For the Shoalhaven and Woronora Rivers, programs will be developed by 30 April 1997 for trial, initially over the subsequent 12 months, subject to regulatory approvals.

The above experimental release programs will be modified in response to the objectives for environmental flows endorsed by the Government as a result of the inquiry of the Healthy River Commission or the Interim Objective setting process.

S4 Other Water Extractors

The objective of this study is to review the activities of other extractors, both licensed and unlicensed, from the water resources defined in this Agreement. The Department will assess: the numbers of water users; the annual volumes being extracted; the number and extent of dormant licences; and whether the current level of use is sustainable. Finally, it will assign priorities for allocations to licensed extractors in varying climatic regimes, and will report on the suitability of existing water management policies and procedures, and on options for improvements to these.

The first study to be undertaken will focus on the Hawkesbury-Nepean River.

A remote sensing study, using GIS techniques to locate and measure irrigated areas and farm dams, is largely complete. This information is being checked through field inspections and then will be used to estimate water use and available water resources in each sub-catchment.

An amnesty to help identify and address unauthorised use has been put in place and applications under it are currently being assessed.

A hydrology study has been undertaken by Webb McKeown to construct the natural and current flow duration curves for nominated gauging sites around the catchment. This is complete and is being used to assess the impact of water use. Further hydrology studies are underway to enable estimation of flows (50th -100th percentile range) at selected ungauged sites. This study will be completed by June 1997.

An (IQM) daily streamflow model will be developed for the Hawkesbury Nepean system in two stages: Stage 1 - Hawkesbury-Nepean below major storages and including major tributaries. Stage 2 - Tributaries above major storages. This will provide a water planning and management tool to assess the cumulative impact of different levels of extraction rates, pumping restrictions, and storage and STP releases on flow regimes. The development of this model will be integrated with other related modelling work for the river.

This study will be completed by end 1998.

Stressed rivers classifications which will assist in determining appropriate River Flow Objectives and associated pumping restrictions will be determined for all major tributaries of Hawkesbury-Nepean based on following criteria:

- Level of water use relative to low flow regimes
- Potential for future growth in use
- Evidence of environmental stress

This study will be completed by end 1997.

An assessment of the hydrological impact of farm dams in selected sub catchments will be undertaken in terms of impact on total yield, storm runoff and groundwater/baseflow contributions.

This study will be completed by end 1997.

S5 Other Studies

The need for other studies to be undertaken may be identified during the course of the work described above. In such cases an agreed project brief and assignment of responsibilities are to be completed as soon as possible after the identification of the study need.

MEMORANDUM OF UNDERSTANDING BETWEEN

**NSW HEALTH AND SYDNEY
WATER CORPORATION**

***Memorandum of Understanding between
NSW Health and Sydney Water Corporation***

NSW HEALTH DEPARTMENT

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March 2001

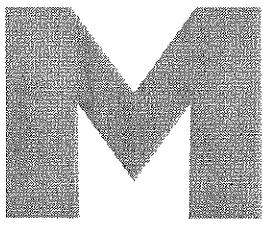
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Introduction

This is the Memorandum of Understanding (MOU) which was executed by the NSW Health Department and the Sydney Water Corporation on 11 November 1997, incorporating the amendments made to that MOU by agreement between those agencies signed 21 November 2000.



Memorandum of understanding

Memorandum of Understanding between the NSW Health Department (the Department) of the one part and the Sydney Water Corporation (the Corporation) of the other part.

This Memorandum was entered into on the 21 day of November 1997, and incorporates amendments made to that MOU by agreement between the NSW Health Department and the Sydney Water Corporation dated 21 November 2000.

Context

- A.** The Corporation is a statutory state owned corporation (SOC) under the *State Owned Corporations Act 1989*. The Corporation has a responsibility to supply safe drinking water to its customers in accordance with its Operating Licence granted under the *Sydney Water Act 1994*.
- B.** The Department has a role in providing advice to the Government on standards in relation to drinking water quality and to commit the Corporation to supplying water which is safe to drink having regard to public health.
- C.** The Minister for Health and the Director-General of the Department have certain responsibilities in relation to the protection of public health under the *Public Health Act 1991* and other relevant legislation. The Department's roles and responsibilities as outlined in this Memorandum are in addition to any functions conferred upon the Department, the Director-General of the Department, the Chief Health Officer of the Department or the Minister for Health under the *Public Health Act 1991*.
- D.** The objective of this Memorandum is to formally set out the terms of a cooperative relationship between the parties, establish their respective roles, facilitate fulfilment of each party's function in relation to the protection of public health, and to fulfil the requirements of section 35 of the *Act* and the Corporation's Operating Licence.
- E.** It is recognised that the Independent Pricing and Regulatory Tribunal has a role as the Operating Licence regulator for Sydney Water and in setting the Corporation's prices for services which takes into account community preferences including their willingness to pay or accept risk.

1. Interpretation

- 1.1 Unless otherwise specified, terms in this Memorandum shall have the same meaning as provided by the *Act* or the Operating Licence.
- 1.2 '*Act*' means the *Sydney Water Act 1994*.
- 1.3 'Water supply system' includes all the infrastructure, from the Sydney Catchment Authority's delivery point to the Corporation to the consumer's point of connection and utilised by the Corporation to supply drinking water in the Licence Area.
- 1.4 'Guideline exceedances' means water quality monitoring results which exceed the *NHMRC and ARMCANZ Australian Drinking Water Guidelines 1996*.
- 1.5 'Significant and major incidents' means those incidents which are required to be reported to the Department through the Corporation's incident management plans.
- 1.6 Headings and numbering are for convenience only and do not affect the interpretation of this Memorandum.

2. Regulatory agency

- 2.1 The Director-General of the Department is specified as a 'regulatory agency' under section 34 of the *Act*. The *Corporation's Act* and Operating Licence requires it to enter into a Memorandum of Understanding with the Department. For clarification, it is agreed that the Department will fulfil the Director-General's responsibilities under the *Act* and the Department shall act as the regulatory agency in accordance with this Memorandum.
- 2.2 The Department's public water supply regulatory program will consist of the requirements contained within this MOU.

3. Term

- 3.1 The term of this Memorandum shall be for the period commencing on the date of execution hereof and remaining in force for the term of the Corporation's Operating Licence.

4. Liaison between the Corporation and the Department

- 4.1 A Strategic Liaison Group consisting of the Director-General of the Department and the Managing Director of the Corporation and senior officers nominated by them shall meet regularly to discuss the broad principles, directions and policies underlying the roles and responsibilities of the parties under this Memorandum and to:
 - annually review progress on the implementation of this Memorandum.
 - consider long term strategic issues and policies and to define and implement processes for the interchange of strategic planning information.
- 4.2 A Joint Operational Group shall meet regularly to:
 - coordinate implementation of this Memorandum.
 - establish data sharing programs.
 - establish programs of investigations, feasibility studies and economic analyses to be undertaken by the Corporation to meet changing public health objectives in relation to drinking water.
 - make recommendations to the Strategic Liaison Group regarding the updating of this Memorandum.
 - facilitate coordination of the collection of data on water quality for use by all relevant agencies.

The Joint Operational Group may establish ad hoc joint working parties to investigate and formulate recommendations on specific and technical issues, as required.

- 4.3 The Membership of the Joint Operational Group (unless otherwise agreed between the parties) will be as follows:

Corporation

- Regulatory management representative
- Water quality management representative
- Water operational management representative
- Corporate representative

Department

- Manager, Water Unit
- Policy Advisers, Water Unit

The Corporation and Department may invite other officers to attend in support of specific issues.

5. Dispute resolution

5.1 Where a dispute between the parties cannot be resolved by the Joint Operational Group, or the Strategic Liaison Group, then it should be referred to the Chief Executive Officers for resolution. In the event that the dispute cannot be resolved by the Chief Executive Officers, the view of the Department shall prevail.

6. Amendment

6.1 This Memorandum can be amended at any time upon agreement between the parties and in accordance with section 36 of the *Act*. Where agreement is not reached, the view of the Department is to prevail in accordance with section 35(3) of the *Act*.

6.2 Where the Corporation's Operating Licence is amended and the effect of the amendment is to create a conflict between the Licence and the Memorandum, then the parties shall meet to discuss the implications of the amendment and steps that can be taken by the Corporation to resolve any public health issues that may arise.

7. Corporation's roles and responsibilities

7.1 The Corporation shall ensure that all drinking water it supplies is safe to drink having regard to the health of the public and that it is supplied in accordance with its Operating Licence.

7.2 The Corporation's Operating Licence requires it to comply with the following relating to drinking water:

- (a) the *NHMRC and ARMCANZ Australian Drinking Water Guidelines 1996* ('1996 Guidelines') relating to health guideline values
- (b) any amendments, updates or supplements of the *1996 Guidelines* ('updated Guidelines') relating to health guideline values specified by NSW Health

(c) the aesthetic guideline values of the *1996 Guidelines* specified by the NSW Minister for Health following consultation with the Minister responsible for the Corporation

(d) the aesthetic guideline values of any updated Guidelines specified by the NSW Minister for Health following consultation with the Minister responsible for the Corporation.

7.2.2 The Corporation's Operating Licence requires that other grades of water supplied by Sydney Water must be supplied according to relevant guidelines and requirements prescribed by EPA, NSW Health, the Department of Land and Water Conservation, the Department of Agriculture, other relevant government agencies and the NSW Recycled Water Coordination Committee.

7.2.3 Sydney Water is to have regard to the concepts of risk minimisation practices and system management of public water supplies referred to in the *1996 Guidelines* and any updated Guidelines, when conducting its water supply system activities.

7.3 The Corporation shall establish and use an internal complaints handling procedure for receiving, responding to, investigating and resolving customer complaints regarding water quality.

7.4 The Corporation shall consult with the Department in relation to planning issues that arise from changes in the *NHMRC and ARMCANZ Australian Drinking Water Guidelines* from time to time.

7.5 The Corporation shall prepare, to the satisfaction of the Department, a comprehensive Annual Drinking Water Quality Monitoring Plan for the water supply system by 31 March each year. The Corporation shall submit this Plan to the Department for review and approval no later than 31st January each year. The Department shall determine its approval no later than 28th February each year. The monitoring plan shall:

- a) include the health and aesthetic parameters for which compliance is required under clause 7.2 of this MOU.

- b) monitor drinking water quality for the aesthetic parameters as required in clause 7.2 of this MOU.
- c) be based on a statistically valid sampling program which meets the intent of the *1996 Guidelines* and any updated Guidelines.
- d) include monitoring locations such that the sampling results are representative of water supplied to Customers and Consumers.
- e) require that samples be tested in accordance with the testing requirements of the 20th edition of *Standard Methods for the Examination of Water and Wastewater* published by the American Public Health Association or other established methods as appropriate.

The Corporation shall carry out a monitoring program in accordance with the monitoring plan. Initially, the Corporation must undertake drinking water quality monitoring for the period 1 January 2000 to 30 June 2001 and after that for each subsequent financial year.

- 7.6** The Corporation shall maintain an effective system of quality assurance for monitoring, sampling, testing, reporting and other processes in relation to the water supply system in consultation with the Department.
- 7.7** The Corporation shall submit to the Department:
- a) on a quarterly basis, monitoring results as agreed in the monitoring plan together with an evaluation of the results on an exception basis.
 - b) on a financial-year basis and by 30 November each year:
 - the results of the health and aesthetic parameters for which compliance is required under clause 7.2 of this MOU.
 - the results of the aesthetic guideline values of the *1996 Guidelines* that apply to the physical characteristics of drinking water.
 - the results should be accompanied by the Corporation's analysis of conditions relevant to the interpretation of data or system descriptions indicating potential health-related problems, together with an evaluation of the results on an exception basis.

- a summary of monitoring information (including guideline exceedances), indicating water quality trends and problems, and a summary of significant and major water quality incidents required to be reported to the Department through the Corporation's Drinking Water Quality Incident Management Plan provided under 10.3. The summary is to include action taken to resolve those exceedances with the potential to impact on public health, and information as to how public health was protected during those exceedances.

- c) the fourth quarterly report required in 7.7(a) can be included as a part of the annual report provided under 7.7(b).
- d) by 31 March in each year, unless otherwise specified following the Mid-term review of Sydney Water's Operating Licence, the Corporation must prepare, to the satisfaction of the Department, an Annual Water Quality Improvement Plan for the water supply system. This Plan is to incorporate system and operational changes needed to address problems identified through water quality monitoring data and through periodic system inspections and evaluations.

- 7.8** The Corporation will develop a system to provide on line access to test results for regulatory agencies during incidents.
- 7.9** The Corporation or its authorised agent shall fluoridate all drinking water supplies as required by the *Fluoridation of Public Water Supplies Act 1957*. Fluoride shall be sampled and reported in accordance with the requirements of the *Fluoridation of Public Water Supplies Act 1957*.
- 7.10** The Corporation shall review with the Department its strategies for the comprehensive management of public health issues no less frequently than every five years, or whenever changes occur that substantially alter the basis of the existing strategies. Strategies to be submitted for review include:
- a) The Five-Year Drinking Water Quality Management Plan
 - b) The 20 year Water Strategy
 - c) Wastewater disposal and reuse strategy.

7.11 The Corporation shall provide the Department with all data and all information on the planning, design, maintenance, operation and administration of the Corporation's activities that the Department reasonably requires to make informed judgements regarding matters relating to the protection of public health.

7.12 The Corporation's responsibilities under this Memorandum apply to the whole of the Corporation's operations (including the whole of its water supply system), including those operations which are performed on behalf of the Corporation by a third party. Protocols are to be established between the Corporation and third parties to ensure the effective operation of the requirements of this Memorandum of Understanding. Such protocols are to include, but not be limited to, joint procedures and training for the identification and notification of information and events of public health significance and the responses described in Clause 10.

7.13 The Corporation shall allow officers of the Department to enter any premises under its care and control, including facilities performing water supply, wastewater reticulation, treatment and disposal systems and wastewater reclamation and reuse systems for the purposes of carrying out any inspections or viewing any records which the Department reasonably requires to make informed judgements regarding matters relating to the protection of public health.

7.14 The Corporation, as a service provider, has a role in ensuring public health protection. This role must be recognised in any conflict or matters of mutual concern to both public health and environmental protection approaches, and will require consultation between the Corporation, the NSW Environment Protection Authority and the Department. The Corporation must meet the environmental water quality requirements for any discharges or water releases required by licences issued to it by the EPA or the Department of Land and Water Conservation.

8. Department's role and responsibilities

8.1 The Department shall provide advice to the Corporation on matters regarding the supply of water which is safe to drink and on other public health issues in regard to water which relate to the Corporation's activities.

8.2 The Department shall provide advice to the Corporation on wastewater management activities that impact on public health, where appropriate.

8.3 The Department shall make independent judgements on public health matters related to the Corporation's activities and exercising its powers and functions under the *Public Health Act 1991*.

8.4 Where any drinking water supplied by the Corporation is failing to meet the Drinking Water Guidelines which the Corporation is required by clause 7.2 to meet, or where the provision of drinking water, or the reclamation, reuse, disposal, or treatment of wastewater takes place in such a manner that a hazard to public health may arise, the Corporation shall be responsible for assessing the problem and proposing rectification action. If the Department is of the opinion that it is appropriate to do so, it may provide advice on rectification action that may be taken by the Corporation. Where the Department gives any advice to the Corporation under this clause, it shall be entirely the responsibility of the Corporation to take appropriate rectification action to ensure that: the drinking water it supplies is safe to drink and meets the requirements of the Corporation's Operating Licence and clause 7.2 and that other activities are conducted in a manner that do not pose a potential hazard to public health. For the purposes of this exercise, the Department will use the *1996 Guidelines* or any updated Guidelines in providing such advice in relation to drinking water.

8.5 The Department shall report to IPART upon the Corporation's compliance with the provisions of this Memorandum and upon any public health matters related to the Corporation's operations, as required by IPART or as considered appropriate by the Department, to enable IPART to carry out its functions under the *Act*.

9. Emerging public health issues related to water

9.1 The parties shall cooperatively exchange information and the Corporation shall participate in appropriate research and development on emerging public health issues related to drinking water so as to enable them to make well informed judgements regarding action to be taken in relation to the Corporation's water supply system to maintain the protection of public health.

9.2 The parties shall independently provide input to public discussion and debate on future revisions of the *1996 Australian Drinking Water Guidelines*, and on guidelines for other grades of water.

10. Events of public health significance

10.1 The Corporation shall immediately report to the Department any information or event within its drinking water supply system, or within its wastewater reclamation and reuse and wastewater reticulation, treatment and disposal operations which may have significant implications for public health.

10.2 The report of information by the Corporation will include maps depicting geographical locations and systems in addition to tables or text if required by the Department.

10.3 The Corporation shall, in consultation with the Department and other Government agencies where appropriate, maintain and update the Corporation's Drinking Water Quality Incident Management Plan.

10.4 The Corporation shall, in consultation with the Department and other Government agencies where appropriate, develop and deploy incident management plans/protocols covering the Corporation's activities relating to waste water management.

10.5 The parties shall nominate a 24 hour incident management contact point for the coordination of responses to any event of public health significance. That contact point will be an officer of each organisation who has been trained in the plans and incident management procedures and protocols thereunder. The incident management plans shall contain or incorporate by reference, procedures and protocols for the coordinated management of incidents including media and stakeholder liaison and any notification of public health advice from the Department.

10.6 The parties shall ensure that all relevant personnel in their respective organisations are trained to respond to and execute the incident management plans and that appropriate training exercises are jointly developed and conducted.

11. Data exchange

11.1 The Department will provide the Corporation with reports and studies it undertakes which are relevant to those activities of the Corporation which impact on public health.

11.2 The Corporation will provide reports and studies undertaken by the Corporation as part of its business which are relevant to public health.

12. Public education and information

12.1 The Department and the Corporation shall jointly undertake a public education program relating to the health aspects of drinking water.

12.2 The Corporation shall report to the public in accordance with section 6.4 of its Operating Licence.

APPENDIX E
MOU Compliance Tables

Appendix E – MOU Compliance Tables

Table A: MOU EPA Compliance Table

Clause	Requirement	Findings
1	The MOU was executed on the 26 November 1996, that is, prior to a number of significant developments including Sydney's water crisis, McClellan Findings, commencement of the <i>Protection the of Environment Operations Act, 1997</i> , <i>Water Legislation Amendment (Drinking Water and Corporate Structure) Act, 1998</i> , and the creation of the Sydney Catchment Authority.	<p>No requirement.</p> <p>As indicated in the 2000/01 Operational Audit, the Sydney Water / EPA MOU is significantly out of date (originally signed in November 1996) and the opportunity was available to demonstrate a "cooperative relationship" through the development of a new MOU consistent with requirements to the Operating Licence. Considerable activity has been undertaken by Sydney Water and EPA through the 2001/02 operating year with the end result that a new draft Memorandum of Understanding has been agreed at the conclusion of the year (28 June 2002). The draft MOU was advertised during August and September 2002.</p> <p>Notwithstanding the draft MOU currently being considered, the requirements of the Operating Licence are such that the existing (1996) MOU be assessed for compliance over the 2001/2002 year.</p>
2.1	To facilitate "effective interaction" between the two organisations.	The MOU and the activities of the EPA and SWC have engendered a significantly improved relationship that demonstrated "effective interaction". Sydney Water has performed well in it's efforts to better understand the requirements of EPA and to generate effective interaction. This is demonstrated in part through SWC's initiation of direct stakeholder research which included EPA and the formal establishment of a "Stakeholder Relationship Plan: Environment Protection Authority". A draft of this plan was sighted and, whilst outside the audit period (final draft September 2002), was undertaken during the operational year. The above is a significant achievement recognising the faltering of relationships have occurred in mid 2000 when Sydney Water lodged an appeal to the Land and Environment Court regarding Sewerage Treatment System Licences. At that stage interaction (eg. Strategic Liaison Group and Operational Policy Committee activity) was frozen. Significant gain is evident in improving the relationship through the above actions.
2.2	To provide an agreed set of principles which guide the two organisations to, identify regulatory approaches and encourage a mixture (regulatory, economic, educational instruments) to assess and enhance environmental performance.	<p>No requirement.</p> <p>The new draft MOU provides a far more succinct statement as well as agreed principles to guide a "cooperative relationship".</p>
2.3	To set out effective processes and co-operative arrangements to achieve sound environmental outcomes in the context of the commercial operations of the corporation.	Cooperative arrangements are evident through the Strategic Liaison Group (SLG) and Operational Policy Committee (OPC). Minutes of both the OPC and SLG were sighted and confirmed. The business of both committees is consistent with the identified structure and processes of the MOU.
2.4	To provide a sound platform under which to progress the achievements of the environmental goals relevant to Sydney	<p>Performance requirements were met.</p> <p>The case studies of a Pollution Reduction Program and joint agreement on the Capital Investment Program of Sydney Water were</p>

Appendix E – MOU Compliance Tables

Table A: MOU EPA Compliance Table

Clause	Requirement	Findings
	Water's operations.	evidence of this platform.
2.5	This MOU accords with the requirements of the EPA and Sydney Water's governing legislation or any other obligation.	Performance requirement not met. As indicated the current (1996) MOU is not in accord with the current legislation of EPA and Sydney Water.
3.1	The MOU is consistent with and expires at the same time as the Operating Licence granted to Sydney Water.	Performance requirement not met. MOU signed 26 November 1996 and is not consistent with Sydney Water's Operating Licence in purpose or term. However, a draft MOU that identifies the revised term is to remain in force until amended or replaced.
4.1.2	Mutually supportive approaches, consistent with public health and environmental protection objectives, should be developed accordingly in consultation with the NSW Department of Health.	A number of mutually supportive approaches were demonstrated through, for example, joint workshops and participation in CEO's and Water CEO forum, and Project North Head (involved SWC, NSW Health, EPA and PlanningNSW) and met twice over the year.
4.1.3	EPA to verify information provided by Sydney Water to licence regulator pertaining to EPA's interaction and regulation of Sydney Water.	Verification is largely directed day to day, between EPA and Sydney Water rather than via an MOU mechanism. For example, the Pollution Reduction reports go directly to EPA. Generally, there was a low compliance in that there was no particular information that Sydney Water forwarded to IPART that had been verified by EPA.
4.2.1	Sydney Water must comply with all relevant requirements of NSW environmental law (ie. licences and certificates of registration under <i>Waste Minimisation and Management Act</i> and licences for the operation of overflow points and sewerage systems).	Sydney Water holds twenty seven Environmental Protection Licences for sewerage transport and treatment systems and an additional four licences for pesticide use and water filtration plant discharges.
4.2.2	EPA's environmental regulatory framework applied to Sydney Water is the same as other dischargers and the price for the licence fee is determined by the NSW Independent Pricing and Regulatory Tribunal.	It was not possible to confirm, through SWC, that EPA applied the same regulatory framework as other dischargers nor that the price for the licence fee is determined by IPART. Rather, a copy of the Annual Return and Administrative Fee (26 August 2002) was sighted. SWC advised the same fee applied to 2001/2002 as in the previous year.
4.2.3	EPA will endeavour to base its regulatory decisions on environmental outcomes though, in the short term, technology based limits may be needed as outcomes may not be easily	No change is applied compared to the audit finding of last year as outlined below. <i>"Performance requirement well developed, as exemplified through:</i>

Appendix E – MOU Compliance Tables

Table A: MOU EPA Compliance Table

Clause	Requirement	Findings
	defined or measured or their environmental risk may be significant.	<p><i>Licences are performance (outcome) based. For example, Blue Mountains Sewer Augmentation Scheme is monitored on performance basis (environmental outcomes). Other examples provided were the Sewer Overflow Licensing Program EIS and EPA's Determining Authority Report on the Sewer Overflow Licensing Program (SOLP). Regulation of discharges consists of combination of performance and technology based requirements.</i></p> <p><i>Performance Based example: Bubble Licence for STPs in South Creek catchment which, as a group, have specified load targets for nitrogen and phosphorus discharges to South Creek.</i></p> <p><i>Technology Based example: West Camden STP nitrogen discharge targets are set as a result of the plant's capabilities. Recent upgrades to plant will result in EPA lowering acceptable total nitrogen discharges".</i></p>
4.2.4	EPA undertakes independent audit to monitor and report Sydney Water's compliance with EPA's licence conditions, approvals and certificates of registration.	No "independent" audit was conducted over and above the ongoing licence compliance checks, as outlined above under clause 4.2.3:
4.2.5	Licence, approval and certificate of registration should make reasonable provisions for unforeseeable emergency conditions.	<p>Performance requirements continue to apply as per last year; viz:</p> <p><i>Performance requirement met.</i></p> <p><i>"Contingency arrangements for emergencies are provided in Licence conditions and performance standards. Examples provided: Mt. Victoria STP, West Camden STP & Penrith STP. Provisions for limit conditions, wet weather overflows, wet and dry weather bypasses and notification procedures for bypass or overflow incidents."</i></p> <p><i>Sydney Water actively identifying gaps between Licence allowances and possible environmental and health risks through STP upgrading schemes etc."</i></p>
4.2.6	<p>Existing STPs licences should reflect the capability of the facility, long term pollution reduction programs and any agreed system based priority.</p> <p>New licence conditions for STP recognise environmental, social and economic needs.</p>	Performance requirement met. A number of changes were made during 2000/2001 and the Notice of Licence variation for Licence 372 (29 October 2001) containing changes was sighted.

Appendix E – MOU Compliance Tables

Table A: MOU EPA Compliance Table

Clause	Requirement	Findings
4.2.7	Litigation, where warranted, will be conducted in line with EPA's prosecution guidelines.	No prosecutions were undertaken by EPA against SWC over 2001/2002.
4.2.8	EPA and Sydney Water recognise water quality objectives linked to river flow objectives and which set the context of both catchment management plans and environmental regulation.	A number of fora, (for example in the Hawkesbury Nepean River Management Forum and Healthy Rivers Commission) have or are establishing water quality and environmental flow requirements. Similarly, Sydney Water has participated in Catchment Boards and numerous planning initiatives (Water Plan 2001) which also address water quality objectives. Integrated effluent management strategy for the Hawkesbury Nepean involved significant SWC input.
4.2.9	<p>Section 23-27 of the WBC Act proposes obligations on Sydney Water to conduct ecological risk assessments involving the following:</p> <p>EPA to approve methodologies and set pollution reduction targets for scheduled substances.</p> <p>Sydney Water to meet pollution targets set by EPA for reduction of substances listed in Schedule 10 of the Act.</p> <p>Sydney Water's requirement to conduct environmental impacts statements on environmental flows in the Hawkesbury Nepean, Shoalhaven and Woronora rivers (Operating Licence clause 1.6) will be conducted in the framework for water quality objectives and river flow objectives.</p>	<p>Performance requirements were met as exemplified below:</p> <ul style="list-style-type: none"> • Example provided: "<i>Ecological and Human Health Risk Assessment of Chemicals in Sewage Discharges to Ocean Waters</i>". • <i>Environmental Indicators Compliance Report</i> states EPA reporting requirements for identifying substances of potential concern (focussed monitoring to Schedule 10 substances). • A study was undertaken on Ecological Risk in mid 1990's which has led to ecological toxicity testing methodology improvements. <p>Appropriate performance requirements were met and reported by Sydney Water through its water quality and environmental reporting programs. Note: Environmental impact statements with respect to environmental flows are now the responsibility of SCA.</p>
4.2.10	Sydney Water adopts definitions for "environmental values", "criteria", "guidelines" and "standards" as defined in the glossary for <i>Australian Water Quality Guidelines for Fresh and Marine Water</i> (ANZECC, 1992) and <i>NSW National Environment Protection Council Acts</i> definitions relating to national environment protection measures are to be applied.	Performance requirement met. For example, the definitions have been resolved through the activities of the Strategic Liaison Group and Operational Policy Committees and exemplified through the joint paper (sighted) on nutrients generated in the Hawkesbury Nepean system, by the SLG November 2001.

Appendix E – MOU Compliance Tables

Table A: MOU EPA Compliance Table

Clause	Requirement	Findings
4.3.1	Interaction between Sydney Water and EPA should achieve environmental protection, restoration and enhancement and the least overall cost to the community. Thus, a full range of regulatory, educational and economic tools need to be considered in designing regulatory frameworks to achieve environmental goals and prioritise work.	Performance requirement has been met. Examples of education were made available including the " <i>Pets, Pests and Pesticides Program</i> ".
4.3.2	EPA and Sydney Water encourage environmental management on a catchment basis taking into account diffuse and point source pollution.	Performance requirement met. A pilot program (" <i>Pets, Pests and Pesticides</i> ") that focused on the issue of toxicity of sewerage effluent was undertaken in Shellharbour. EPA was briefed on outcomes and consulted on future measures. In addition, through EPA's South Creek Pilot study, Sydney Water has provided additional funding for on-ground works to address diffuse sources pollution.
4.3.3	Linkages between potable water management, wastewater management and the natural water cycle should be considered in applying a regulatory regime and in the design of water and wastewater systems.	Performance requirement met. SWC provided examples to demonstrate how it applied this linkage including, for example, the integrated effluent management strategy developed for South Creek in the Hawkesbury Nepean System.
4.3.4	Effluent reuse is an integral part of effective water cycle management and should be promoted recognising public health must not be compromised, the environment must be protected and activities must be commercially viable. This will also apply to biosolids and other treatment by-products.	Performance requirement was demonstrated through the consideration of effluent reuse which had been a major component of STP upgrade (and similarly the consideration of reuse in Camden EIS).
4.3.5	Water, waste water and drainage systems operation and regulation should include consideration of risk management principles and the costs and benefits, and environmental objectives.	SWC has indicated it adopts the consideration of Risk Management as well as cost and benefits in a broad range of activities, including EIS assessment and Emergency Risk Management. Such an approach is evident in the broader consideration of, say, water quality.
4.3.6	The EPA is primarily responsible for advising the government on any non-cost-reflective "environmental tax" component.	Performance requirement met as demonstrated through Sydney Water's actions, exemplified by the following: <ul style="list-style-type: none"> • Load based licensing fees gradually introduced to industry over 4 year period.

Appendix E – MOU Compliance Tables

Table A: MOU EPA Compliance Table

Clause	Requirement	Findings
4.3.7	<p>Sydney Water will be responsible for determining the best and most cost effective way for the Sydney Water's licence condition through source control or additional levels of treatment of domestic or diffuse sources as well as industrial sources discharging trade waste for treatment.</p> <p>EPA is responsible for determining pollution reduction targets for Schedule 10 substances by 30 June 2000 and ensuring licence conditions are conducive to Sydney Water meeting or exceeding the targets.</p>	<p>SWC's performance continues as per last year as outlined below:</p> <p><i>Performance requirement met.</i></p> <p><i>Examples include Trade Waste Policy where pricing is calculated by working backwards from receiving waters at the discharge point, linking to the capability of the STP, and identifying the type of industries that should be allowed to operate in the catchment.</i></p> <p><i>Targets for Schedule 10 substances set in Trade Waste Policy and Environmental Indicators Compliance Report. Community Education programs also developed.</i></p> <p>As highlighted above (and see comment under Clause 1) steps have been taken through Sydney Water and EPA to agree upon a specific strategy for the Strategic Liaison Group to look at longer term strategic issues and planning (as opposed to being a more 'reactive' group). However, the performance of this should continue to be monitored with the adoption of the revised MOU in 2002. A further example was discussion on Sydney Water's Capital Program as it applies to funding priorities for improved sewerage performance.</p>
5.1	<p>A framework for defining environmental requirements to be applied to the Sydney Water Corporation is needed to allow for a longer term strategic planning focus.</p>	<p>Performance requirement met.</p> <p>Sydney Water indicated difficulty was experienced in clarifying EPA's environmental requirements and priorities beyond a 1 - 2 year timeframe. However, Sydney Water has a 12–18 month "strategic agenda" with EPA including: EPA involvement in Capital Works Planning, IPART 5 year price path review and EPA's review of WaterPlan21 (SLG Minutes - June 2001 & July 2001)</p>
5.2	<p>CEOs at EPA and Sydney Water will meet regularly to establish and confirm broad principles, directions and policies underlying investigations and negotiations and address major issues referred by either the Strategic Liaison Group or the Operational Policy Committee.</p>	<p>Performance requirement met.</p> <p>Whilst the CEO meetings were informal and no minutes taken. A meeting schedule was sighted.</p> <p>Both CEO's now attend all SLG meetings.</p>
5.3	<p>.....a Strategic Liaison Group has been established to consider long term strategic issues, define and implement processes for interchange of planning information or development of innovative regulatory approaches.</p>	<p>Relationship of Sydney Water and EPA has developed and improved, as exemplified through Sydney Water's efforts to establish a <i>Stakeholder Relationship Plan</i> that establishes an appropriate framework and direction for interaction with EPA. Some examples in the Plan of strategic issues included an increased focus on outcomes such as an agreement on water quality guidelines, pollution offsets, as well as consideration of the trading scheme. Also a June 2001 Workshop set the strategic agenda for SLG and OPC.</p>

Appendix E – MOU Compliance Tables

Table A: MOU EPA Compliance Table

Clause	Requirement	Findings
5.3.1	SLG membership nominally involves specific Sydney Water and EPA representatives.	Performance requirement met. Membership of SLG is required by MOU. Other groups and individuals attend SLG as required regarding specific issues to be discussed.
5.3.2	SGL meetings are usually held at least twice a year and chaired alternatively by EPA and Sydney Water.	Performance requirement met as indicated by minutes (SLG Minutes 5 November 2002 and 28 March 2002 meetings and 6 July 2001 workshop reviewed). Representatives have changed but equivalents have now been established as evidenced in the <i>Stakeholder Relationship Plan: Environment Protection Authority</i> Two meetings were held during the year viz: in November 2001 and March 2002.
5.4	Operational Policy Committee (OPC) should meet to resolve operational regulatory issues.	Performance requirement met. (OPC Agenda and Minutes 7 August 2001, 25 September 2002, 3 December 2000, 8 April 2002, 26 June 2002 Minutes)
5.4.1	Unresolved matters of significance (including negotiations on PRPs) will be referred to the SLG for consideration.	An example of an unresolved matter related to the agreement on the Capital Investment Program to upgrade sewerage operations which was forwarded to the SLG for consideration.
5.4.2	The OPC will consist of senior officers, will be alternatively chaired between EPA and Sydney Water, will meet approximately 6 times a year and both EPA and Sydney Water will seek to ensure continuity of representation.	Performance requirement met. Meetings alternately chaired by Sydney Water and EPA, as required. OPC sees minutes. Agendas for the meeting 7 August, 25 September, 3 December, 8 April and 26 June were sighted.
5.5	The interactions of the OPC and SLG must not compromise the independence of the EPA nor the community's confidence in environmental regulation.	Performance requirement met. EPA's independence maintained eg. Licence appeal in previous year.
5.6	Sydney Water may seek EPA submissions to assist meeting its	Various forms of interchange or review and comment between Sydney Water and EPA were sighted. Though, in the majority of

Appendix E – MOU Compliance Tables

Table A: MOU EPA Compliance Table

Clause	Requirement	Findings
	requirement under the <i>Water Board Corporations Act</i> or Operating Licence and in this regard provide a timeframe for review and comment. Further, the CEOs may convey in writing if they are of the view that either party is not complying with the spirit of these obligations.	cases, formal reports are provided independently of the MOU. For example, EPA's submissions to IPART on the Operating Licence and on the pricing determination.
5.7	EPA and Sydney Water are committed to open communication and consultation with the community on key strategic issues (eg load-based licensing and sewer overflow licensing) and opportunities are provided through existing forums such as EPA's State Community Consultation Forum and Sydney Water's Customer Councils	<p>Sydney Water's commitment to open communication as exemplified through a number of actions including the survey of stakeholders. The survey provided an accurate base of stakeholders' perception of Sydney Water and led to the subsequent establishment of <i>Stakeholder Relationships Plans</i>.</p> <p>Whilst participation continued on for example, Customer Councils, no specific items were identified at the interview to demonstrate SWC's activities in this regard.</p> <p>Joint EPA - SWC sponsorship for water conservation parts of "<i>It's a Living Thing</i>" campaign continued.</p>
6.1	Compliance data will be made available by Sydney Water to EPA in line with EPA's licensing requirements and conditions of the Corporation's Act and Operating Licence.	Compliance requirement forwarded to IPART (30 August 2002 Ref 070) though some reports (as exemplified through <i>Sydney Water's Environment Report</i>) were supplied in draft. No indication was given of reports being made available to EPA. (Copy of covering letter to EPA sighted as under Clause 6.1).
6.2	Other data gathered or collated by the Corporation may be available to the EPA and, should a dispute arise in the regard to the availability of such data, that it be referred to the SLG or CEO as necessary.	<p>Sydney Water indicated that a free flow of information and data sharing took place and there were no disputes.</p> <p>The stakeholder survey identified an issue that "<i>the EPA would like to assess data such as environmental data and modelling tools, water monitoring data etc</i>" and "<i>Sydney Water needs to be more succinct in the quantity of data supplied</i>".</p>
6.3	Data not related to Sydney Water's compliance and having a commercial value may be supplied for a charge.	<p>No Requirement.</p> <p>No charges were applied to data for example, South Creek data, GIS water quality and macro invertebrates.</p>
6.4	EPA is similarly expected to share data gathered by it in regard to Section 6.2 and 6.3 and to do so free or on a charge though again expeditiously complete negotiations where required.	No requests were made to EPA for data during the year.
6.5	The Strategic Liaison Group has the capacity to establish data	Performance requirement met.

Appendix E – MOU Compliance Tables

Table A: MOU EPA Compliance Table

Clause	Requirement	Findings
	sharing arrangements,	As an example, the SLG developed a joint nutrient paper in regard to the Hawkesbury-Nepean system to assist both organisations.
6.6	The MOU does not affect disclosure of information (eg under the <i>Pollution Control Act</i> section 26 or under the <i>Freedom of Information Act</i> section 32) concerning documents affecting business affairs.	Performance requirement met. A number of issues were forwarded to the SLG which, during the year, included sewerage capital works program as well as data mentioned previously, (see clause 6.3 for further details). A revised draft MOU between Sydney Water and the Environment Protection Authority was prepared but was not completed nor available for public exhibition.
7	Matters of long term significance that cannot be resolved by the Operational Policy Committee may be referred to the Strategic Liaison Committee and if such matters remain unresolved these may be referred to the CEO level for resolution.	Performance requirement met. See clause 5.4.1.
8	Any amendment to this MOU be publicly exhibited.	No Requirement. MOU was not amended.

Table B: MOU NSW Health Compliance Table

Clause	Requirement	Comment
Context	This section outlines the particular responsibilities of the Department of Health, the Director General, the Sydney Water Corporation, the role of IPART and establishes the objective of the memorandum to set out the terms for a cooperative relationship between the parties, establish the roles, facilitate fulfilment of each party's functions in relation to the protection of public health and fulfil the requirements of Section 35 of the Act and the Corporation's Operating Act.	
1	Interpretation which sets out the meanings of specific terms under the Act or Operating Licence.	No requirement.
2	The Director General of the Department is specified as a regulatory agency.	The Water Legislation Amendment (Drinking Water and Corporate Structure) Bill 1998 amended the <i>Sydney Water Act</i> and the Health Act to effectively strengthen and clarify NSW' Health's powers concerning the safety of drinking water and establish Sydney Water as a Statutory State Owned Corporation.
3.1	The term of this MOU will be from the date of execution and remain in force for the term of the Operating Licence.	Performance requirement met. Current MOU signed by Sydney Water and NSW Health on 21 November 2000.
4.1	A Strategic Liaison Group shall meet to discuss broad principles of directions and policy underlying the roles and responsibilities of the party and to: annually review progress on the implementation of this Memorandum; consider long term strategic issues and policies in defined implemented processes for the interchange of strategic planning information.	Performance requirement met. SLG met 5 times in the audit period: 2 July 2001; 5 September 2001; 12 November 2001; 14 February 2002; and 13 June 2002. Meeting minutes sighted. Annual review has been undertaken over last few years. The review process is initiated by the JOG and presented to the SLG for approval. Due to a change in audit period from a calendar year to financial year, a half year review was undertaken for the period January – June 2001 which was endorsed on 5 September 2001 by the SLG. A draft report on the performance against the MOU, for 2001/2002 was endorsed by the JOG on 19 August 2002 and sent to SLG for endorsement. As significant development was the initiation of a Strategic Issues Work Program to be implemented in a three to five year timeframe. A Strategic Issues paper (sighted) drafted by the JOG was presented to the SLG on the 13 June 2002 for future works. The JOG is to develop the background program to ensure identified issues are pro-actively analysed and papers prepared to ensure informed discussion at future SLG meetings.

Table B: MOU NSW Health Compliance Table

Clause	Requirement	Comment	
4.2	A Joint Operational Group shall meet to discuss implementation of MOU, data sharing programs, feasibility studies and economic analyses, make recommendations to the SLG and facilitate coordination of water quality data.	<p>Performance requirement met.</p> <p>JOG met 6 times in the audit period: 6 August 2001; 8 October 2001; 3 December 2001; 6 February 2002; 8 April 2002; and 3 June 2002. Meeting minutes sighted.</p> <p>Issues discussed include: implementation of MOU; SWC Drinking Water Quality Plan; Water Quality Monitoring Program and ongoing implementation of strategic issues. As detailed above the JOG prepared Strategic Issues list and provided it to the SLG. The JOG provides the forum for data sharing and information transfer.</p>	
4.3	Membership of the joint operational committees should include Sydney Water (Regulatory Manager, Water Quality Manager, Water Operations Manager, Corporate Representatives) and Departmental (Manager Water Quality Unit and Policy Advisor Water Quality Unit) members.	<p>Membership of committee noted.</p> <p>Sydney Water: (Titles of SLG members has changed over audit period)</p> <p>Manager, Regulation & Compliance (now known as Regulatory Affairs);</p> <p>Manager, Water Filtration (Process Leader, Water Operations, Water Filtration);</p> <p>Manager, Product Delivery Water (Process Leader, Water Operations, Networks); and</p> <p>Corporate Representatives</p>	<p>NSW Health:</p> <p>Manager Water Unit (or A/Manager)</p> <p>Senior Policy Advisors;</p>
5.1	Disputes between the parties not resolved by the Joint Operational Group or the Strategic Liaison Group should be referred to the CEOs for resolution and if this is unsuccessful the views of the Department shall prevail.	<p>No requirement.</p> <p>No disputes recorded.</p>	
6.1	The MOU can be amended at any time upon agreement of the parties. Where agreement is not reached the Department's view shall prevail.	<p>No requirement.</p> <p>No amendments were made.</p>	
6.2	Where the Sydney Water's Operating Licence is amended and creates a conflict between the Operating Licence and the MOU	<p>No requirement.</p>	

Table B: MOU NSW Health Compliance Table

Clause	Requirement	Comment
	then the parties should meet to discuss the implications and steps to resolve any public health issue.	No conflicts identified in current audit period. Conflicts were rectified in the last audit period in respect to Australian Drinking Water Guidelines.
7.1	Sydney Water must ensure all drinking water it supplies is safe for drinking having regard to public health and supplied in accordance with its Operating Licence.	Performance requirement met. Refer to "Part 6 – Water Quality" for discussion.
7.2.1	The Corporation's Operating Licence requires it to comply with nominated drinking standards.	Performance requirement met. Refer to "Part 6 – Water Quality" for discussion.
7.2.2	The Corporation's Operating Licence requires that other grades of water supplied by Sydney Water must be supplied in accordance with relevant guidelines and requirements as prescribed.	Performance requirement met. Refer to "Part 6 – Water Quality" for discussion.
7.3	The Corporation shall establish internal complaints handling procedures for resolving customer complaints regarding water quality.	Performance requirement met. Refer to "Part 12 – Dispute Resolution" for discussion.
7.4	Sydney Water will consult with the Department in relation to planning issues arising from changes to NHMRC and ARMCANZ Australian Drinking Water Guidelines from time to time.	Performance requirement met. Consultation between Sydney Water and the Department is evidenced through the JOG. Meeting minutes sighted: JOG, 6 August 2001, Item 6; <i>Microcystin AWT Results</i> : "NSW Health advise that they had adopted the new NRMHC level of 3ug/L prior to NHMRC approving it", consequently "..SWC would need to revise their Drinking Water Plan following its approval from NHMRC". JOG, 3 June 2002, Item 11; <i>Revised drinking water guidelines, removal of total coliforms as a compliance micro-organism, and implications for all SWC supplies and the SCA picnic supplies – Discussion</i> .
7.5	The Corporation shall prepare, to the satisfaction of the Department, a comprehensive Annual Drinking Water Quality Monitoring Plan for the water supply system by 31 March each year. The Corporation shall submit this plan to NSW Health for review and approval no later than 31 January each year. NSW	Performance requirement met. 2002/2003 Drinking Water Quality Plan was prepared and approved by NSW Health on 27 March 2002. The audit findings are detailed in Table 6.2, (Clauses 6.3.1, 6.3.2, 6.3.3, 6.3.4 and 6.3.5) of this report. The draft plan was provided to NSW Health on the 31 January 2002 for 'review and comment'. Comment was transmitted on the 25

Table B: MOU NSW Health Compliance Table

Clause	Requirement	Comment
	<p>Health shall determine it's approval no later than 28 February each year. The monitoring plan shall:</p> <ul style="list-style-type: none"> include Health and aesthetic parameters Monitor drinking water quality for aesthetic parameters Be based on a statistically valid sampling Include monitoring locations such that the sampling results are representative of water supplied Require samples be tested in accordance with testing requirements. Sydney Water shall carry out a monitoring program in accordance with the monitoring plan for the period 1 January 2000 to 30 January 2001 and after that for each subsequent financial year. 	<p>February 2002. A final draft was then forwarded, 19 March 2002, for approval (transmittal correspondence sighted). No correspondence was provided to demonstrate transmittal of approved document back to Sydney Water, but was signed off on the 27 March 2002.</p> <p>Whilst this constitutes a technical non-compliance with the requirement for approval by NSW Health to be determined by no later than 28 February, SWC has complied with the requirement for submission to NSW Health. It appears that the current process, similarly adopted last year, creates the technical non compliance. Both organisations should coordinate the process to ensure that final approval by NSW Health is achievable by no later than 28 February.</p> <p>The MOU requirement is not consistent with the Operating Licence Clause 6.3.1 which requires preparation of the Plan to the satisfaction of NSW Health by the 31 of March. Both organisations have complied with the Licence requirement</p>
7.6	<p>Corporation shall maintain an effective system of quality assurance for monitoring, sampling, testing and reporting and other processes in relation to water quality system in consultation with the department.</p>	<p>Performance requirement met.</p> <p>The audit findings, in regard to quality assurance, are detailed in Table 6.2, Clause 6.3.2 of this report which states: "<i>A detailed review of compliance...including quality control procedures had been carried out...(Independent Audit of Drinking Water Quality for 2001/2002) on behalf of NSW Health. The finding of the audit was full compliance.</i>"</p> <p>The Quality Assurance Systems for monitoring, sampling testing and reporting are certified ISO 9002 and are subject to bi annual surveillance audits, most recently in February 2002.</p> <p>The Drinking Water Quality Management System which covers all water quality activities is certified ISO 9002:1994 #QEC12888 on 26 June 2000. The system is subject to semi-annual audits. Audits undertaken in August 2001 and March 2002 found no non conformances, and that "<i>implementation has been maintained</i>".</p> <p>NSW Health reviewed the Drinking Water Quality Monitoring systems as detailed Clause 7.5 (above).</p>
7.7a	<p>Sydney Water shall submit to the Department on a quarterly basis monitoring results as agreed in the monitoring plan together with an evaluation of the results on an exceptions basis.</p>	<p>Performance requirement met.</p> <p>Sydney Water provided drinking water quality monitoring reports to NSW Health for each quarter. Copies of transmittal</p>

Table B: MOU NSW Health Compliance Table

Clause	Requirement	Comment
		correspondence for 1 st and 4 th quarter's of 2001-2002 period were sighted. SWC tabled the 1st quarter Report at JOG, 6 October 2001. "NSW Health advised that they had received the report and erratum."
7.7b	<p>On a Financial year basis and by the 30 November submit to the department:</p> <p>results relating to health and aesthetic parameters;</p> <p>guideline values applying to drinking water;</p> <p>the cooperation's analysis of conditions relevant to interpretation of data or systems indicating potential health problems and an evaluation of results on an exceptions basis;</p> <p>a summary of monitoring information indicating water quality trends, problems and significant and major water quality incidents (reported through the corporations drinking water quality incident management plan); and a summary of actions to be resolved with respect to exceedences with a potential to impact public health.</p>	Annual Drinking Water Quality Report was provided to NSW Health on the 30 November 2001. Audit findings are detailed in Table 6.2 Clause 6.4 of this report. Transmittal correspondence dated 29 November was sighted.
7.7c	The fourth quarterly reports required in 7.7a can be included as part of the annual report provided under 7.7b	<p>No requirement.</p> <p>1st and 4th quarter summary reports for periods 1 July 2001-30 September 2001 and 1 April 2002-30 June 2002 were sighted. Annual report for 2000-2001 sighted.</p>
7.7d	By the 31 March each year, unless otherwise specified following the Mid term review of Sydney Water's operating licence, Sydney Water must prepare an Annual Water Quality Improvement Plan for the water supply system to the satisfaction of the department and to incorporate systems and operational changes to address problems identified through the water quality monitoring data and periodic system inspection and evaluations.	<p>Performance requirement met.</p> <p>SWC comments that it submitted the Plan on 29 March 2002 and it was approved by Health on 12 April 2002. JOG 8 April 2002 Minutes Item 16, state " all requirements met on time as specified by the MOU".</p> <p>The audit findings, being assessed as Full compliance, are detailed in Table 6.2, Clauses 6.5.3 and 6.5.4.</p>
7.8	Sydney Water Corporation will develop a system to provide on-line access to test results for regulatory agencies during incidents.	<p>Performance requirement met.</p> <p>'Drinking Water Quality On-line Notification & Reporting Systems to NSW Health' outlines procedures for gaining access to, and</p>

Table B: MOU NSW Health Compliance Table

Clause	Requirement	Comment
		<p>operating the on-line notification and reporting system. The system was approved as fully commissioned at JOG on 8 October 2001. Minutes state that "<i>The on-line monitoring system will act as a reporting tool to notify NSW Health of water quality incidents and contain monthly reports</i>".</p> <p>System was tested during the incident training exercise 'Operation Julie' on 12 October 2001.</p> <p>JOG 8 April 2002 Minutes re E-mail Internet Incident Notification, discussion of effectiveness of system.</p>
7.9	<p>Sydney Water will fluoridate all drinking water supplies as well as sample and report upon such fluoridation in regard to the <i>Fluoridation of Public Water Supply Act 1957</i>.</p>	<p>Performance requirement met.</p> <p>Fluoridation monitoring is reported in Quarterly and Annual reports on drinking water quality.</p> <p>Note: the determination of compliance with the requirements of the <i>Fluoridation of Public Water Supplies Act 1957</i> is at the discretion of the Fluoridation Of Public Water Supplies Advisory Committee. A target of 95% of sample results between 0.90 and 1.5mg/L and no results greater than 1.5mg/L has been agreed between Sydney Water and NSW Health as an appropriate performance requirement.</p>
7.10	<p>Sydney Water shall review with the Department it's strategy for comprehensive management of public health issues no less frequently than every five (5) years or whenever substantial change exists. Strategy to be submitted for review include:</p> <p>Five (5) year drinking water quality management plan</p> <p>Twenty (20) year water strategy</p> <p>Waste water disposal and reuse</p>	<p>Performance requirement met.</p> <p>Five Year Drinking Water Quality Management Plan July 1999-June 2004 was completed 12 September 2000. No review in this audit period. Annual Progress Summary Report, detailing progress with the plan, was issued to NSW Health 8 October 2001 at the JOG (copy of report sighted). <i>Five Year Drinking Water Quality Management Plan July 1999 to June 2004 Status Report No.4 Data as at 31 March 2002</i> was provided, demonstrating ongoing progress and reporting of progress with the plan.</p> <p>Twenty Year Water Strategy has been integrated into <i>Waterplan21</i> which was reviewed and presented to Health and SCA at JOG on 6 February 2002 and invited feedback. "<i>SWC sought NSW Health's assistance in identifying potential health risks and working through risk management strategies such that new and innovative options could become viable solutions.</i>" The plan is due for finalisation in late 2002.</p> <p>Waste water disposal and reuse is incorporated into <i>Waterplan21</i>.</p>
7.11	<p>Sydney Water shall provide to the Department all information on the planning, design, maintenance, operations and administration of the Corporation activities that the Department reasonably requires to make a judgement regarding matters relating to the protection of public health.</p>	<p>No requirement.</p> <p>SWC advised that there were no specific requests for data during the audit period. Information transfer mostly occurs through SLG and JOG. NSW Health have on-line access to monitoring results during incidents and monthly reports. (Also See MOU Clause 7.8, above).</p>

Table B: MOU NSW Health Compliance Table

Clause	Requirement	Comment
7.12	Sydney Water's responsibilities under this MOU apply to the whole of the Corporation's operations (including the whole of its water supply system), including those which are performed on behalf of the Corporation by a third party. Protocols are to be established between the Corporation and third parties to ensure the effective operation of the requirements of the MOU. Such protocols are to include joint procedures and training for the identification and notification of information and events of public health significance as described in clause 10.	SWC has protocols in place with contractors/consortia running the Water Filtration Plants that ensure procedures align, information is shared, joint training is conducted and notification is provided. SWC provided a copy of <i>Bulk Water Supply Protocol Raw Water Quality Monitoring</i> which contains details of the actions and activities that will be undertaken by the SCA, Sydney Water and the contractors of the BOO water filtration plants in the delivery of raw and treated bulk water.
7.13	Sydney Water cooperation must allow NSW Health officers entry into any premises for the purpose of carrying out inspections or viewing records to enable judgements regarding matters relating to the protection of public health to be made.	No requirement. NSW Health officers did not require access to any Sydney Water premises during the audit period.
7.14	Corporation has a role to ensure public health protection. This role must be recognised in any conflict or matters of mutual concern to both public health and environmental protection approaches and will require consultation with the EPA and the Department of Health. The Corporation must meet the environmental water quality requirements for any discharges or water releases required by licence issued to it by the EPA or the DLWC.	No requirement. SWC reported that there were no conflicts or matters of mutual concern during the audit period and therefore no consultation was required. No issues were reported in regard to SWC meeting water quality requirements for water releases/discharges.
8.1	NSW Health to provide advice to Sydney Water on matters regarding the supply of water which is safe to drink and other public health issues.	No requirement. SWC reported that no advice was provide by NSW Health in regard to the supply of water which is safe to drink and other public health related issues during the audit period.
8.2	NSW Health shall provide advice to Sydney Water on waste water management activities impacting public health.	No requirement. SWC reported that no advice was provided by NSW Health in regard to waste water management activities impacting public health.
8.3	NSW Health shall make independent judgement on public health matters and exercise it's powers and functions under the <i>Public</i>	No requirement.

Table B: MOU NSW Health Compliance Table

Clause	Requirement	Comment
	<i>Health Act 1991.</i>	Requirement of NSW Health. An example of a judgement made by NSW Health was in regard to the inappropriateness of inclusion of test results for <i>epichlorohydrin</i> for compliance assessment purposes. Letter from NSW Health sighted. (See Section 6.3.3 of this report for further discussion of epichlorohydrin)
8.4	Where Sydney Water fails to meet Drinking Water Guidelines or where the provisions of drinking water, or the reclamation, reuse, disposal or treatment of wastewater takes place in such a manner that a hazard to public health may arise, Sydney Water is responsible for assessing the problem and proposing rectification action. NSW Health may provide advice on the rectification action although Sydney Water shall be entirely responsible to take appropriate rectification action, ensuring the supply of drinking water is safe and meets the requirements of the Sydney Water's Operating Licence and clause 7.2 and that other activities do not pose potential health hazard to public health.	SWC report that there were no incidents where a hazard to public health arose. SWC provided data detailing a Summary of Events for 2001/2002. There are regular incidents which are managed in accordance with the Drinking Water Quality Management System and Incident Management Plan.
8.5	NSW Health to report to IPART on Sydney Water's compliance with the MOU, upon any public health matter or as considered appropriate.	No requirement. NSW Health does not provide Sydney Water with copies of reports sent to IPART. SLG 5 September 2001, NSW Health indicated it would liaise directly with IPART in relation to last years Operational Audit of SWC.
9.2	Sydney Water shall make independent input to public discussion debate on revisions of the <i>1996 Australian Drinking Water Guidelines</i> or other grades of water	SWC reported that staff attended public for a which have direct input into NHRMC. Evidence that SWC and NSW Health are engaged in a collaborative approach with other agencies on water quality issues. Minutes of SLG 14 February 2002 sighted.
10.1	Sydney Water shall immediately report to NSW Health any information or event within drinking water supply system or wastewater reclamation and reuse and wastewater reticulation, treatment and disposal operations which may have significant implications for public health.	Performance requirement met. Sydney Water has a Drinking Water Incident Management Plan for Significant and Major issues (in accordance with Clause 6.5.6 of the Operating Licence). The Plan details the procedures to be followed and a requirement to report to Health once an incident has been identified. The 'Drinking Water Quality On-line Notification & Reporting Systems to NSW Health' has been established and will act as a reporting tool to notify NSW Health of water quality incidents and will contain monthly reports. See Clause 10.3 (below) re discussion of update of SWC Drinking Water Quality Incident Management Plan.

Table B: MOU NSW Health Compliance Table

Clause	Requirement	Comment
10.2	Sydney Water report of information will include maps depicting the geographical location and systems in addition to tables or text if required by NSW Health.	Information is reported to NSW Health via the 'Drinking Water Quality On-line Notification & Reporting System to NSW Health'. NSW Health have all relevant information and maps to identify location of a reported incident.
10.3	Sydney Water, in consultation with NSW Health and other agencies shall maintain and update its Drinking Water Quality Incident Management Plan.	Performance requirement met. The <i>Drinking Water Quality Incident Management Plan</i> was prepared and approved by the Department in 1999. The Plan was due to be updated by 30 June 2002. SWC prepared a draft <i>Drinking Water Quality Event Management Plan</i> which was provided to NSW Health (and SCA) for comment on the 3 June 2002 (JOG minutes sighted). The new Plan streamlines the former <i>Drinking Water Quality Incident Management Plan</i> and incorporates the latest <i>Emergency Risk Management Manual</i> and <i>Standard Operating Procedure – Drinking Water Quality Event Management Plan</i> . (NSW Health approved the new Event Management Plan on the 12 August 2002).
10.4	Sydney Water, in consultation with NSW Health or other government agencies shall, where appropriate, develop and deploy incident management plans / protocols covering Sydney Water's activities relating to waste water management.	Sydney Water advised that 'Emergency Risk Management Guide and Policy Manual' was updated and distributed in July 2001 and includes incident management plans/protocols covering SWC's activities relating to waste water management. The Guide provides a process for SWC to manage risks associated with its activities which may adversely affect the Corporation achieving its statutory objectives. (Extract of Guide was sighted).
10.5	NSW Health & Sydney Water shall nominate a 24hr incident management contact point for coordinating responses to events of public health significance. The contact point will be an officer of each organisation who is appropriately trained. The incident management plan shall contain references, procedures and protocols for coordination of incident management including media and stakeholder liaison and notification of some NSW Health of public health advice.	Performance requirement met. 24hr contact number is detailed in the <i>Standard Operating Procedure Drinking Water Quality Event Management Plan</i> . Media and stakeholder liaison procedures are detailed in the <i>Emergency Risk Manual</i> . Both document are incorporated into the <i>Drinking Water Quality Incident Management Plan</i> .
10.6	NSW Health & Sydney Water shall ensure all relevant personnel are trained to respond and execute the incident management plan and the appropriate training exercise are jointly developed and conducted.	SWC reports that training is provided to both internal and external personnel, and that a regular program of training and exercises is established. During 2001/2002 two weekly training sessions were conducted commencing on the: 11 September 2001, 11 December 2001, 12 March 2002 and 11 June 2002. SLG, 13 June 2002, Feed back from JOG – Operation Julie simulation exercise focused on a scenario of chemical contamination at

Table B: MOU NSW Health Compliance Table

Clause	Requirement	Comment
		<p>Bellevue Hill Reservoir.</p> <p>Exercise "Future Risk" was undertaken on the 29 April 02. It was a Discussion Exercise focussing on a scenario of terrorist caused water contamination event. SWC provide debriefing report detailing outcomes of exercise.</p> <p>NSW Health was involved in both exercise detailed above.</p> <p>Reference made to a range of training exercises undertaken by SWC staff inclusive of: power failure at North Richmond WFP; Liaison awareness training; Site Manager training and ERM awareness training (for over 700 personnel).</p>
11.1	NSW Health will provide Sydney Water with reports and studies which are relevant to those activities of Sydney Water impacting on public health.	<p>No formal reports were provided.</p> <p>Relevant information is provided through SLG and JOG</p>
11.2	The Sydney Water will provide reports and studies to NSW Health undertaken as part of it's business relevant to public health	<p>No formal reports were provided. Relevant information is provided during SLG and JOG meetings.</p> <p>Examples of SWC providing reports to NSW Health include:</p> <ul style="list-style-type: none"> • SLG 2 July 2001 – Water Quality R&D summary of activities. • SLG 13 June 2002 – Drinking Water Disinfection and the Management of Dialysis Facilities.
12.1	Sydney Water and NSW Health shall jointly undertake public education programs relating to health aspects of drinking water.	<p>Performance requirement met.</p> <p>Program for public education endorsed at SLG May 2000. Program targets provision of information through health care providers. SWC has enlisted 17 (of the 18) GP Divisions within its area of operation to run articles on water quality within their regular newsletters to GPs. Content of articles is jointly agreed by NSW Health and SWC. An example of an article, <i>Endocrine Disrupting Chemicals</i>, in the Bankstown GP Divisions Newsletter, April 2002, was sighted.</p> <p>Additionally information including daily, monthly, quarterly and annual water quality reports are placed on Sydney Water's web-site and quarterly confidence reports are provided to customers with their bills.</p> <p>Web site provides access to other water quality education information, see 'Your Education'.</p>
12.2	Sydney Water shall report to the public in accordance with 6.4 of its operating licence.	<p>SWC web-site has daily, monthly, quarterly and annual water quality testing results and reports for access by the public. Also includes daily <i>Cryptosporidium/Giardia</i> testing results. Reports are audited in Operating Licence Clause 6.4.</p>

Table C: MOU WAMC Compliance Table

Clause	Requirement	Comment
Pre- amble	The MOU relates to clause 3.3 "Memorandum of Understanding" under the Operating Licence, which indicates the main purpose of MOU's is to form a basis for "cooperative relationships between the parties".	<p>The MOU has been reviewed and amended and was executed on the 28 June 2002. The previous MOU was executed 23 December 1996 and expired on 31 December 1999. The previous MOU did not reflect current legislation or operations of the two parties and the structures such as the SLG have not been adhered to.</p> <p>A cooperative relationship has been maintained between the two parties through joint involvement of issues of mutual concern such as Hawkesbury Nepean management. During the audit period the parties have jointly participated in the renewal of the MOU; review of SWC's Water Management Licence; discussed and contributed to specific projects and been involved in inter-agency forums and processes such as the Hawkesbury Nepean Forum; and development of a Drought Response Protocol.</p>
Intro and Purpose	<p>The purpose of the MOU is "to form the basis of cooperative relationships between the signatories, including agreed areas of study and data exchange".</p> <p>The MOU will continue until the 31 December 1999 unless it is replaced by the water licence</p>	No requirement.
2.1	Sydney Water and WAMC to act in accordance with this MOU	<p>No requirement.</p> <p>Divestment of previous powers between Sydney Water and SCA has occurred. Three water extraction licences held with WAMC for North Richmond, Manly Dam and Botany Wetlands. The MOU has been revised and amended in the audit period and the MOU was executed on the 28 June 2002.</p>
2.2	Sydney Water may exercise the right to the use and flow, and to the control of water vested in the Ministerial Corporation	<p>No requirement.</p> <p><i>"The establishment of the SCA saw the transfer of numerous catchment management responsibilities which were previously regulated by DLWC. DLWC's regulation of Sydney Water is presently limited to regulating Sydney Water's activities at North Richmond, Manly Dam and Botany Wetlands".</i></p>
2.4	Sydney Water will manage it's day to day operations without intervention of the department (NOTE: the term department is not defined within the MOU that was taken to be the Department of Land and Water Conservation)	No requirement.

Table C: MOU WAMC Compliance Table

Clause	Requirement	Comment
2.5	Sydney Water agrees to exercise its right and to operate its works consistent with sustaining values of water and related resources and with protecting the rights of other users and general communities	The Water Management Licence issued to Sydney Water Corporation defines Sydney Water's access rights and obligations. Sydney Water Operating Licence defines Sydney Water's obligations in respect to sustaining values of water and other resources and with protecting the rights of other users and general communities.
3.1.1	Sydney Water's operations will ensure water resources and related resources are allocated and used efficiently, consistent with environmental requirements and provide maximum long term benefit to Sydney Water's customers and the state generally	Demand management and environmental requirements are detailed in Parts 8 and 9 in Operating Licence. The audit of these sections are detailed in Chapters 8 and 9 of this report. SCA is now also responsible for long term benefits.
3.1.2	Provide safe and secure and reliable supply of water to Sydney's customers	Sydney Catchment Authority has the responsibility of supplying safe water and ensuring security of supply of bulk water to Sydney Water. Sydney Water's supply of safe water to its customers is managed in accordance with the Operating Licence and its own Drinking Water Quality Management Plan. Safety requirements are achieved by complying with ANZECC guidelines, as approved by NSW Health.
3.1.3	Sydney Water to operate in a commercial manner consistent with community environment and statutory requirements	Outside scope of audit.
3.1.4	To support ecological sustainable water and associated environments	Sustainability report incorporates indicators. See Chapter 9 – Environment - Indicators and Plans.
3.1.5	To achieve flood operational procedures best method requirements of the community, environment and the dam safety committee	SCA is now responsible for all matters pertaining to Dams and Dam Safety Committee. See Chapter 7 – System Performance.
3.1.6	Sydney Water to meet its obligations under the Water Board (corporation) Act (now the Sydney Water Act) and the operating licence relating to water resources	Annual Operational Audits and internal audits available. SCA is now responsible for most matters pertaining to water resources, however, examples of Sydney Water's efforts toward meeting these obligations include; the upgrade of the West Camden STP; development of the Integrated Effluent Management Strategy in conjunction with DLWC (and EPA); and involvement in inter-agency forums and processes such as the Hawkesbury Nepean River Management Forum and Implementation of the Hawkesbury Nepean Statement of Joint Intent.

Table C: MOU WAMC Compliance Table

Clause	Requirement	Comment
3.1.7	Undertake activities to enable consideration of the issue of the water use licence after the mid term operating licence review.	Sydney Water was granted a Water Management Licence under Part 9 of the <i>Water Act 1912</i> on 1 July 2000. (Refer to "Summary and Background" of this report for outline of Regulatory Regime).
3.2.1	The program of studies to be jointly supervised by the Department and Sydney Water Corporation to meet the implementation plan as shown in the schedules. NOTE: Compliance against the schedule is provided at the conclusion of this compliance sheet.	No requirement. Program of studies is not in context of this audit. Examples of work jointly undertaken by SWC and DLWC during the audit period include Hawkesbury Nepean Flow Modelling; SCA environmental flow releases; discussion of issues surrounding West Camden Sewerage Treatment Plant upgrade and the implementation of the Hawkesbury Nepean Statement of Joint Intent.
3.2.2	The MOU, or any license issued, will be reviewed will have incorporated, through structures and process identified in Section 5, adopted recommendations or endorsed outcomes from: The studies and investigations listed in the schedule Healthy Rivers Commission report The EIS and Environmental flows identified in the operating licence	No requirement. MOU has been reviewed during this audit period and was executed on the 28 June 2002. The revised MOU provides framework for renewed and improved 'cooperative relationship'. Assessment of this will be achieved in next years audit.
3.2.3	Sydney Water will report on the progress of the program of studies and investigations as part of its operational audits	No requirement.
3.3.1	Any data information required by either organisation will be at a cost to be negotiated.	No requirement. No cost applied to data exchange during the audit period.
3.3.2	Commercial and intellectual property rights are maintained and protected	No requirement.
3.3.3	All flow data and water quality data as agreed for release by EPA should be exchanged at three monthly intervals in an agreed format.	No requirement. Flow data now responsibility of SCA and DLWC.
3.3.4	All requests for data or studies should be through a nominated single point in each organisation.	No requirement.

Table C: MOU WAMC Compliance Table

Clause	Requirement	Comment
4.1	Parties will enter into an agreement by March 1997 to define the heads of consideration to guide preparation of the Water Use Licence.	No requirement.
4.2.1	Sydney Water's rights to store and extract are agreed	Sydney Water has a Water Management Licence which sets out its rights to store for Manly Dam and Botany Wetlands and extract water at North Richmond Water Filtration Plant.
4.2.2	Sydney Water will operate its water storages with the aim of ensuring a flow of 50 megalitres of water a day over the Penrith weir	No requirement. Now responsibility of SCA.
4.2.3	Until the water use licence is issued Sydney Water must release sufficient water to enable Shoalhaven City Council to meet its actual requirements for water at Burrier or the amount that would be available if Tallowa Dam did not exist, whichever is the less	No requirement. Now responsibility of SCA.
4.2.4	Water release from the Sydney Water storages to meet these requirements should reverse riverine and environmental impacts and risk to public safety and property.	No requirement. Now responsibility of SCA.
4.2.5	Sydney Water should keep the Department informed of any activity that would impact on the Department's role as the State Water manager.	Interaction between Sydney Water and DLWC allows for communication regarding activities that may impact upon DLWC's role as the State's Water Manager. Sydney Water's Water Management Licence prescribes the nature and type of information required by the DLWC in regard to Botany Wetlands, Manly Dam and North Richmond Water Filtration Plant. CEO meetings are coordinated if any issues arise.
4.3.1	The Department and Sydney Water undertake to influence water and land use activities in order to minimise adverse effects on the quality of water entering the water resource described in this MOU.	Specific responsibility is now with the SCA, however, Sydney Water Corporation is a key stakeholder on water quality and catchment management issues. As part of this SWC has been involved in the Regional Advisory Committee on the draft REP for Sydney's drinking water catchments and has contributed to discussion on the REP at Water CEO's meetings in relation to application of biosolids in the catchment. Minutes of Water CEO meeting on 26 June 2002 sighted.
4.3.2	DLWC and Sydney water will consult (with a wide range of organisations) to determine options to better coordinate actions required to fulfil the MOU.	SWC has developed its Stakeholder Relationship Strategy to better manage its relationships with its stakeholders. DLWC and SWC advised the Assistant Director General Ministry of Energy and Utilities, the Chief Executive SCA, Chairman of

Table C: MOU WAMC Compliance Table

Clause	Requirement	Comment
		IPART and peak environmental groups (via the SWC's PENGO Relationship Manager) that the revised MOU was on exhibition.
4.3.3	DLWC will assess water volumes extracted and licence attributes.	No requirement. North Richmond Water Filtration Plant only water extraction site for Sydney Water which is managed in accordance with Water Management Licence. Now DLWC requirement.
4.3.4	DLWC review its water management policies.	No requirement. A DLWC action, no direct requirement on Sydney Water.
5.1	An agreed framework is needed to address issues and conflicts not specifically covered in this MOU.	Sydney Water initiated and pursued the revision of the MOU. Water CEO's meetings are held to discuss issues of mutual concern. The (new) MOU initiates the SLG for discussion of long term strategic issues; and other jointly shared issues.
5.2	A Strategic Liaison Group (SLG) will be established to consider long term issues and policies, the group would meet twice per year, more frequently as required and provide a frame of reference for reviewing the department and Sydney Waters operational outcomes.	No SLG meetings were conducted. There has been agreement for resumption of the SLG now that the MOU has been amended.
5.3	An Operational Peer Review Group be established to review data collection and sharing arrangements, monitor the programs of studies and address issues referred to it by the strategic liaison group.	No Operational Peer Review Group meetings were held. They have not been included in the revised MOU.

APPENDIX F

Complaint Contract Compliance



Table D: Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
1	<i>Introduction</i>	No requirement	
2	What is a Customer Contract and who is covered by it?	No requirement	Clause provides background information, a definition of the Customer Contract and who is covered.
3	What service does Sydney Water provide?		
3.1	Water supply services 3.1.1 Supply of drinking water	High compliance	Sydney Water is required to provide customer's with drinking water within the terms of clause 3.1, which includes consideration of water quality, water pressure, supply of recycled water and health or special needs. While the physical characteristics of the water are reviewed in detail elsewhere, the results of the customer surveys and the <i>Operating Licence Compliance Report (OLCR)</i> were used as indicators of compliance with this clause of the Licence. Water continuity information is provided for planned and unplanned events and for the number of households impacted. There were 5,719 unplanned events impacting water continuity which affected 179,108 households during the period. The majority of these households (91%) were affected for less than 5 hours. There was a further 1,412 planned events affecting 92,530 households with 79% of households affected for less than 5 hours. Of those customers reporting a problem in the customer survey, 5% indicated interruption to flow as the problem.
	3.1.2 Drinking water quality	High compliance	Sydney Water reported "All 14 systems met the guideline values for all health – related characteristics monitored (except Epichlorohydrin), and for the aesthetic characteristics for which compliance is required by NSW Health." The NSW Health Department indicated that it "is satisfied that Sydney Water has met or is making good progress towards meeting its obligations under the <i>Operating Licence and Memorandum of Understanding</i> ". The customer survey reports 81% of customers as "Very or Quite Satisfied" and 18% as "Not very Satisfied" or "Not at all Satisfied" with the quality of their tap water.
	3.1.3 Drinking water pressure	High compliance	The OLCR indicates that 2,338 properties did not receive the required continuous water pressure during the audit period. It was also reported that 3,136 properties had less than the required pressure more than once during the period. There were also 2,247 complaints about pressure representing 4.5% of the total number of complaints for the year. The customer survey reported of those customer reporting a problem, and some 11% indicated it was a water pressure problem.



Table D: Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
	3.1.4 Supply of recycled water	High compliance	Recycled water pressure and water continuity results are reported in the OLCR and are mainly relevant to the Rouse Hill Development Area. There were no properties affected by water pressure problems with 10 unplanned and 37 planned events impacting water continuity. The largest proportion of properties (6,029) were affected between 5 to 12 hours which was 97% of properties affected by unplanned events. No information was sighted to confirm the quality of the recycled water provided.
	3.1.5 Health or special needs	High compliance	Sydney Water staff indicated that they assist those organizations/individuals who had special needs particularly with regards to issues included in the contract. Special mention was made of those people using dialysis machines. Verbal assurances were given although no specific reports were sighted.
3.2	Sewerage services		
	3.2.1 Supply of sewerage services	High compliance	No evidence was sighted that Sydney Water had refused to provide sewerage services to customers who were entitled to receive such services. In reading the OLCR it is understood that Sydney Water is preparing a strategic plan to address sewerage of backlog areas. The Auditor has not sighted any information concerning the extent of this backlog and waiting times for such services. The customer survey asked people to rate their satisfaction with Sydney's sewerage system. While there was wording changes between 2001 and 2002 which were discussed in the report, only 12% of customers said they were "Not very satisfied" or "Not at all Satisfied".
	3.2.2 Sewage overflow	High compliance	The OLCR reports sewage overflows as part of the performance indicators. The number of dry weather uncontrolled sewage overflow events attributed to chokes was reported as 15,290. The response time to high priority sewer incidents was also reported in the OLCR. Wastewater overflow generated the highest number of complaints with 21,493 reported during the audit period accounting for 43% of all complaints. The Emergency Contacts survey indicated that 85% of customers had their expectations met, or exceeded, with respect to Sydney Water's approach to dealing with wastewater problems. The survey also asked customers how the area was left after the repair work and reported 86% customers agreeing with the statement, "The service people left the area clean and tidy" although this was only of customers in which the problem was fully or partly fixed. Customers who felt their problem had not been fixed were generally dissatisfied.



Table D: Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
	3.2.3 Blockage of your sewer system	High compliance	As reported above, the major indicator associated with dry weather uncontrolled sewage overflow events was sewer chokes. This area is one which can create confusion between the customer and Sydney Water about the appropriate responsibility for fixing the problem based on where the choke in the sewer occurs. The Emergency Contacts survey reports 15% of respondents indicated that Sydney Water did not take responsibility for a particular wastewater problem, however further analysis in the survey suggests that 48% of customers whose problem, according to Sydney Water's records, was not a Sydney Water responsibility said that Sydney Water did take responsibility for fixing it. The possible different expectations between customers and Sydney Water on blocked sewers can be a potential area for dissatisfaction and will always require ongoing education of property owners about the delineation of responsibility between the property owners sewer system and that maintained by Sydney Water.
	3.2.4 Trade waste	Full compliance	Sydney Water provided copies of its trade waste agreement along with information provided to customers and available on its web site. Sydney Water offers a mobile service in which Sydney Water will visit the place of business and explain the services provided by Sydney Water. The Auditor also sighted Sydney Water's trade waste policy and management plan.
3.3	Stormwater drainage services	High compliance	Sydney Water report its their OLCR that it is continuing the development of stormwater management plans. It also reported its involvement in various committees and investment in stormwater programs. Sydney Water reported only 71 complaints dealing with stormwater drainage (0.14% of all complaints), although it has determined that only 15 are Sydney Water's responsibility.
3.4	Factors affecting service		



Table D: Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
	3.4.1 Repairs and maintenance	Partial compliance	The Emergency Contacts survey reports on the satisfaction of customers with repair work undertaken at their property. Satisfaction varied depending on whether the customer believed the problem had been fixed. Those who believed the problem had been fixed gave a mean rating of 8.7 (out of 10) for water and 8.8. for wastewater problems. Those who believed the problem had not been fixed gave satisfaction ratings of 4.5 for water and 3.9 for wastewater. While there was only a relatively small proportion of people in these categories, the sample was drawn from the population of complaints which Sydney Water had classified as having fixed the problem. When asked what could be done to improve the situation, as would be expected most people said <i>"fix the problem"</i> . Other suggestions included faster response, keeping the customer up to date, and giving a time frame to have the problem fixed. Sydney Water was deemed as "Partial compliance" because approximately 20% of customers indicated that their problem had not been fixed or partially fixed while Sydney Water reported the problem fixed.
	3.4.2 Unplanned interruptions	High compliance	The OLCR provides information on system performance concerning unplanned interruptions. 15,770 properties had unplanned interruptions to water supply exceeding 5 hours which is less than 50% of the stated maximum allowance. 163,338 properties were effected for less than 5 hours.
	3.4.3 Planned interruptions	High compliance	The OLCR indicates that 19,342 properties had a planned and warned shutdown of water supply exceeding 5 hours which is below the stated maximum allowance of 32,000 properties. Indicators of the number of days letters were sent out in advanced were not sighted.
	3.4.4 Restrictions in drought	No requirement	No restrictions had been placed on users due to drought. Voluntary restrictions are being announced for the 2002-03 period and should be reviewed for the next audit.
4	What you pay		
4.1	Responsibility to pay account	No requirement	Responsibility of customer.
4.2	Publication of charges	Full compliance	Publication of Sydney Water charges sighted.
4.3	Concessions	Full compliance	Pensioner rebate pamphlet sighted and information provided on accounts.
4.4	Your account	Full compliance	Example accounts sighted.
4.5	Undercharging	High compliance	There were 6,628 complaints about accounts/rating/billing (13.2% of all complaints) however no information was sighted as to the specifics of the billing complaints.



Table D: Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
4.6	Overcharging	High compliance	As above.
4.7	Account disputes	High compliance	As above.
4.8	How prices are determined	No requirement	For customers information.
4.9	Notification of price variations	No requirement	Sample accounts sighted although not one with notification of a price variation.
4.10	Other costs and charges	Full compliance	Publication of charges sighted.
5	What can I do if I am unable to pay my account		
5.1	Payment difficulties	Full compliance	The pamphlet titled " <i>Experiencing financial hardships?</i> " was sighted. Information is also located on the account sent to customers.
5.2	Account relief	Full compliance	As above. Numbers of people helped under the payment assistance scheme (PAS) was also sighted.
6	Disconnection or restriction of water and sewerage Services		Much of the evidence used to evaluate this section relates to clause 5.3 of the Operating Licence (Code of practice and procedure on debt and disconnection).
6.1	Disconnection or restriction of supply for non-payment	Full compliance	No evidence was sighted that supply had been restricted without providing notices under clause 6.2 of the Customer Contract. The OLCR indicates 0 properties were disconnected for non payment although 3,213 properties had flow restrictions and 1,620,026 debt recovery actions were undertaken.
6.2	Notice of disconnection or restriction of supply of water	Full compliance	Sample notices as stipulated in this clause have been sighted.
6.3	Disconnection or restriction for other reasons	No requirement	No figures showing the number of properties disconnected for other reasons were sighted.
6.4	Minimum flow rate during restriction	No requirement	Information for the customer and no evidence sighted that indicate that this was not done.
6.5	Limitations on disconnection or restriction	No requirement	No evidence to suggest that this has not happened.
6.6	Disconnection by a customer	No requirement	No evidence to suggest that customers have not been able to disconnect.
6.7	Restoration of supply after restriction or disconnection	No requirement	No evidence to suggest that restoration of supply was not in accord with this clause.
7	Redress		
7.1	Notification	Full compliance	Sydney Water reported that over 99.9% of complaints are responded to within the specified time periods. However no letters were sighted to ensure they complied with the required advice suggested



Table D: Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
			in this clause.
7.2	Rebates	High compliance	The OLCR indicates the number and dollar value of rebates issued. Boiled water and recycled water rebates are also reported, with recycled water being categorised into planned and unplanned interruptions. Further sub categories will need to be reported in the future based upon the Contract and should include the dollar value of rebates for each category. Trend information may also be a useful management tool.
7.3	Rebates for recurring sewerage service disruption or internal overflows	No requirement	Refers to occurrences during the six month period while the contract has only been applicable since 1 April 2002.
7.4	Redress	No requirement	No evidence was sighted concerning the implementation of this clause.
7.5	Claim for damages	No requirement	No evidence was sighted concerning such claims. [This clause may be relevant for next years audit concerning the bushfires.]
7.6	Limitation of liability	No requirement	No evidence has been sighted that is relevant to this clause.
8	Responsibilities for maintenance		
8.1	Water pipes	No requirement	Primarily for the information of customers although no relevant evidence sighted.
8.2	Your sewer system	No requirement	Primarily for the information of customers.
8.3	Joint private water or sewer system	No requirement	As above.
8.4	Conserving water	No requirement	As above although pamphlets produced by Sydney Water on this subject have been sighted.
8.5	Defective work	No requirement	No evidence sighted of such notices being served.
8.6	Giving notice of system failure	No requirement	Primarily information for the customer although such notifications are recorded as complaints.
8.7	Building work	No requirement	Primarily information for the customer.
8.8	Altering and unauthorised connection or use	No requirement	As above.
8.9	Removal of trees	No requirement	As above.
9	Entry onto a customer's property for maintenance		



Table D: Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
9.1	Access to Sydney Water's system	No requirement	Primarily information for the customer.
9.2	Identification	No requirement	No evidence sighted that this was not followed. This may be a component of complaints.
9.3	Notice of access	No requirement	No evidence sighted of written notice given to customers.
9.4	Impact on customer's property	High compliance	As noted, previously the Emergency Contacts survey indicated a high level of satisfaction by customers if the problem had been fixed by Sydney Water.
10	Water meter installation, testing and maintenance		
10.1	Measuring water supplied	High compliance	Sydney Water reports between 1.44% and 1.31% of metered accounts not read during the year.
10.2	Water meter installation and maintenance	High compliance	Meters are provided. Sydney Water reported 1,523 complaints about meters (3% of all complaints) although most of these were the customers responsibility after damaging them with a motor vehicle.
10.3	Meter testing	High compliance	Verbal assurances was provided by Sydney Water that this was done. Complaints noted as above.
10.4	Access to the water meter	No requirement	Primarily for the information of the customer.
10.5	Meter replacement	Full compliance	Sydney Water advised of their ongoing meter replacement program.
11	Who can I speak to if I have any questions or want to make enquiries?		
11.1	Telephone enquiries	No requirement	Information on responses to complaints was sighted but not too regular enquiries.
11.2	Written enquiries	No requirement	As above.
11.3	Emergency enquiries	Full compliance	The appropriate phone numbers have been sighted.
11.4	Interpreter and TTY service	Full compliance	These services are listed on Sydney Water's account.
12	If I am unhappy with the service provided by Sydney Water what can I do?		
12.1	Customer complaints	High compliance	Sydney Water reports as part of the OLCR that 99.9% of complaints were responded to within the required time frame, although the same report also indicates that between 79% and 74% of customer complaints received a "substantive" response within 2 days.



Table D: Customer Contract Compliance Table

Clause	Requirement	Compliance	Findings
12.2	Complaints review	High compliance	The escalation of complaints is discussed under Chapter 10.
12.3	Resolution of disputes	No requirement	Primarily for the information of customers.
12.4	External dispute resolution	High compliance	External dispute resolution is reviewed in Chapter 10.
13	Consultation, information and privacy		
13.1	Involving customers in service planning	High compliance	Customer Councils are discussed under the review of Clause 5.4.
13.2	Provision of information	No requirement	While responses to complaints have been assessed no assessment has been made concerning requests for information of a more general nature.
13.3	Privacy	Full compliance	The principles associated with the protection of privacy and personal information in Sydney Water was sighted.
14	When does my customer contract with Sydney Water terminate?	No requirement	Primarily for the information of customers.
15	Dictionary and interpretation	No requirement	Primarily for the information of customers.

APPENDIX G

Report Prepared by Sydney Water on Systematic Problems



1.1.1.1 SYSTEMIC PROBLEMS

Complaint Category	Typical Complaint Causes	Analysis Undertaken	Typical Response	Examples
Pressure	<ul style="list-style-type: none"> System Capability Static Head eg property too close to res. level High Demand/head loss : eg bushfires and max day demands 	<ul style="list-style-type: none"> Pressure complaints are graphed and variations discussed at Production meetings Customer complaints from the Electronic Customer Complaints system are infrequent. They often occur after Civil Mtce. has attempted to resolve the issue without success. Poor pressure job cards from CMtce are forwarded to Water Ops. for review to better identify system problems. The majority of the jobs are resolved by CMtce but occasionally a system problem is identified. 	<ul style="list-style-type: none"> System capability a function of design. System planning / design, DSP processes in place to ensure capability is adequate Look initially at opportunity for non asset solutions (rezonings, operational changes - pump scheduling or reservoir cycle windows) Discussion with customers before considering asset (capital) solutions. Information on alternatives – tanks and boosters etc if problem is chronic and renewal/up sizing warranted corrective works undertaken 	<ul style="list-style-type: none"> Bayview – removed from designated Low Pressure Area listing through capital improvement Pressure improvement program Some watermain renewals/amplifications.
		<ul style="list-style-type: none"> Complaints are resolved as they occur and are predominantly isolated events Poor pressure job cards from CMtce are forwarded to Water Ops. for review to better identify system problems. The majority of the jobs are resolved by CMtce but occasionally a system problem is 	<ul style="list-style-type: none"> Backtrack on tasks completed in affected area to ensure all valves are reopened after a shutdown Reactive response to pressure complaint followed by appropriate corrective action Customer advised to upgrade private service 	<ul style="list-style-type: none"> In September 2001, a number of low water pressure complaints were received from residents of a particular area of Hunters Hill (Boronia Park). The complaints coincided with the isolation of a 500mm main in the same Reservoir Zone (Hermitage). However hydraulic modelling indicated that even with the 500mm main out of service, there should be minimal impact on pressures in the Boronia Park area. Using customer complaint data (location and times of pressure loss) Water Operations personnel concluded a valve on a 600 mm main was most probably closed near Flyde Rd and Monash Rd. The valve was checked and found to be closed. The valve was opened and pressures returned to normal. Customers were kept informed (by Water Operations, Call Centre and Centralised Scheduling) throughout the investigation process and were appreciative of SWC's response and communication. A letter of thanks from one resident featured in Splash. Low Pressure Complaints were received from residents in Kirkwood St Seabrook in 2001. An investigation by Water Operations personnel identified that some customers in the street were experiencing poor pressure whilst other customers in the street enjoyed normal pressures. It was found that the customers experiencing poor pressure were connected to Bantry Reservoir outlet main instead of the Bantry Boosted Zone main. Civil Maintenance reconnected the services of the properties experiencing poor pressure to the correct main rectifying the pressure problems.



Complaint Category	Typical Complaint Causes	Analysis Undertaken	Typical Response	Examples
Continuity	<ul style="list-style-type: none"> Perception <ul style="list-style-type: none"> eg customers moving from an area of high pressure to an area of lower pressure System Integrity <ul style="list-style-type: none"> breaks and leaks shutdowns for planned maintenance 	<ul style="list-style-type: none"> Complaints are resolved as they occur and are predominantly isolated incidences of customers relocating from an area of high water pressure to a lower pressure area. Continuity complaints are graphed and variations discussed at Production meetings <ul style="list-style-type: none"> Continuity complaints follow a very clear trend with watermain breaks/leaks. Watermain performance is used as a surrogate for complaint numbers and is the primary consideration when developing renewal programs Where customers complain of multiple discontinuity investigation is carried out to determine causes. Pending the outcome of these investigations appropriate solutions are developed Dirty water complaint data is analysed and mapped to identify problem areas. Data assists in determining dead end and systematic flushing programs. Data also is used to determine swabbing programs. Dirty water complaints are graphed and trends discussed at Production meetings 	<ul style="list-style-type: none"> Attempt to manage customers perception through the provision of appropriate advice Watermain renewal program <ul style="list-style-type: none"> Better planning of shutdowns to ensure that they are correctly notified and carried out within arranged timeframes. Improvements to system configuration to reduce repeat discontinuity events Swabbing and flushing (systematic and Dead end) programs 	<ul style="list-style-type: none"> Various - dealt with reactively by C.Mtce and Water Operations Various - a complaint over the number of supply disruptions may initiate investigation and result in a watermain renewal. The majority of renewal proposals are initiated by analysis of mainbreak history data in WAMS. Targeted renewals lead to lower numbers of discontinuity events and therefore reduced complaint numbers <ul style="list-style-type: none"> A major industrial customer (Hunter Douglas) complained about the number of reactive shutdowns on a water main on Victoria Rd Rydalmere that was affecting their processes. The customer was advised that the main did not satisfy renewal criteria however by inserting stop valves either side of their water service it would greatly improve their security of supply. This was completed and the customer has not had any subsequent problems. Flushing programs are primarily targeted at reducing the incidence of dirty water complaints
Dirty Water	<ul style="list-style-type: none"> Low Flows <ul style="list-style-type: none"> Primarily related to dead ends and low demands relative to main size Unlined mains/ fittings 			

NOTE: The majority of water related customer complaints are from customer calls received in the emergency call centre relating to system problems such as mainbreaks, leaks, poor pressure and dirty water.

APPENDIX H

Comments from Government Authorities

Dr Ian Garrard
Project Manager
GHD Pty Limited
PO Box 201
CHATSWOOD NSW 2057

RE: SYDNEY WATER CORPORATION - AUDIT OF OPERATING LICENCE

Dear Dr Garrard,

I refer to your letter of 20 September 2002 inviting comments from the Department of Land and Water Conservation (DLWC) on the audit of Sydney Water Corporation's (SWC) Operating Licence for the period 1 July 2001 to 30 June 2002.

In recent submissions to IPART the department has raised concerns in relation to the implementation of the demand management strategy by SWC. Although the comments were made in relation to the mid-term review of the Operating Licence they remain relevant for the purposes of the annual audit. Relevant excerpts are provided as attachments A and B for your attention.

The department has reviewed the Operating Licence and provides the following updates in relation to areas relevant to DLWC as requested in your letter:

Part 3.3 MoU - An MoU between the department and SWC was signed in June 2002 and a first meeting of the Strategic Liaison Group established under the MoU was held on the 18th October 2002. The MoU should have been finalised in the first year of the Operating licence, but it was delayed by a late response from SWC. The department is however satisfied with the recent progress and hopes the MoU will improve the understanding and cooperation between the two organisations.

Part 6 Water Quality, Clause 6.6 Environmental Water Quality - This clause is not relevant to the department. Any water quality requirement under the water management licence will be administered by the department independent of the Operating Licence. The clause could be deleted if EPA has similar concerns.

Part 6 Water Quality, Clause 6.7 Other Grades of Water - For comments on other grades of water and minimum standards for non-drinking water - see the comments in attachments A and B.

Part 8 Water Conservation - The department has recently received a copy of the SWC's "Towards Sustainability Report 2002" which is currently being reviewed. The department will be able to provide additional comments on the performance of the SWC demand management obligation for the year 2001/02 in near future if required. Also see comments in attachments A and B.

Should you require a meeting to discuss the department's submission in more detail, please contact Mr Salim Vhora of the Department's Penrith Office on (02) 4722 1116 to arrange a meeting time and date. Please also contact Mr Vhora for any further enquiries you may have in respect of this matter.

Yours sincerely

Axel Tennie
Regional Director

Department of Land and Water Conservation

**SUBMISSION TO THE INDEPENDENT PRICING
AND REGULATORY TRIBUNAL**

**MID-TERM REVIEW
OF OPERATING LICENCES FOR
THE SYDNEY CATCHMENT AUTHORITY
AND SYDNEY WATER CORPORATION**

MAY 2002.

INTRODUCTION

The comments which follow address only those issues which have relevance for the Department of Land and Water Conservation (DLWC) or on which it has some expertise or direct experience. Comments are made in the order of the issues as identified and numbered in the Issues Paper prepared by the Tribunal.

3 SYDNEY WATER CORPORATION

3.2 Operating licence

The Operating Licence adequately reflects the legislation and fulfils its objectives.

3.3 & 3.4 Drinking water guidelines and annual drinking water quality improvement plan

There are new initiatives in water cycle management at an international level, in particular the World Health Organisation's push for adopting incremental improvements in water quality (via identification and management of water cycle hazards) rather than rigid numerical hazards *per se* (WHO 2002 Water Safety Plans. WHO/SDE/WSH/02-09). While SWC appears to be adopting the principles of these initiatives (see risk assessment section of SWC 5-Year Plan), IPART might consider whether any changes to the operating licence are appropriate to formally recognise this approach.

3.5 Minimum standards for non-drinking water

In paragraph two the document refers to the NSW Recycled Water Coordination Committee. This committee no longer exists.

In 3.5.1 it is stated that Sydney Water currently supplies various grades of water that comply with a range of guidelines. The *National Water Quality Management Strategy Guidelines for Sewage Systems – Use of Reclaimed Water, 2001* are the most recent guidelines. These and other guidelines under the National Water Quality Management Strategy have wide acceptance and should be adopted by Sydney Water.

The issue of standards is a different matter. DLWC is developing integrated water cycle management guidelines. It will be pursuing several water use initiatives under the *Water Management Act 2000* to promote the hierarchical "reduce/re-use/recycle" approach already adopted for general waste minimisation by the Government. These include the implementation of return flow credits and water use approvals, both of which will involve some minimum standards. However, DLWC is still in the process of developing details for implementing the relevant sections of the Act and is not in a position at this time to offer views on what minimum standards should be.

3.6 Water conservation target for 2014/2015

It is agreed that Sydney Water has committed considerable resources over a number of years in a genuine attempt to reduce average water demand and that the Sydney Water Demand Management Strategy has had some success in reducing consumption. Significant and continuing shifts in the demographic characteristics of the Sydney Water customer base pose difficulties in effectively targeting demand management initiatives.

However, considering that:

- (1) the reference year for the demand targets (1990/91) was a particularly high demand year;
- (2) pay-for-use volumetric tariffs were introduced after 1990/91; and
- (3) drought restrictions were imposed between 1994 and 1996;

an 18 percent downturn in per capita demand since 1990/91 could be improved upon.

Sydney Water needs to improve the effectiveness of its demand management strategy, but it is not the only effective agent in this area. The NSW Water Conservation Strategy identifies actions being undertaken to address the broad issue of increasing use, and the Strategy identifies local government as a key agent in achieving the desired outcomes.

The Issues Paper notes that IPART may investigate possibilities for "ensuring" demand management is addressed by SWC. Recognition needs to be given to the possibility that, depending on the mechanism used, mandatory improvements in demand management performance may adversely affect the social justice and economic performance goals of Sydney Water which, under the *Sydney Water Act 1994*, have equal importance.

The Issues Paper notes that targets are likely to be most effective if they are part of a broader, integrated framework. Such a framework for the Sydney region is being developed at the moment by natural resource management agencies. The major drivers are the continuing population growth of Sydney, and the inability of existing infrastructure to meet the demand for water in the face of increasing requirements for environmental flows and river health. SWC and SCA are now members of the Water CEOs Committee which is addressing the key issue of integrated demand and water cycle management.

The identification by IPART of the option for setting the conservation target in terms of water saved rather than consumption would better reflect the current situation where SWC is not in control of all factors that result in consumption.

To attain maximum benefits from a demand management program, a comprehensive understanding of end use is required. A thorough end use metering program will allow demand management measures to be more accurately targeted. Such a program should be considered and there should be separate targets for clearly identifiable and manageable sectors.

Any demand management framework should include:

- water demand monitored on a climate-corrected basis;
- reporting of estimated water savings on a per capita/per residence basis for residential users and bulk water basis for commercial and industrial users, subject to robust and independent verification;
- per capita and per property consumption, which are the most valid demand indicators;
- water demand monitored intensively in each use category and for each demographic group; and
- identification of the socio-economic drivers of demand.

Department of Land and Water Conservation

SUPPLEMENTARY SUBMISSION

MID-TERM REVIEW

**OF OPERATING LICENCES FOR
THE SYDNEY CATCHMENT AUTHORITY
AND SYDNEY WATER CORPORATION**

August 2002.

INTRODUCTION

The following comments address issues raised at the July 2002 IPART workshop which have relevance for the Department of Land and Water Conservation (DLWC) or on which it has expertise or direct experience. Comments are made in the order of the issues as presented in the Issues Paper prepared by the Tribunal.

The NSW Water Conservation Strategy, approved by the Government in October 2000, was not mentioned in the earlier DLWC submission or at the workshop. It contains several strategies of relevance to both operating licences. A copy is attached.

SYDNEY WATER CORPORATION

Drinking water guidelines and annual drinking water quality improvement plan

IPART posed a specific question on the necessity for SWC's annual drinking water improvement plans, considering the existence of other strategic plans. Discussion at the workshop indicated that there is a need for these plans. They should be retained because they provide an effective focus for the operational and planning staff of SWC. They also offer all regulators an opportunity to assess SWC's adherence to the principles for the delivery of safe drinking water.

IPART should support SWC in this process and, if appropriate, encourage SWC to adopt the principles of HACCP methodology in conjunction with ISO 9000 accreditation.

Demand Management - Targets and Process

The panel discussion at the workshop highlighted significant agreement among panel members concerning the principles and nature of the demand targets and a need to audit the management processes that SWC has in place to deliver water savings that will meet these targets.

The Panel Discussions at the workshop, which included DLWC, indicated consensus on the following key issues:

- The need to recognise the impact of an effective volume 'cap'. Recycling and reuse, combined with a more restrained use of water, will be the only way to increase supply to meet new demand. This is particularly important with the pending requirements for environmental flows that are being determined by the Hawkesbury-Nepean Forum and Expert Panel. A "cap" is not the sole answer but it must be part of the approach.
- The need for all stakeholders (both regulators and operators) to be accountable for their roles and performance.
- The need for an absolute volumetric target for SCW/SCA long-term consumption to be set and worked within.
- A need for agreement between regulators and operators, in consultation with the community, on any adjustments to the long-term targets.
- An urgent need to finalise the demand management forecasting model, including appropriate climate correction procedures. This will ensure a realistic analysis of SWC's water consumption, as determined by its demand management and performance-monitoring activities.
- The 2014 target should be set in 2005, and perhaps higher targets should be set for the longer-term.
- Targets must stay in place, but the single "litres per capita per day (lcd)" target is a poor measure. This should be replaced with a suite of complementary targets. These would be a hierarchy of sector-based targets which, when combined, would contribute to the single,

volumetric target for the SCA/SWC "capped" systems. (DWLC would work with IPART, SWC, SCA and other relevant agencies to ensure that appropriate sector targets are developed.)

- Performance towards targets needs to be assessed and audited annually. This will require careful reporting of milestones for the demand management initiatives proposed by SWC and SCA. These milestones would be used to ascertain the progress of management systems within SWC and the execution and monitoring of individual initiatives. Transparent annual reviews provide the greatest chance for adaptive corrections.
- Complementary regulatory requirements are required for both SCA and SWC.

Some further minor points are included in Attachment A.

Minor Issues for consideration for a revised Sydney Water Corporation Operating Licence.

Section / Condition	Action
2.3.3 - 2.3.5 Mid term review	Delete
3.1 Other laws	Add ' <i>Water Management Act 2000</i> '
6.3,6.5 Drinking water 6.7 Other water 7.3 Review of performance standards 9.1 - 9.4 Environment indicators and plans	These sections are now dated and could be revised to reflect the current situation

074



Ian Garrard
Project Director
GHD Pty Ltd
PO Box 201
CHATSWOOD NSW 2057

**NSW
NATIONAL
PARKS AND
WILDLIFE
SERVICE**

ABN 30 841 387 271

Att: Nicholas Digges

Dear Mr Garrard

RE: SYDNEY WATER OPERATING LICENCE

I refer to your letter dated 23rd September 2002, regarding the Sydney Water Corporation Audit of Operating Licence. In providing the information below, I am assuming that the Operating Licence is unchanged from that presented in the 2001 audit.

Compliance with requirements:

In relation to the specific items identified in the Sydney Water Operating Licence as relating to the National Parks and Wildlife Service (NPWS), being Part 9 – Environment – Indicators and Plans – 9.2.3 and 9.5.4 I am pleased to advise that Sydney Water has consulted with NPWS as required in 9.2.3. However I can find no record of consultation in relation to 9.5.4

Progress to meeting requirements:

The above licence requirements have been included in more general discussions between senior officers from Sydney Water and NPWS, as part of a Strategic Relationship Agreement which has been recently entered into between both agencies. The Agreement establishes a framework for effective interaction between Sydney Water and the NPWS and outlines the roles and responsibilities of both organisations. A Strategic Liaison Group is established under a formal terms of reference and will meet quarterly to workshop issues including sharing of information, the proposed development of master easement and maintenance of on-park infrastructure agreements, on-park water quality improvements and rehabilitation of disturbed areas. The Agreement provides an opportunity for both NPWS and Sydney Water to formally address a number of issues that have been outstanding for some time. A copy is attached.

Directorate Office
Level 1
10 Valentine Av
PO Box 95
Parramatta NSW 2124
Tel: 9895 7440
Fax: 9895 7414

Head Office
43 Bridge Street
PO Box 1967
Hurstville NSW
2220 Australia
Tel: (02) 9585 6444
Fax: (02) 9585 6555
www.npws.nsw.gov.au

Adequacy of actions being taken:

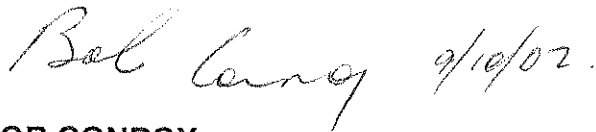
I consider the actions that have been to date to be adequate.

Adequacy of the requirements of the licence in the light of recent experience:

My only comment here is that I would like to discuss with Sydney Water the possibility of including a reference to the Agreement within the Operating Licence. The purpose being to both enhance the accountability around the Agreement and also to capture some further points of interest to NPWS (eg management of easements) within the terms of the Licence. I would prefer the benefit of Sydney Water's views on this, prior to formally suggesting it as an amendment to the requirements of the Licence. I do not expect that this will occur prior to the finalisation of the 2002 Audit.

I trust this information is of assistance for the purposes of the Audit. Please contact me on 9895 7744 if you require further information.

Yours sincerely

A handwritten signature in cursive script that reads "Bob Conroy" followed by the date "9/10/02".

BOB CONROY
Director, Central Directorate



Sydney
WATER

**Attachment A to
Strategic
Relationship Agreement**

between

**NSW National Parks
and Wildlife Service**

and

Sydney Water Corporation

August 2002

Figure 1 National Parks and Wildlife Service Contacts.

Central Directorate

Southern Directorate

Sydney Metropolitan, Illawarra, Central Coast and Blue Mountains

South Coast and Southern Tablelands

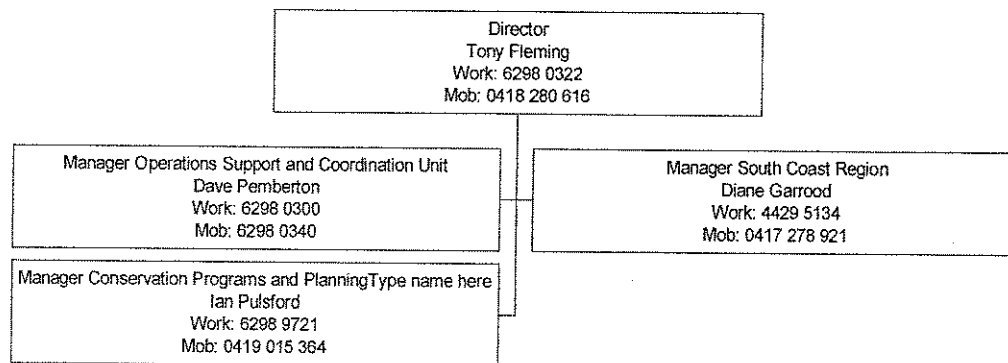
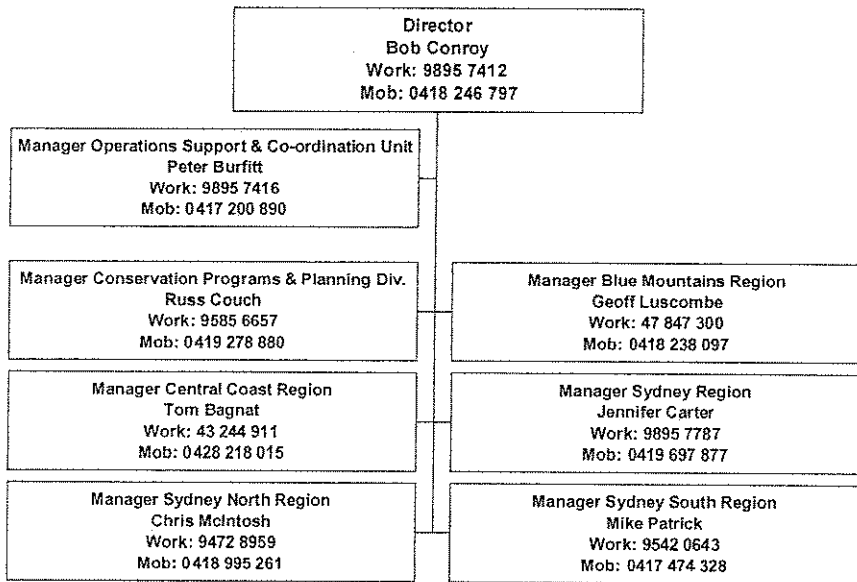
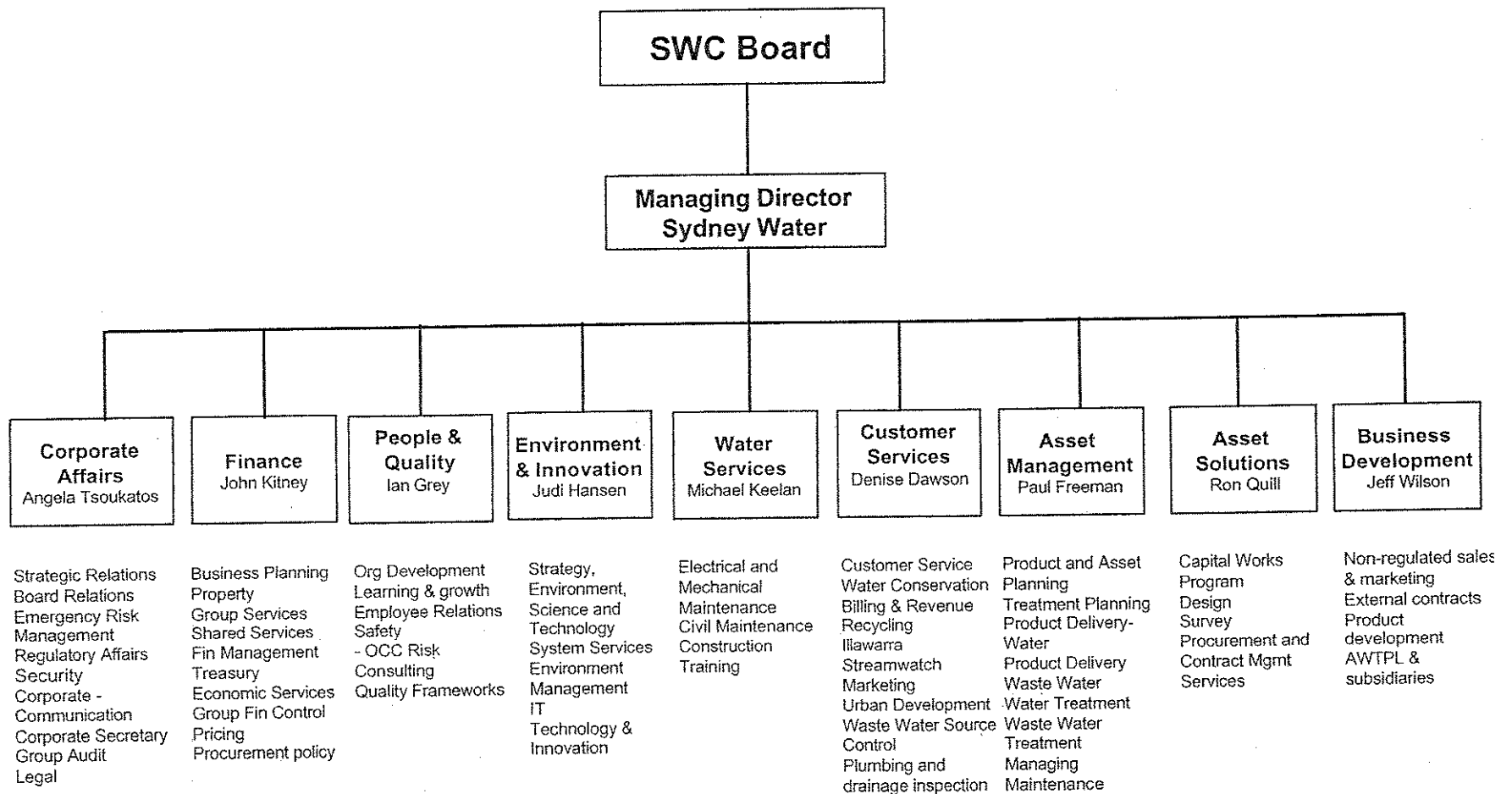


Figure 2 Sydney Water's Management Structure.





Sydney
WATER

**Strategic
Relationship Agreement**

between

**NSW National Parks
and Wildlife Service**

and

Sydney Water Corporation

August 2002

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1. Introduction

This Strategic Relationship Agreement (Agreement) sets the framework for interaction between the NSW National Parks and Wildlife Service (NPWS) and the Sydney Water Corporation (Sydney Water). The Agreement is designed to outline the roles and responsibilities of both organisations and to facilitate effective interaction between the two.

2. Roles and responsibilities

Sydney Water's role is defined in the Sydney Water Act 1994. That Act specifies the corporation's three equal principal objectives as:

- to protect public health,
- to protect the environment, and
- to be a successful business.

Sydney Water responsibilities are to: supply safe drinking water to its customers; transport wastewater; treat wastewater; recycle effluent; return effluent, biosolids and other treatment by-products to the environment; provide some drainage and stormwater services; and provide related products and services in line with its Operating Licence, Customer Contract and relevant legislation.

In carrying out its responsibilities, Sydney Water conducts its operations in compliance with the principles of Ecologically Sustainable Development (ESD). Sydney Water's Corporate Plan and Operating Licence also recognise the principles of ESD.

The NSW National Parks and Wildlife Service is the government department responsible for establishing and protecting a parks and reserve system in the State of New South Wales. The NPWS is responsible for conserving natural and cultural heritage generally, and for managing significant protected areas which include national parks, nature reserves, Aboriginal areas, historic sites, state recreation areas and regional parks. The National Parks and Wildlife Act 1974 defines the powers, duties and functions of the NPWS. Under the Wilderness Act 1987, NPWS is responsible for identifying and managing wilderness areas in NSW. The Threatened Species Conservation Act 1995 outlines the duties of the NSW National Parks and Wildlife Service in protecting threatened species, communities and critical habitat in New South Wales.

Sydney Water's area of operations and the NPWS Central Directorate cover a similar geographic area, and as a result, operational interactions with Sydney Water are primarily through the NPWS Central Directorate, but within the policy and decision-making context set at an organisational level by NPWS.

Approximately 43 percent or 5,437 square kilometres (km²) of Sydney Water's area of operations (a total area of 12,520 km²) is also NPWS estate. Sydney Water's and NPWS' corresponding areas of jurisdiction, and where these overlap, are shown in the map contained in Appendix 1.

The organisational structure of both Sydney Water and NPWS are provided in Attachment A.

3. Purpose and outcomes

The purpose of this Agreement is to set objectives and mechanisms for facilitating an effective relationship between the NPWS and Sydney Water, and to resolve issues between the two parties in order to achieve our mutual responsibilities.

In order to do this the following outcomes for relationship improvement and resolution of issues have been identified:

a. Communication

- i. A consistent approach to relationship matters at both strategic and operational levels within and between each organisation.
- ii. Effective conflict resolution.

These will be achieved through processes and fora established by this Agreement.

b. Planning

- i. A common approach to ESD, namely the integration of social, economic and environmental considerations and the application of ESD principles throughout our joint areas of operation.
- ii. Joint planning for access to and establishment of Sydney Water infrastructure within and near NPWS managed parks and reserves.

c. Operations

An agreed position regarding Sydney Water infrastructure and activities within and near NPWS managed parks and reserves, which specifically addresses:

- i. Appropriate access to Sydney Water infrastructure.
- ii. Management of infrastructure within and near NPWS managed parks and reserves to achieve appropriate environmental and social outcomes.
- iii. Regulatory and property requirements and rights.
- iv. Fees, compensation and related valuation criteria and methods.

4. Issues

This Agreement recognises that a key opportunity exists for NPWS and Sydney Water to establish common understanding and agreed positions on the following broad issues, as a means of satisfying our respective and mutual obligations and to achieve best outcomes for the community in terms of sustainability:

- a. Developing and implementing strategic and operational plans and processes for each organisation, which appropriately respond to the obligations and interests of the other party and which identify joint project opportunities.
- b. Consultation between the agencies regarding such matters as:
 - ♦ additions to or establishment of NPWS managed parks and reserves;

- ♦ the development, review and amendment of park plans of management and utility or easement policies;
 - ♦ forward planning on major infrastructure works and associated activities; and
 - ♦ information exchange.
- c. Resolving identified conflict regarding the rights and powers under the respective organisations' legislation through regulatory and administrative responses.
- d. Appropriate and consistent easement and licensing arrangements with recognition of both agency's statutory responsibilities, and the basis for fees and compensation.
- e. Appropriate funding, regulatory mechanisms, and whole of government approach to achieving the broader government agenda, and the role of other regulators (e.g., IPART) in such matters.

Specific issues currently requiring resolution through the processes and fora established by this Agreement are to be decided conjointly by NPWS and Sydney Water and appended to this Agreement.

5. Liaison between Sydney Water and NPWS

- a. A Strategic Liaison Group (SLG) will be established under the following terms of reference:
- i. Representatives for the SLG from both Sydney Water and NPWS will be nominated by the CEOs of each organisation. Membership of the SLG will depend on the specific issues but will normally include:

From Sydney Water

General Manager Corporate Affairs
General Manager Asset Management
General Manager Asset Solutions
General Manager, Environment & Innovation or Manager,
Environmental Planning and Management, Environment & Innovation
NPWS relationship manager, Corporate Affairs

From NPWS

Director Central
Manager Business Development
Manager Conservation Programs and Planning
Manager Strategic Policy

- ii. The above list of members can be altered unilaterally to reflect changes of title or structure within NPWS or Sydney Water. The SLG is at liberty to invite other officers to attend meetings, as necessary. Both organisations will seek to ensure continuity of representation on the SLG.
- iii. The SLG will consider the required outcomes as set out in this Agreement, and define and implement mechanisms to resolve the issues identified in this Agreement.

- iv. The SLG will consider other long-term strategic issues and policies identified by either party to be relevant to the purpose and outcomes of this Agreement, and develop approaches to address these.
 - v. Meetings of the SLG can be called by either party but will usually be held at least quarterly. NPWS and Sydney Water will chair the meetings alternately. The SLG will be entitled to consider issues raised by either party.
 - vi. The General Manager Corporate Affairs, Sydney Water, and the Director, Central Directorate shall be empowered by the Strategic Liaison Group to discuss and resolve matters on behalf of the group outside the formal meetings.
 - vii. The SLG will review and update the list of issues identified in section 3 of this Agreement on an annual basis. However, emerging issues may be added to the list at any time by the SLG.
 - viii. The SLG will establish working groups with appropriate membership to address specific issues identified by the SLG for resolution. The SLG will define for each working group any accountability to and delegation from the SLG, timeframes and deliverables. The SLG will consider and provide direction to any working group regarding specific matters of conflict or uncertainty, where SLG considers that such direction is necessary to enable resolution to be reached.
- b. The SLG shall ensure that a communication protocol is developed within six months of the signoff of this Agreement and then regularly reviewed. The protocol will define responsibilities and processes for communication on Sydney Water/NPWS operational and strategic matters within and between each organisation, and define the scope, processes and responsibilities for information sharing, including that relating to environmental data, research, programs and plans. The SLG will determine appropriate delegation of the development of this protocol. Upon completion, the communication protocol will become an appendix to this Agreement.

6. Review and report

This Agreement can be amended at any time upon agreement between the parties.

The SLG will annually review the implementation of this Agreement and forward any changes to the Agreement to each agency's Chief Executive Officer (CEO) for consideration and approval.

7. Dispute resolutions

Where an issue or matter of long term strategic significance cannot be resolved by the SLG, the matter will be referred in the first instance to the General Manager Corporate Affairs, Sydney Water Corporation and the Director Central Directorate, National Parks and Wildlife Service, for resolution. If the matter remains unresolved, it will then be referred to the CEOs of each agency for resolution.

8. Emergency risk management

Sydney Water shall immediately report to the NPWS any information or event relating to its drinking water, wastewater, stormwater or re-use systems, or disposal operations, that is likely to have a significant impact on any national parks estate. The contact numbers for key NPWS personnel are provided in Attachment A.

Equally, the NPWS shall immediately report to Sydney Water any information or event on any national parks estate that is likely to adversely affecting Sydney Water's drinking water, wastewater, stormwater or re-use system services. The emergency contact number for Sydney Water's Service Centre is 13 20 90.

9. Term

The term of this Agreement shall be for the period commencing on the date of execution hereof and remaining in force for five (5) years, or until NPWS or Sydney Water require a change to the Agreement.

This Strategic Relationship Agreement is made at Sydney on the 30 day of August 2002.

SIGNED for and on behalf of
SYDNEY WATER CORPORATION
ABN 49 776 225 038

Alex Walker
.....
Alex Walker
MANAGING DIRECTOR

WITNESS to the above signature:
Name: JENNIFER NORTH
Address: Sydney Water

.....
Jennifer North

SIGNED for and on behalf of
NSW NATIONAL PARKS AND WILDLIFE SERVICE
ABN 30 841 387 271

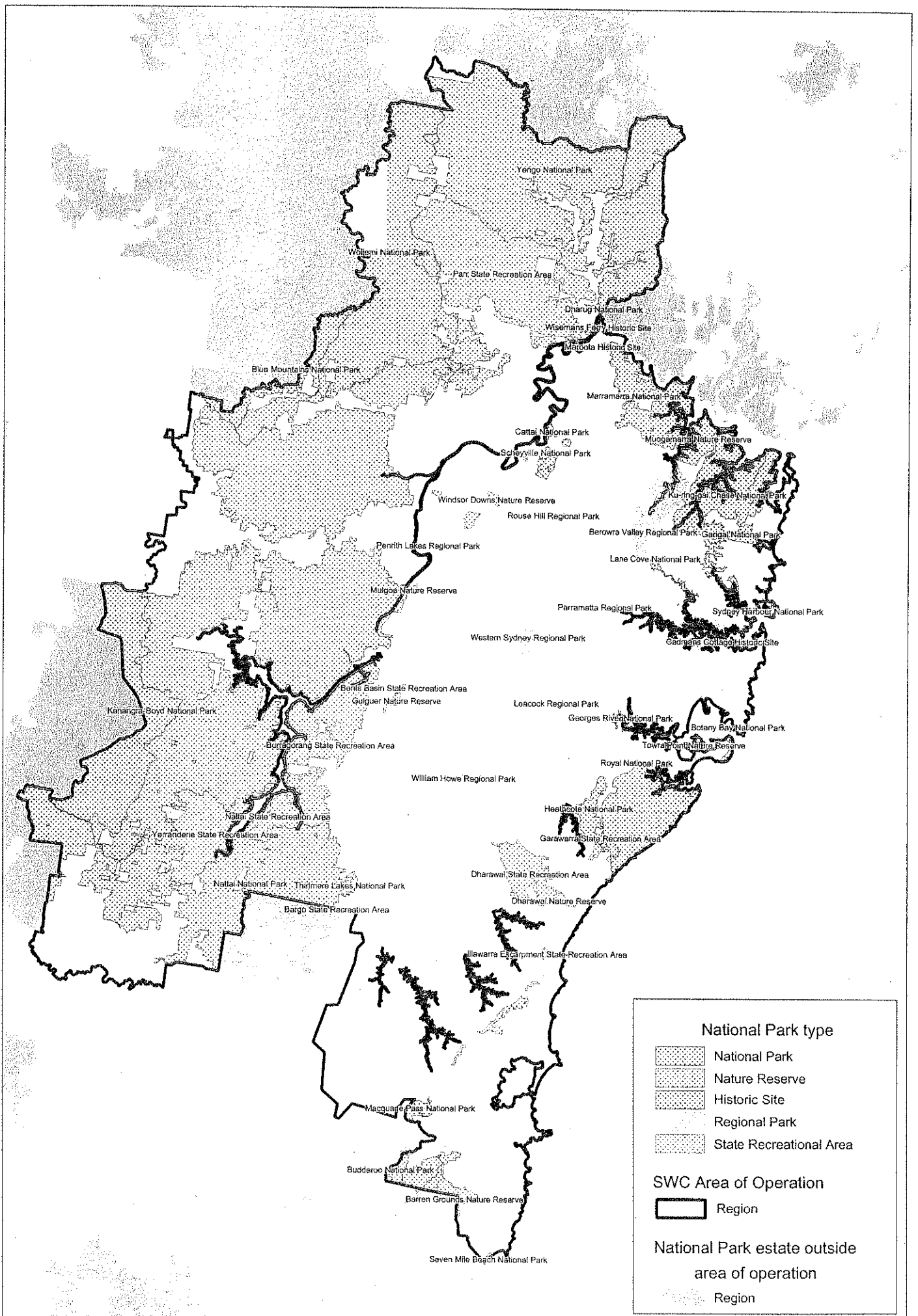
Brian Gilligan
.....
Brian Gilligan
DIRECTOR-GENERAL

WITNESS to the above signature:
Name:
Address:

K. Carie
.....

Appendix 1 Sydney Water's and National Parks and Wildlife Service's areas of operations

Figure 1 Sydney Water's (SWC's) and National Parks and Wildlife Service's (NPWS') corresponding areas of jurisdiction.





Sydney
WATER

**Attachment A to
Strategic
Relationship Agreement**

between

**NSW National Parks
and Wildlife Service**

and

Sydney Water Corporation

August 2002

Figure 1 National Parks and Wildlife Service Contacts.

Central Directorate

Southern Directorate

Sydney Metropolitan, Illawarra, Central Coast and Blue Mountains

South Coast and Southern Tablelands

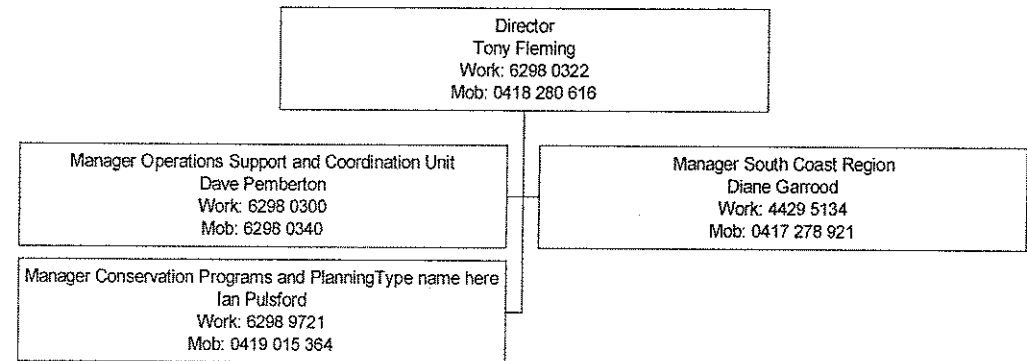
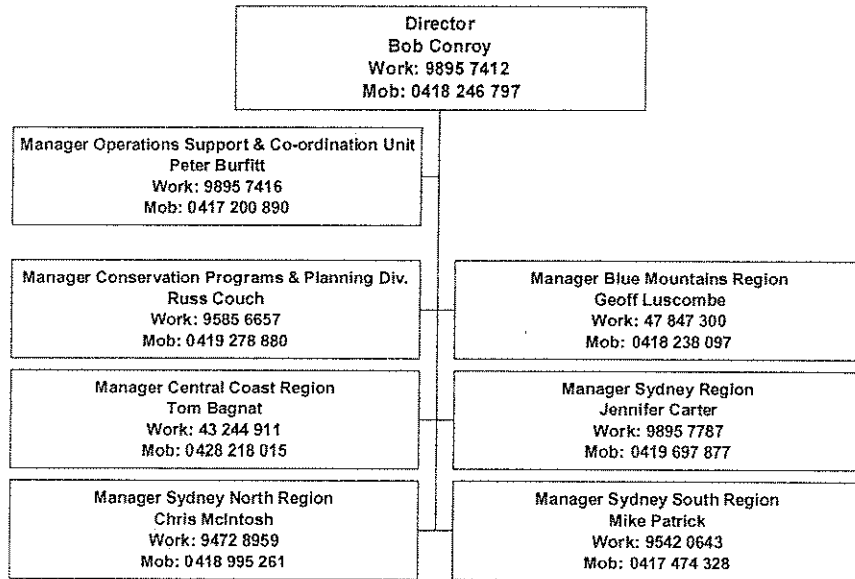
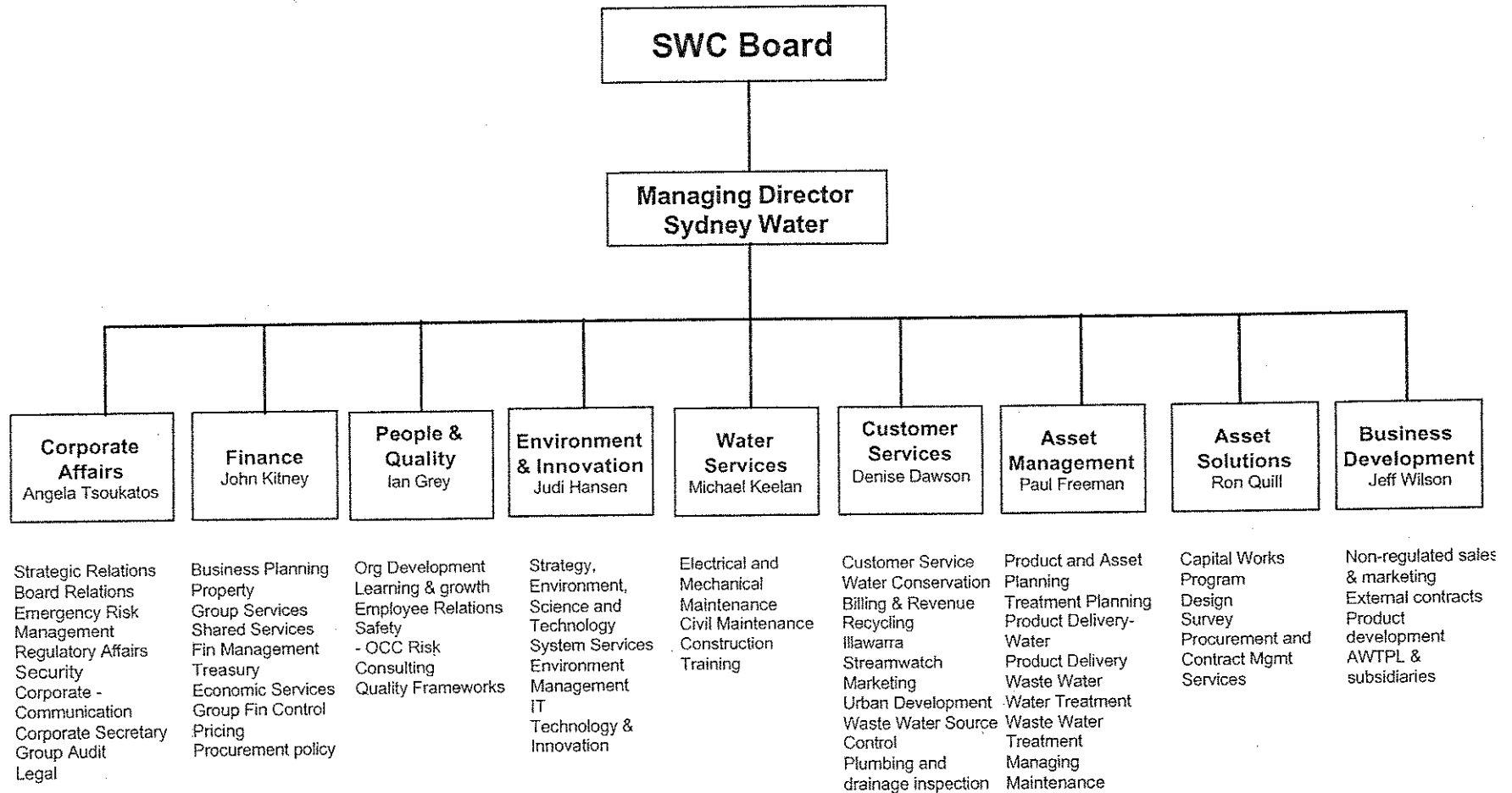


Figure 2 Sydney Water's Management Structure.



Dr I Garrard
Project Director
GHD Pty Ltd
PO Box 201
CHATSWOOD NSW 2057

Dear Dr Garrard

I refer to your letter regarding the audit of the Sydney Water Corporation Operating Licence. Thank you for the opportunity to provide input to the audit process.

The NSW Department of Health enjoys an effective and open relationship with Sydney Water at officer and strategic levels. The Department is satisfied that Sydney Water has met or is making good progress towards meeting its obligations under the Operating Licence and Memorandum of Understanding (MoU). The Joint Operational Group with Sydney Water maintains a checklist of MoU requirements. The list is a useful tool for monitoring progress and is periodically reviewed and endorsed by the Strategic Liaison Group. The Department is satisfied that the requirements of the Operating Licence and MoU are adequate and provide a sound basis for a cooperative relationship between the organisations.

During the audit period the Department worked with Sydney Water to review the *Standard Operating Procedure - Drinking Water Quality Event Management Plan*. The maintenance of such a plan is a requirement of the MoU. The Department is confident that the Plan gives adequate consideration to the protection of public health.

I refer you to the report of the *Independent Audit of Drinking Water Quality for 2001/2002* that was prepared on behalf of the Department. The report contains a detailed review of Sydney Water drinking water monitoring, measuring and reporting systems. During the audit period Sydney Water complied with the health-related parameters of the *Australian Drinking Water Guidelines*. The audit report concludes that Sydney Water is continuing to improve its water quality reporting performance. The Department endorses the Independent Audit report.

Dr Peter Nadebaum of GHD recently met with Christine Cowie and Paul Byleveld of the Department's Water Unit to discuss aspects of the audit. At this meeting Dr Nadebaum requested additional information in relation to the independent laboratory process, which I have enclosed with this letter.

I trust that the information that I have provided will assist with the audit process. Should you require further information, please contact Christine Cowie or Paul Byleveld on 9816 0589.

Yours sincerely



Dr Greg Stewart
Deputy Director-General Public Health
Chief Health Officer

4/11/02

Our Reference: 2002/03478
Your Reference: 2111273\SCA Letter

- 5 NOV 2002

152

Mr Ian Garrard
Project Director
GHD Environmental
PO Box 201
CHATSWOOD NSW 2057

Dear Mr Garrard

Subject: Sydney Water's Operating Licence Audit

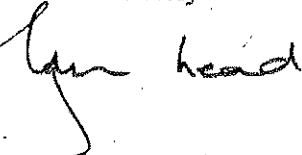
Thank you for your letter of 23 September 2002, seeking comments on Sydney Water's performance against its Operating Licence over the last twelve months.

Our response is attached. It specifically focuses on the way in which Sydney Water and the SCA have worked together in relation to such important matters as water conservation, demand management, drought planning and drinking water standards.

Highlights for the year include the development of compatible drought response plans, the development of Bulk Water Supply Protocols and the Bulk Water Supply Agreement Management Framework.

If you require further information or clarification of any of our comments please contact Mr. Richard Warner, General Manager – Strategy and Policy. Mr Warner is available on telephone 4731 0210.

Yours sincerely



GRAEME HEAD
Chief Executive

Enclosure

SUBMISSION FROM THE SYDNEY CATCHMENT AUTHORITY ON THE 2001-2002 SYDNEY WATER CORPORATION OPERATING LICENCE AUDIT.

Overview

Sydney Water's Operating Licence directly governs its operations in relation to supplying drinking water to the community. However, the Bulk Water Supply Agreement (BWSA) and to a lesser extent the draft Strategic Relationship Agreement outline the obligations and arrangements between Sydney Water and the Sydney Catchment Authority (SCA) that support the effective management of Sydney's drinking water supply.

As indicated in Sydney Water's submission to the audit of the SCA Operating Licence the agencies entered into the first BWSA in September 1999. A review of the BWSA was completed in late August 2002, which brought the agreement into line with the new operating licences issued for the both organisations.

The process for reviewing the BWSA was amicable but lengthy due to the nature of the process specified in the *Sydney Water Catchment Management Act 1998*, which requires public exhibition and formal consultation with the Treasurer and IPART.

Both agencies have reinforced their commitment to achieving the obligations in the BWSA. Specifically, this has meant working together to maintain and improve their efficiency and effectiveness in harvesting, storing, transporting, treating and supplying water as part of their respective functions. They have also reinforced their commitment to the adoption of a strategic approach to the management of water resources. This was with a view to fostering the enhancement of water quality on a continuing basis in a manner consistent with the protection of public health and the conservation of the environment.

The draft Strategic Relationship Agreement between the agencies will provide the basis for cooperative work between the agencies. The work will be done in recognition of the agencies' mutual interests in water conservation, protection of public health and the long term management of the water supply for Sydney.

The BWSA is driven primarily by "on the ground" day-to-day activities. The Strategic Relationship Agreement aims to formalise liaison and strategic discussions between the agencies.

The Sydney Water and SCA Boards met in August this year to discuss a number of strategic water supply issues. The topics discussed included drought response planning, demand management and water supply security.

WATER CONSERVATION/DEMAND MANAGEMENT

Compliance with requirements

Sydney Water is required to develop and implement a strategy to reduce per capita demand for water from 506Lcd in 1990-91 to 364 Lcd in 2004-05 and to 329 Lcd in 2010-11. The current water demand is estimated to be approximately 411 Lcd. This indicates that there has been a reduction of 18.6 per cent since 1991¹.

Schedule 3 of the BWSA sets out requirements for the supply of information, on a range of matters, by Sydney Water to the SCA. The matters include population forecasts by local government areas. They also include forecast water consumption per head of population for the total system, as well as

¹ IPART Mid term review of SWC's Demand Management Strategy – by Montgomery Watson Harza in 2002.

for each bulk raw water supply point of the agreed group of bulk raw water supply points. The supply of information further relates to estimates of maximum day demand for water and average day demands in annual time steps. The manner and frequency for the supply of such information has been agreed between Sydney Water and the SCA.

Progress to meeting requirements

Sydney Water's Demand Management Strategy, was first developed in 1995. In 1998 they developed a Least Cost Planning Model to assist in the evaluation of the demand management initiatives. This resulted in the development of the Sydney Water's 1999 Demand Management Strategy. This was reviewed in May 2002 and substantially revised in June 2002.

The SCA and Sydney Water have exchanged a substantial amount of information on this topic and it continues to be an important item at the Sydney Water – SCA Strategic Water Planning Forum meetings. A detailed presentation by Sydney Water to members of the SCA executive and other key SCA officers, in November 2001, outlined Sydney Water's demand forecasting modelling and the different aspects of the demand management program. The SCA also had input to Sydney Water's 2001-02 Water Conservation and Recycling Report, which is a requirement of Sydney Water Operating Licence and details the implementation of Sydney Water's demand management program.

The SCA and Sydney Water continue to work in close association on the subject of demand management, which has been discussed at length in a range of interagency forums. Forums on which both agencies have representation include Water CEOs various working groups convened by Water CEOs to closely investigate particular demand management issues, including the role of pricing. Another area currently being investigated is the development of a comprehensive government policy on the use of rainwater tanks.

Adequacy of actions being taken

The SCA is of the view that Sydney Water has been active in the development and implementation of a range of demand management initiatives. The SCA has supported other demand management initiatives to assist in the enhancement of Sydney Water's programs. The programs are regularly reviewed and revised to ensure their effectiveness.

Adequacy of requirements of the licence in light of the recent experience

The SCA is pleased with quality and quantity of data that has been exchanged with Sydney Water to date. The recent review of the BWSA did not identify a need for any further requirements.

The SCA supports the view that the two agencies need to work together closely to enable Sydney Water to achieve its demand management targets. SCA also acknowledges that the conditions in its Operating Licence could better define the SCA's involvement in Sydney Water's demand management strategies.

IPART considered the role of the SCA in demand management during the mid term review of the SCA's Operating Licence. As a result, the SCA is required to develop a demand and supply management strategy with DLWC and Sydney Water by 31 December 2003. IPART considers this to be the best way of strengthening the combined work between the SCA and Sydney Water in relation to demand management obligations.

IPART has also highlighted opportunities to better inform the water supply demand balance debate by gathering relevant information over the next two and a half years.

One of the main projects focuses on gaining a better understanding of community attitudes towards demand management and their acceptance of water conservation measures, including restrictions. Other government stakeholders, such as the Environment Protection Authority and the Department of Land and Water Conservation will also participate in the project.

DROUGHT PLANNING

Compliance with requirements

Section 8 of the BWSA makes provision for cooperation between Sydney Water and the SCA in relation to drought. Clause 8.1 requires each party to prepare a drought management plan that is consistent and complementary to that of the other party.

As part of the long-term management of Sydney's water supply, Sydney Water and the SCA have developed complementary drought management plans. In addition, the agencies have been working on the development of a tripartite drought protocol with the Department of Land and Water Conservation.

The drought management plans identify several joint strategies and initiatives. In particular, they call for the establishment of a joint Drought Management Committee and a Drought Executive Committee (composed of the heads of the relevant organisations), to be convened when the system storage levels drop to 70 per cent. The first meeting of the Drought Management Committee took place on 22 October 2002. Discussions focused on the role and responsibilities of the committee, the status of supply levels and demand trends, as well as on possible communication strategies and regulatory powers to impose restrictions.

Progress to meeting those requirements

The SCA believes that both organisations have made adequate progress towards the obligations in the BWSA in relation to drought planning.

Adequacy of actions taken

Both the SCA and Sydney Water have agreed that drought planning is an iterative process and requires ongoing close consultation. Negotiation and information sharing relating to drought management have been positive.

Adequacy of the requirements of the licence in the light of recent experience

Current requirements are adequate.

DRINKING WATER QUALITY STANDARDS/ CUSTOMER RELATIONSHIP

Compliance with requirements/Progress to meeting those requirements

Section 6 of Sydney Water's Operating Licence stipulates Sydney Water's obligations in relation to drinking water quality standards, monitoring, reporting and planning.

Clause 11 of the BWSA requires the development of a bulk water supply protocol. The protocol is an agreement between Sydney Water, SCA and Build Own Operate Water Filtration Plant operators. It sets out the manner in which requests are to be made by Sydney Water for bulk raw water and the way in which the SCA is to respond to those request. It also details day-to-day operating requirements for normal and abnormal operations. More specifically, it details day-to-day water quality requirements and information, procedures for operational changes, planned maintenance and procedures for incidents. It was developed during the auditable year and is fully operational.

Sydney Water has also developed the Bulk Water Supply Agreement Management Framework as required by Minister Yeadon. The SCA and Sydney Water met in June 2002 to workshop the current management processes that track compliance with the BWSA and to identify any gaps in those processes. The resulting management framework confirms that both agencies have in place the control measures and strategies necessary to achieve compliance with the BWSA. The document is currently operational.

A number of water management forums have provided the SCA and Sydney Water with the opportunity to strengthen their working relationship as together they focus on ensuring the supply of good quality drinking water. The forums include:

- Water forums - operations and planning staff from both agencies attend bimonthly meetings to discuss water quality and operational issues.
- Customer Interface Meetings - representatives from both agencies and BOO plant operators meet on a bimonthly basis to discuss and resolve operational and planning issues. These included major outages of Warragamba Pipelines and the Upper Canal.
- Operations Interface meetings – senior staff from both agencies meet on a six weekly basis to discuss and resolve strategic operational issues.
- Strategic Water Planning forum – senior staff from both agencies meet quarterly to discuss long term management of the water supply.
- Strategic Liaison Group meetings between NSW Health, Sydney Water and the SCA. The SLG has a strategic “big picture” focus in relation to drinking water quality issues.
- Joint Operations Group with NSW Health, Sydney Water and SCA - is the operational group to the SLG identified above. This discusses more operational issues relating to drinking water quality.

Adequacy of actions taken

All actions have been more than adequate to ensure good drinking water quality to Sydney Water's customers.

Adequacy of the requirements of the licence in the light of recent experience

Requirements are more than adequate. The BWSA was recently revised to take into account changing situations and now better reflects the close working relationship between the two agencies.

ENVIRONMENTAL FLOWS

Sydney Water continues to be an active member of the Hawkesbury-Nepean River Management Forum to assist in the development of the environmental flows for the SCA's storages. It was also an issue that was discussed at the meeting of the Boards of Sydney Water and the SCA in August 2002.

Your Reference : 2111273\ EPA Letter
Our Reference : SR610/HO3455; EXF25499
Contact : Warren Hicks, (02) 9995 6802



Operations

5 NOV 2002

Mr I Garrard
Project Director
GHD Pty Ltd
67 Albert Avenue
CHATSWOOD NSW 2067

Dear Mr Garrard

2001/2002 OPERATING LICENCE AUDIT OF SYDNEY WATER CORPORATION

I refer to your letter dated 20 September 2002 requesting comment from the Environment Protection Authority (EPA) regarding aspects of the 2001/2002 independent audit of the Sydney Water Corporation being undertaken by your firm, and more specifically the EPA's role in this process. I note that the audit covers the period 1 July 2001 to 30 June 2002.

Your letter requests comments on Sydney Water's performance, particularly against specific clauses in Sydney Water's 2000 - 2005 Operating Licence (identified in Attachment 1 to your letter) where the EPA's requirements are to be satisfied, or the EPA is to be consulted. The information requested is presented in the attachment to this letter in the order of the clauses in your letter.

If the EPA can be of further assistance to you in relation to any of these matters please contact Mr Warren Hicks on (02) 9995 6802.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Simon Smith'.

SIMON SMITH
Acting Assistant Director General

Attachment

ATTACHMENT

2001 - 2002 OPERATING LICENCE AUDIT OF SYDNEY WATER CORPORATION (SWC)

PART 3 SYDNEY WATER'S RESPONSIBILITIES

3.3 Memorandum of Understanding

During 2001/02, the EPA / Sydney Water Strategic Liaison Group worked to revise and update the Memorandum of Understanding (MoU) between the two organisations. The revised MoU now reflects current organisational structures and operating arrangements in the two organisations, and it more clearly articulates their environmental objectives and interactions. A draft of the MoU document was publicly exhibited in mid 2002, and no comments were received.

PART 6 WATER QUALITY

6.6 Environmental Water Quality

Licence Limit Exceedances

(a) Sewage Treatment Systems

During 2001/02, Sydney Water's coastal and inland sewage treatment plants (STP) complied with all licence limit requirements apart from the following minor exceedances:

Total Residual Chlorine Limits

- Exceedance of the Total Residual Chlorine (TRC) limit at the Blackheath STP, (issues with determining compliance with TRC limits have also arisen at other SWC plants, as listed below).

The EPA required Sydney Water to undertake works to enable it to meet a TRC limit by 30 June 2000, with an environment protection objective. It was expected at the time that the main source of chlorine would be from SWC's chlorine based disinfection processes at the treatment plants. SWC addressed this by either using alternative technology not involving chlorine, or improving dosing and de-chlorination operations. However, following these improvements, some low levels of chlorine were still detected in effluents, leading to the low levels exceedances described below. These are being investigated by SWC and the EPA. It appears that the chlorine is contained in sewage inflows to the plants, rather than as a result of plant operations. Described below are related technical issues involving the method of analysis used to assess compliance with TRC limits.

The EPA has reviewed the analytical procedures being used by Sydney Water for TRC. Agreement has now been reached between Sydney Water and the EPA on a preferred procedure and an appropriate detection limit. The EPA agrees that a detection limit of 0.05mg/L for TRC is the best available at this time. This is higher than the licence limit, and so it was agreed that if all samples were found to have no detectable TRC at the 0.05mg/L detection limit, then SWC would be considered to be complying its licences.

- Exceedance of the 90 percentile TRC limit at the North Richmond STP even though disinfection at the plant is achieved using UV. No action was taken regarding this exceedance for the same reason given for the Blackheath STP above;
- Exceedance of the TRC licence limit at the Rouse Hill STP. No action was taken regarding this exceedance as Sydney Water has constructed new chlorination and dechlorination facilities at the plant to enable better control of chlorine dosing and dechlorination; and
- Exceedance of the TRC limit at the Warragamba STP despite the use of UV disinfection. No action was taken regarding this exceedance for the same reason given for the Blackheath STP above.

Sydney Water is now investigating the potential interferences in the analytical procedure for TRC to determine if any other chemicals potentially present in the effluents are causing false positive determinations. Sydney Water is also investigating the possible sources of TRC in the effluents more thoroughly. Once the information from these investigations is available, the EPA will consider further actions;

Total Suspended Solids Limits

- Exceedance of the 100 percentile Total Suspended Solids (TSS) limit at the Liverpool STP. The EPA decided to not take action against Sydney Water regarding this exceedance as it resulted from the unexpected scouring of accumulated sediment in the Liverpool STP oxidation pond during high wet weather flows. The solids were subsequently mixed, and transported with the final effluent which was discharged downstream into the Georges River, at the diversion valve overflow point at Chipping Norton. Subsequent to this event, Sydney Water has refurbished the penstocks in Sewage Pumping Station 582, which delivers effluent from the oxidation ponds to the Chipping Norton overflow point, and is desludging the oxidation ponds to prevent a recurrence of the above;
- Exceedance of the 50 percentile and 3 day geometric mean Total Suspended Solids (TSS) limits at the Richmond STP. A report was subsequently sought from Sydney Water to explain the reason for the exceedances. The report revealed that algae in the effluent was responsible for the elevated TSS levels. Given that effluent from the Richmond STP is irrigated on adjacent paddocks, the EPA considered that the presence of the algae in the effluent did not cause any environmental harm. The EPA is considering the report in light of the proposed plant upgrade in 2003;

In addition to the above exceedances, Sydney Water reported a large number of minor non-conformances relating to small dry weather system bypasses (resulting mainly from tree root and debris blockages and broken mains) and sample losses. The EPA did not take any action against Sydney Water in regard to the above non-conformances for the following reasons:

- The issue of the small dry weather bypasses is currently being addressed by the EPA through the Pollution Reduction Programs included in all of Sydney Water's sewage treatment system licences as part of its Sewer Overflow Licensing Program; and

- The sample non-collections did not affect the overall result and Sydney Water undertook prompt and appropriate action to remedy the problem(s) which caused samples to not be taken.

Sydney Water also reported non-compliance against licence condition O5.1 for a number of sewage treatment systems. This condition requires that Sydney Water demonstrates ongoing improvements in system environmental performance when compared to existing environmental performance, based on the results of modelling undertaken in 1994. Increased growth in outer areas of Sydney has resulted in an increase in the number of predicted wet weather overflow events. The 1994 baseline model used as the basis for the above licence condition is currently being recalibrated, and Sydney Water and the EPA are currently discussing the "no deterioration" issue. This is a complex modelling issue which, it is expected, will be resolved by the end of the year (2002).

(b) *Water Filtration Plants*

There were two minor exceedances at Sydney Water water filtration plants during the period 2001/02. These were as follows:

- Exceedances of volume and mass limits at the North Richmond Water Filtration Plant due to poor raw water quality. The EPA took no action regarding this exceedance as it was not considered to be a significant event and appropriate action was taken by Sydney Water to prevent a recurrence; and
- An exceedance of the TSS limit at the North Richmond Water Filtration Plant. No action was taken by the EPA as the original sample was retested and shown to comply with the licence limit. No environmental harm resulted.

6.7

Other Grades of Water

Recycled Water/Effluent Reuse

The EPA's approach is set out in the draft *Environmental Guideline – Use of Effluent in Irrigation*. This document is intended to inform, or guide people wishing to install effluent irrigation schemes so that they do not cause pollution. It is not a mandatory document. It is expected that a final version of the above document will be issued soon.

In case where Sydney Water operates effluent management schemes, conditions relating to the reuse of appropriately treated effluent are included in the relevant sewage treatment system licences. Where effluent schemes are privately operated, relevant discharge points and conditions are included in the sewerage system licences, to ensure that the quality of effluent provided by Sydney Water to the scheme operators conforms with quality requirements. Thus, the onus for ensuring that no water pollution occurs from operation of private schemes lies with the operators of the schemes.

Sydney Water reuses treated effluent in a number of applications. The majority is used for processing and irrigation at its STPs. It also supplies effluent for commercial irrigation and industrial purposes. Recycled water is provided to the Rouse Hill development area for safe non-potable uses such as flushing toilets and watering gardens. The Picton STP and the Gerringong Gerroa sewerage scheme both provide recycled water for the local agricultural industry. As part of the Illawarra Wastewater Strategy, the recycled water is provided to BHP's Australian Steel Mills Services in Port Kembla for use in its steel making facilities.

Sydney Water is also implementing the Upper Georges River Wastewater Strategy, which will assist it, in part, in meeting the requirements of condition O5.1 discussed above. Briefly, the scheme involves the upgrading of the Liverpool, Glenfield and Fairfield STPs to take account of increased wastewater flows from projected growth in the Southern Suburbs Sewage Treatment System area and provides for overflow abatement at the STPs. A recycled water pipeline will also be constructed to transfer effluent to the Malabar deepwater ocean outfall. Recycled water will be provided to potential industrial and commercial customers along the pipeline route, with the balance of flows being discharged to the ocean via the outfall.

The strategy will improve the wet weather overflow performance in the Georges River, and also aims to reduce current demand on the water supply system by promoting recycled water use and implementing water conservation measures.

PART 9 ENVIRONMENT – INDICATORS & PLANS

9.6 Pollution Reduction Targets

Sydney Water undertook the monitoring and reporting required by the EPA for the Pollution Reduction Targets (PRT) conditions.

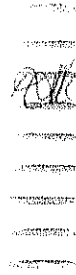
A number of chemicals were still found to be increasing above past levels. Sydney Water has been investigating the possible reasons, as required. Difficulties with cyanide and un-ionised hydrogen sulfide analysis were identified and investigated. Improvements to the cyanide analysis have been approved by the EPA and will be evaluated after 2002/03. Initial investigations into the un-ionised hydrogen sulfide analysis did not clearly identify the problems, so further investigations are being undertaken.

Toxicity testing of the effluents from the ocean STPs was undertaken, as required. This testing identified a number of issues. The chlorination/dechlorination process at Bombo STP was found to be not as well controlled as necessary. Sydney Water is investigating this matter. Nonylphenol ethoxylates were found to be at levels of potential concern at some of the STPs. The EPA is still considering this information before commencing discussions with Sydney Water regarding possible further investigations.



NSW Fisheries

27-11-02
IMG



DL02001025

Mr Ian Garrard
Project Director
GHD Pty Ltd
PO Box 201
CHATSWOOD NSW 2057

Dear Mr Garrard

Thank you for the opportunity to comment on Sydney Water's auditable obligations. The department apologises for the delay in responding but understands that comments can be incorporated within the second draft of the Operational Audit.

The current requirements of Sydney Water's operating licence do not offer a means for Sydney Water to report on compliance with issues under NSW Fisheries jurisdiction. NSW Fisheries main concerns in relation to Sydney Water's operations relate to the conservation of aquatic biodiversity including aquatic threatened species, and the conservation of fish stocks and aquatic habitat, including maintenance of fish passage. Water quality, which is important to protecting aquatic biodiversity, is under the jurisdiction of the Environment Protection Authority. However, water quality is not the only factor contributing to protection of aquatic biodiversity.

Equally relevant to protecting aquatic biodiversity is the maintenance and rehabilitation of aquatic habitat and the connectivity of these habitats. For example the installation of stormwater treatment devices and creek 'improvement' works carried out by Sydney Water can negatively impact both aquatic habitat and fish passage. Some structures can completely block fish passage and concrete or rock lining waterways results in a loss of aquatic habitat values. Waterway crossings of pipelines can also cause blockages to fish passage if they are not constructed in accordance with NSW Fisheries *Policy and Guidelines for Bridges, Roads, Causeways, Culverts and Similar Structures 1999*. A copy of this document, which outlines considerations for planning, designing and constructing fish friendly waterway crossings, can be found on the NSW Fisheries website under the "Conservation" section at www.fisheries.nsw.gov.au.

The department recommends that the Ecological Sustainable Development Indicators for Sydney Water include indicators which measure Sydney Water's efforts to maintain and rehabilitate fish passage and aquatic habitat, particularly during upgrade works.

HEAD OFFICE

202 Nicholson Parade - PO Box 21 CRONULLA NSW 2230

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Website: www.fisheries.nsw.gov.au

ABN 56 287 047 871

These might include:

- removal or modification of barriers to fish passage and therefore the length of waterway made accessible to fish
- number of stormwater treatment devices installed offline or at the end of pipes
- length of waterway protected through revegetation rather than construction of hard surfaces.

The ESD Indicator: "Species Impact" does not measure if aquatic threatened species have been considered in each proposal involving works in a waterway. There may have been no species impact statements completed because threatened species generally were not considered. Threatened species of fish (including aquatic macroinvertebrates) and marine vegetation are listed under the *Fisheries Management Act 1994* (FM Act). The proportion of projects considering threatened species issues would be a better measure of compliance. Officers of Sydney Water are currently submitting information on certain works but there is no mechanism of knowing what proportion of works are being captured and assessed correctly against the FM Act.

It is also recommended that NSW Fisheries issues concerning aquatic threatened species, aquatic habitat and fish passage be incorporated into the ESD Awareness training for all employees of Sydney Water.

If you require any additional information, please do not hesitate to contact Ms Lesley Diver, Conservation Manager (Sydney Region), on (02) 9492 9401.

Yours sincerely


STEVE DUNN
Director, NSW Fisheries

25-11-02

APPENDIX I

System Performance Indicators



Part 3 – System Performance Indicators

Water Pressure

Indicator	From July 2001 to June 2002
Number of properties that do not receive continuous water pressure at main tap of a least 15 meters as a result of abnormal operations.	2,338
<i>(This data includes properties as a result of abnormal operations and includes operational problems greater than 4 days. The data excludes system capability problems).</i>	
Number of properties where pressure of less than 15 meters head at the main tap occurs more than once during the report year.	3,136
<i>(This data includes properties affected for a period exceeding 15 minutes per 1 calendar day as a result of system capability deficiencies and exceeding 4 days as a result of abnormal operations. Properties in Designated Low Pressure Areas are included).</i>	

Water Continuity

Indicators	Indicator Parameters	From July 2001 to June 2002
Water Continuity – <u>Planned</u> Number of properties affected by shut-offs in a report year that are:	>1 hour but ≤ 5 hours	73,188
	>5 hours but ≤ 12 hours	18,816
	>12 hours but ≤ 24 hours	526
	>24 hours	0
Water Continuity – <u>Unplanned</u> Number of properties affected by shut-offs in a report year that are:	>1 hour but ≤ 5 hours	163,338
	>5 hours but ≤ 12 hours	14,658
	>12 hours but ≤ 24 hours	1,010
	>24 hours	102
Water Continuity –Number of events in a report year by type of interruption:	Planned and warned	1,412
	Unplanned	
	– <i>Third Party Damage</i>	51
	– <i>Power Failure</i>	6
	– <i>Other</i>	4,256
	Unplanned Total	5,719



Sewage Overflows

Indicators	Indicator Parameters	From July 2001 to June 2002
Number of dry weather uncontrolled sewage overflow events in a report year resulting from:	Chokes	15,290
	Third party damage	13
	Hydraulic overload	0
Response to priority 6 sewer incidents by time band in a report year:	≤ 1 hours	3,729
	>1 hour	1,109
Response to priority 5 sewer incidents by time band in a report year:	≤ 3 hours	20,908
	>3 hour	2,035

APPENDIX J

Further Discussion on System Performance Standards



APPENDIX J

FURTHER DISCUSSION ON THE SYSTEM PERFORMANCE STANDARDS

B1 Further Discussion on Drinking Water Pressure

B1.1 Interpretation of Standard Definition

Sydney Water's definitions and interpretations of the standard are generally consistent with the Minister's requirements as expressed in the Minister's Notice of Amended Performance Standards.

B1.2 Measuring and Recording of Data

Sydney Water has a network of 359 pressure monitoring points spread throughout the water distribution systems. These pressure monitoring points are mainly located in positions where there are known low pressure problems under normal operation and are fitted with a variety of different pressure recording equipment. Low pressure incidents under abnormal operation are identified by operational staff from their knowledge of the impacts of particular operational problems and from reports received from customers. Temporary pressure recording equipment is installed where necessary to verify the pressure.

Sydney water has commenced a program to replace the old technology gauges at 196 sites with 360 new pressure monitoring sites connected to IICATS. When completed, this network will be more reliable and accurate than the current equipment and will enable real-time monitoring of system performance.

B1.3 Collation and Reporting of Data

The pressure recording data are forwarded to Sydney Water staff whose duties specifically include the collation and reporting of these data. The pressure recordings for each pressure monitoring point are scanned to identify instances where the recorded pressure has fallen below the established threshold for that particular pressure monitoring point. In known low pressure areas, Sydney Water has prepared plans showing the extent of reportable properties for each unit of pressure below the calculated threshold. These extents have been stored in the HYDRA GIS database as pre-defined polygons enabling the operator to consistently assign the extent of affected properties for any particular recorded pressure.

A similar process is used where the low pressure is due to abnormal operations, except that pressures may need to be estimated if a pressure recording gauge is not installed in a suitable location in time and the operator will need to estimate the affected properties especially for that area using available ground level data.

The data on affected properties are automatically transferred from HYDRA to the ACCESS billing database, from which the number of reportable properties can be extracted.

Reported performance standard information collated from monthly data was found to be accurate.



B1.4 Accuracy and Confidence Limits for Standard

Sydney Water has planned but not conducted an internal audit of accuracy and confidence limits for the water pressure standard. Sydney Water auditees advised that they are confident that the reported number will comply with the required accuracy of +/-10% with 95% confidence limits, but there is insufficient information available to the auditor to make any objective assessment. The auditors were advised that the internal audit is planned for the monitoring and reporting system, but not for measurement activities (coverage of low pressure areas, accuracy and reliability of pressure recorders, relationship between recorder pressure readings and pressure at the main tap at properties affected, accuracy of detection of instances of low pressure exceeding 15 minutes, accuracy of level contours on plans, delineation of pressure boundaries on plans/GIS) to determine the number of properties affected. The auditor considers that these aspects have a major effect on the accuracy of the reported numbers.

To have some confidence in the reported numbers, the auditors gave some consideration to a subjective assessment of accuracy. An initial assumption has to be made that Sydney Water has located pressure recorders in all areas likely to experience instances of low pressure, and in the appropriate locations. Sydney Water has indicated these locations are carefully selected but this has not been validated, and improvements are being made to upgrade pressure recorders, as noted above. Using a sample of monitored areas where low pressures are expected, the auditors undertook a preliminary review of some of the aspects noted above. This review indicated that, within the required accuracy of +/-1 metre head for pressure recorders, the number of properties affected could vary by up to around 100% due to this single potential source of measurement inaccuracy. This is considered to be an extreme case as the accuracy of most gauges in critical locations is better than +/-1 metre head. In addition, Sydney Water measures pressure at gauge levels some 0.7 to 1.0 metre above the main, giving rise to a conservative (i.e. overstated) number of properties affected. In summary, an overall accuracy of +/-50% to +/-100% for this standard is considered to be achieved. The accuracy requirement of +/-10% is unlikely to be achieved without a considerable investment in technology and systems. Individual property monitoring may be required, which is considered unwarranted and of little benefit to customers. The costs and benefits of reporting to such accuracy requirements, or alternative interpretation of accuracy requirements, should be reviewed.

These matters should be considered as part of an agreed scope, methodology and assumptions for the assessment of accuracy of the standard, to be determined between Sydney Water and the Tribunal.

B1.5 Strategies, Plans and Programs to Ensure Compliance

The majority of the instances of reportable low pressure occur at properties at high elevation in close proximity to reservoirs. The next most common case is properties connected to water mains with high pressure losses under peak flow conditions, particularly at the ends of systems. Sydney Water has commenced a five year program of capital works which will address these causes. Sydney Water anticipate this program will improve pressure to 3070 properties in areas that experience water pressure below the Licence minimum standard on a recurrent or continuing basis.

Sydney Water also requires that new developments and extensions of the system be designed to ensure performance in accordance with the standard can be achieved and maintained.

These measures indicate that Sydney Water has adequate processes and programs in place to maintain the water pressure in mains above the minimum standard.



B1.6 Summary

Overall, Sydney Water reported that it has readily achieved the amended standards for drinking water pressure. The audit finds that the measurement and reporting of the standard is generally reliable. Adequate systems appear to be in place to ensure that the amended standard is maintained. Sydney Water fully complies with the standard requirement for not more than 15,000 properties affected by water pressure at the main tap less than 15 metres.

There is insufficient information available to the auditors to make an objective judgement on whether Sydney Water has met the accuracy and confidence limit requirements for the reported number for these standards. Sydney Water did not analyse or report the accuracy of the standard. However, the auditors have noted that achievement of the accuracy and confidence limit requirements may not be economically feasible and that these should be reviewed. The auditors have made a subjective assessment of accuracy, based on estimated measurement uncertainties in the number of properties reported as affected. The assessed accuracy does not reduce the above finding of full compliance with the standard.

B2 Further Discussion on Drinking Water Continuity

B2.1 Interpretation of Standard Definition

Sydney Water's definitions and interpretations of the standard are generally consistent with the Minister's requirements. Sydney Water defines the number of properties affected as the number of rateable properties plus any associated flats affected. This definition may not include non-rateable properties, and is not consistent with the definition in the amended standard or the Folio of Progress. Sydney Water should clarify this definition.

B2.2 Measuring and Recording of Data

There is potential for human error in accurately recording job records of time off/time on for a water supply interruption, and this may cause some inaccuracies in reported statistics. Validation checks of job records are undertaken to ensure job records and time on/time off in WAMS are complete. Incomplete or erroneous job records are corrected after detection in audits and validation checks. The counting of properties affected is automated in HYDRA after manually defining the area affected. As there is no automated link established in the HYDRA GIS between the asset and each property, the process used by Sydney Water is to count all properties between the shutoff valves, plus one either side. This is a conservative approach that ensures that Sydney Water captures all likely properties affected, and provides the necessary redress to customers. While this approach is prudent and reasonable from a customer service perspective, it will generally overcount the number of properties affected by one or two. Given the average shutoff block contains around fifty properties, this gives rise to overcounting by up to an average of about 4%.

B2.3 Collation and Reporting of Data

Reported performance standard information collated from monthly data was found to be subject to a number of corrections, most, but not all, of which flowed through to corrections of the final reported standard. Some discrepancies were detected which affected the final reported number to a minor degree. This indicates a need for further reconciliation of monthly data.



B2.4 Accuracy and Confidence Limits for Standard

Sydney Water has conducted an internal audit of accuracy and confidence limits, but the audit results were not available. Sydney Water is confident that the reported number will comply with the required accuracy of +/- 5% with 95% confidence limits, but there is insufficient information available to the auditors to make any objective assessment. The auditors were advised that the internal audit was undertaken on the monitoring and reporting system, and did not cover field activities (extent of interruption, time on/time off) or the accuracy of the number of properties affected. These aspects could have a significant effect on the accuracy (as noted above with respect to the overcounting of properties affected). This should be considered as part of an agreed scope, methodology and assumptions for the assessment of accuracy of the standard, to be determined between Sydney Water and the Tribunal.

To have some confidence in the reported numbers, the auditors gave some consideration to a subjective assessment of accuracy. Based on the above observations, an accuracy of between +/-5% and +/-10% is considered to be achieved, with the reported number most likely to be overstated. The accuracy requirement of +/-5% is considered to require improvement to some systems. The costs and benefits of reporting to such accuracy requirements, or alternative interpretation of accuracy requirements, should be reviewed.

B2.5 Strategies, Plans and Programs to Ensure Compliance

Processes are in place to identify poorly performing mains for replacement, based on historical failures or system analysis. Sydney Water has an internal benchmark of 3 breaks in two years, which triggers an investigation of a water main for renewal. Normal practice provides for assessment of water main maintenance activity to ascertain if the work can be undertaken without causing a service interruption. The above indicates that Sydney Water has adequately provided to maintain its level of service for drinking water continuity.

B2.6 Summary

Overall, Sydney Water reported that it has readily achieved the amended standards for drinking water continuity, both for unplanned interruptions and “planned and warned” interruptions, and the audit finds that the measurement and reporting of the standard is generally reliable, with some discrepancies. Adequate systems appear to be in place to ensure that the amended standard is maintained. Sydney Water fully complies with the standard requirement for not more than 35,000 properties affected by an unplanned interruption, and the not more than 32,000 properties affected by a “planned and warned” interruption.

There is insufficient information available to the auditors to make an objective judgement on whether Sydney Water has met the accuracy and confidence limit requirements for the reported number for these standards. Sydney Water did not analyse or report the accuracy of the standard. The auditors have made a subjective assessment of accuracy, based on estimated measurement uncertainties in the number of properties reported as affected. The assessed accuracy does not reduce the above finding of full compliance with the standard.



B3 Further Discussion on Sewage Overflows

B3.1 Interpretation of Standard Definition

Sydney Water's definitions and interpretations of the standard are consistent with the Minister's requirements. Private property is defined as any property charged for sewerage usage. "Wet weather" is defined by the EPA as at least 10 mm of rainfall in the 24 hours preceding 9.00am on the day of the overflow. Sydney Water defines dry weather as all other weather conditions. This definition should be included in Sydney Water's procedures. The definitions are reasonable, with some clarification as to the applicability of the rainfall definition to geographic locations of overflows in catchments remote from the rainfall measuring point.

B3.2 Measuring and Recording of Data

Determining the number of properties affected by an overflow is by field observation as the only practical means. There are numerous instances where an overflow may not be reported by a customer or detected by Sydney Water's systems. Further, the number of properties may not be capable of accurate determination due to delays in attendance, or rectification by a plumber. The reported number of properties affected may thus be somewhat different to the number actually affected, but the extent is difficult to determine. Validation checks of job records are undertaken to ensure completeness, and the counting of properties affected is confirmed in HYDRA after manually defining the area affected. This will eliminate properties that are not within the definition of "private property".

B3.3 Collation and Reporting of Data

Reported performance standard information collated from monthly data was found to be accurate.

B3.4 Accuracy and Confidence Limits for Standard

Sydney Water has conducted an internal audit of accuracy and confidence limits, but the audit results were not available. Sydney Water is confident that the reported number will comply with the required accuracy of +/- 5% with 95% confidence limits, but there is insufficient information available to the auditors to make any objective assessment. The auditors were advised that the internal audit was undertaken on the monitoring and reporting system, and did not cover the accuracy of the notification of instances of overflows (which is not possible to analyse) or confirmation of the overflow event or the number of properties affected. These aspects are considered by the auditors to be a necessary part of an agreed scope, methodology and assumptions for the assessment of accuracy of the standard, to be determined by Sydney Water and the Tribunal.

To have some confidence in the reported numbers, the auditors gave some consideration to a subjective assessment of accuracy. An initial assumption is that overflows which are not notified to Sydney Water must be deemed not to have "affected" a property. Based on the above observations, an accuracy of around +/-10% is considered to be achieved, with the reported number most likely to be overstated. The accuracy requirement of +/-5% is considered to be difficult to confirm given the uncertainties noted above in determining the number of properties affected.



B3.5 Strategies, Plans and Programs to Ensure Compliance

Sydney Water has given a significant focus to the overflow problem, with performance being regulated by both the Tribunal and the EPA. The systems in place to monitor overflows and programs to upgrade the sewerage system are:

- ▶ Monitoring of sewage pump stations (SPSs). All sewage pumping stations are monitored.
- ▶ SPS Overflow Risk Reduction Program. This is a \$200 million, 5-year program covering about 300 SPS to reduce the risk of dry weather overflows. The program is under way, commencing in 2000.
- ▶ SewerFix, the umbrella program for upgrading the sewer network to achieve dry and wet weather overflow containment targets. This includes such activities as smoke testing for illegal connections, tree root cutting, sewer relining and grouting, and system monitoring to determine problem catchments and analyse effectiveness of rehabilitation projects.
- ▶ Choke Reduction Program. Blockage reduction by root cleaning or sewer rehabilitation. Repeat overflows are targeted for investigation under the "Hotspots" program.

Given the increase in properties affected by dry weather overflows, it is unclear what factors have contributed to the increase, or how effective Sydney Water's investment to date in overflow reduction has been. The audit process did not extend to considering the costs/benefits of the various programs for overflow reduction.

B3.6 Summary

Overall, Sydney Water reported that it has achieved the amended standard for uncontrolled dry weather sewage overflows, and the audit finds that the measurement and reporting of the standard is generally reliable, but subject to initial notification of instances of overflows, and recording of properties affected. Adequate systems appear to be in place to ensure that the amended standard is maintained, although improvements in service from Sydney Water's recent investments in overflow reduction were not evident. Sydney Water fully complies with the standard requirement for not more than 25,000 properties affected by an uncontrolled dry weather sewage overflow.

There is insufficient information available to the auditors to make an objective judgement on whether Sydney Water has met the accuracy and confidence limit requirements for the reported number for this standard. Sydney Water did not analyse or report the accuracy of the standard. The auditors have made a subjective assessment of accuracy, based on estimated measurement uncertainties in the number of properties reported as affected. The assessed accuracy does not reduce the above finding of full compliance with the standard.

APPENDIX K

Environmental Indicators Compliance Table



Appendix K - Environmental Indicators Compliance Table

Environmental Indicator	Monitored	Complied Year to Year	Number of Years of Data ¹	Compiled 2001 – 2002	Performance Reported/
Sewerage Effluent Discharges to Ocean					
Discharge Quality					
<ul style="list-style-type: none"> Effluent Quality including Schedule 10 Chemicals 	✓	Glenfield, Fairfield and Liverpool STP's commenced monitoring in 00/01 and continued monitoring for the 01/02 period.	<p>Generally the tables in section 2 of Volume 3 provide data for the previous 7 years ie. data prior to 2001/02. (95/96 – 00/001).</p> <p>Data for Fairfield, Glenfield and Liverpool is for the previous year (00/01).</p>	<p>Discharge quality is reported for the 17 STPs for 2001/02.</p> <p>Glenfield, Liverpool and Fairfield monitor the following schedule 10 chemicals: aluminium, ammonia, copper, cyanide, diazinon, un-ionised hydrogen sulphide, zinc. This is not the entire schedule 10 chemical list.</p>	<p>Performance is discussed in Volume 1, section 2, page 26. Details of effluent quality is provided in Volume 2 and 3</p>
<ul style="list-style-type: none"> nutrients, grease, suspended solids 	<p>✓ No monitoring of suspended solids and oil and grease is recorded at Fairfield, Glenfield and Liverpool.</p> <p>Nutrients are recorded.</p>	<p>Glenfield, Fairfield and Liverpool commenced monitoring in 00/01.</p> <p>Remaining STPs - data compiled year to year.</p>	1993/94 – 2001/02 (previous 9 years).	Volume 3, section 2, tabulates and graphs the oil and grease Volumes at 10 Ocean STPs for 2001/02.	<p>Table 2.2 of the EICR 2002 shows suspended solids and oil as a lump figure.</p> <p>Performance is not discussed for individual STPs due to the abundance of information and is presented in Volumes 2 and 3.</p>
<ul style="list-style-type: none"> STP discharge Volume 	✓	Presented in Figure 2.1 and 2.2 of the EICR 2002.	Discharge Volumes are shown for all 10 ocean outlets for	At Warriewood, North Head, Bondi, Malabar, Cronulla,	A total of 404,047ML of treated sewage was discharged to the

¹ Clause 9.1.4 of the Operating Licence requires Sydney Water to *use the indicators with historical annual values over at least the previous 10 years where comparable data permits such a compilation*. For this audit period ten years of **previous** comparable data is from 1992/93 (one year) to 2001/02.



Environmental Indicator	Monitored	Complied Year to Year	Number of Years of Data ¹	Compiled 2001 – 2002	Performance Reported/
			1993/94 – 2001/02 (previous 9 years).	Bellambi, Wollongong, Port Kembla, Shellharbour and Bombo for 2001/02	ocean in 2001/02. Volume discharged has generally increased since 1993/94. Likely to be from rainfall entering the system.
Water Quality					
<ul style="list-style-type: none"> Water Quality concentrations of Schedule 10 chemicals, nutrients, grease, suspended solids based on effluent measurements and measured/modelled dilution rates 	<ul style="list-style-type: none"> ✓ Data are based on effluent measurements and measured/model dilution rates. 	Presented in numerical form, section 2 of Volume 3.	<p>Random samples were chosen to determine compliance for this indicator.</p> <p>eg. oil and grease results for Bombo are presented for 1996/97 and 1997/1998 ie 2 years. Malabar 1993/94 (9 years) and North Head 1991/92 (11 years).</p> <p>Suspended solids was monitored from 1993/94 – 2001/02 ie. 9 years for most STPs.</p> <p>Nutrients, nitrogen and phosphorus are mostly monitored from 1993/94 – 2001/02 (9 years).</p> <p>Schedule 10 chemicals were monitored from 1995/96 – 2001/02 (previous 6 years) for most STPs.</p>	Oil and grease has not been reported for the previous 12 months for Bombo. Other STPs randomly checked provided data for 2001/02.	Numerical results are provided in Volume 3 section 2 of the EICR. However, these data are difficult to interpret and thus the Auditor believes the performance has not adequately been reported. The average person would experience difficulties understanding Sydney Waters' performance in relation to this indicator.
<ul style="list-style-type: none"> Beach water quality including faecal 	✓	✓	The EICR 2002 provides data	✓	Performance is reported in the



Environmental Indicator	Monitored	Complied Year to Year	Number of Years of Data ¹	Complied 2001 – 2002	Performance Reported/
coliforms and enterococci bacteria at Sydney Beaches (by EPA Beachwatch) and Illawarra beaches (by Sydney Water)			for all sites for the previous 10 years including Illawarra beaches. Enterococci results are shown in Tables 2.6 & 2.7 from 1993/93 – 2001/02		form of Table 2.4 and Table 2.5 which show the <i>percentage of time suitable for swimming at Sydney Beaches according to faecal coliform criteria</i> (summer and winter).
Biota					
For shoreline discharges summarise and report on existing data as basis for ongoing monitoring	✓	✓	2 years	✓	A summary of the history of when monitoring occurs is in the EICR and Offshore Sediment Program (OSP). An assessment of the data would be provided at the end of 2002. However, a report on existing data as a basis for ongoing monitoring is not clear.
For ocean outfall discharges, evaluate results of NSW EPA investigation of biota as basis for ongoing monitoring.			Three Ocean Sediment Program reports have been prepared and submitted to the EPA	The year 2001 was a surveillance year (TOC and grain size are measured). 2002 is an “assessment” year where a range of chemicals and assessment of benthic organisms are measure/assessed.	SWC in consultation with the EPA is currently analysing the data and aims to have the final interpretation report available by end of December 2002. Sampling sites are Bondi, North Head, Long Reef and Terrigal
Sediment					
<ul style="list-style-type: none"> Schedule 10 chemicals 					In accordance with the Environmental Indicators Monitoring for Sydney Water,



Environmental Indicator	Monitored	Complied Year to Year	Number of Years of Data ¹	Complied 2001 – 2002	Performance Reported/
					<p>(the Grey Book) there is no requirement to measure and report schedule 10 chemicals in ocean sediments. However, the “grey book” does not override the requirements of the Licence.</p> <p>Sediment samples were collected and analysed for a range of metals and pesticides at approximately 100 sites. Information from this study was used to design a long term monitoring of sediments program for ocean outfalls. The long term monitoring program for chemicals in sediments was combined with the biota in sediment program and is now part of the Malabar STS licence requirements</p>
Sewerage Effluent Discharges to Rivers and Streams					
<i>Discharge Quality</i>					
<ul style="list-style-type: none"> Effluent Quality including Schedule 10 Chemicals, 	✓	✓	1993/94 – 2001/02 (previous 9 years)	✓	<p>Numerical results are provided on Schedule 10 chemicals in Volume 2 and 3 of the EICR 2002.</p> <p>Interpretation of data for effluent quality and quantity is</p>



Environmental Indicator	Monitored	Complied Year to Year	Number of Years of Data ¹	Complied 2001 – 2002	Performance Reported/
					reported in Volume 1.
<ul style="list-style-type: none"> nutrients, grease, suspended solids, faecal coliforms 	✓ except oil and grease	✓	1993/94 – 2001/02 (previous 9 years)	Oil and grease not reported for 8 STPs	
<ul style="list-style-type: none"> STP discharge quality 	✓	✓		✓	Page 42 reports on percentage contribution of STPs to discharge volumes, phosphorus and nitrogen ie. discharge quality.
Water Quality					
<ul style="list-style-type: none"> Nutrients Chlorophyll a Faecal coliforms Enterococci bacteria Oxygen pH Light intensity Conductivity 	<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ ✗ ✗ ✗ ✗ 	<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ ✗ ✗ ✗ ✗ 			Nutrients, chlorophyll-a, faecal coliforms and enterococci bacteria are discussed in Volume 1 of the EICR 2002. Oxygen, pH, light intensity and conductivity are not reported.
Schedule 10 Chemicals	✗	✗	1995/96	✗	The EICR states Schedule 10 chemicals is not an ongoing EIMP requirement. Schedule 10 chemicals were recorded in 1995/96 and previous years. This is a result of CSIROs recommendation to cease monitoring for some indicators.



Environmental Indicator	Monitored	Complied Year to Year	Number of Years of Data ¹	Complied 2001 – 2002	Performance Reported/
					However, the Licence specifies monitoring for this indicator.
Biota					
Macro invertebrate surveys Algal species identification	✓	✓			Algal blooms and freshwater macroinvertebrate data are illustrated and discussed in Volume 1 of the EICR 2002.
Sediment					
Schedule 10 chemicals	✓	✗	1995/96	✗	Schedule 10 chemicals were recorded in 1995/96 and previous years. Monitoring of Schedule 10 chemicals has ceased as a result of CSIROs recommendation and the EIMP. However, the Licence specifies monitoring for this indicator.
Sewerage Reticulation System					
Discharge Quality					
Effluent Quality including Schedule 10 Chemicals	✓	1-2 years	2 (94-96)	✗	The CSIRO review of the EIMP (covers Hawkesbury-Nepean only), recommended no further sampling and as such no monitoring has been conducted since 1996
Effluent Quality including nutrients					
Effluent Quality including faecal coliforms					

EICR states no ongoing requirements to sample wet weather sewer overflow discharge quality.

However, the Licence requires these indicators to be

monitored.



Environmental Indicator	Monitored	Complied Year to Year	Number of Years of Data ¹	Compiled 2001 – 2002	Performance Reported/
Effluent Quality including enterococci bacteria at representative sites					
Water Quality					
Characterise Schedule 10 chemicals	Once 1997	✘	1	✘	No monitoring has been conducted since 1996
Biota					
Complete current studies on settlement panels and intertidal rock platform communities as a basis for ongoing monitoring	✓	✘	1994	✘	No monitoring has been conducted since 1996
Sediment					
Schedule 10 chemicals, nutrients in sediments at representative sewer overflow sites	✓	✘	1 (95/96)	✘	No monitoring has been conducted since 1996
Air and Land Impacts - Odour and Emissions from Sewerage Treatment Process					
Odour and emissions for sewerage treatment process					
<ul style="list-style-type: none"> Emission quality of chemical scrubbers for compounds such as hydrogen sulfide, chlorine and amines 	For plants that have chemical scrubbers	✓		Chemical scrubbers from Rouse Hill and Castle Hill STPs have been converted to biological scrubbers using activated carbon.	
<ul style="list-style-type: none"> Odour complaints lodged with NSW EPA 	✓	✓	92/93 – 01/02	✓	Section 4 of the EICR 2002 indicates complaints were made and documented in the



Environmental Indicator	Monitored	Complied Year to Year	Number of Years of Data ¹	Complied 2001 – 2002	Performance Reported/
					EICR. An electronic complaints system was used to lodge complaints with the EPA. A copy of the lodgement form was supplied.
Disposal of water treatment sludges					
<ul style="list-style-type: none"> Disposal Volume and re-use percentage 	✓	✓		✓	Tables 4.2 and 4.3 Figure 4.2 Section 4 of Volume 1.
Land application of biosolids					
<ul style="list-style-type: none"> Reporting of volume applied, compliance with EPA code of practice and application location. 	✓Volume and location	✓ (Volume only)	Volume data recorded for 9 years. Location data for the previous 12 months	✓	Reporting of volumes produced and volumes beneficially reused. Reporting of bio-solid use by industry 'type'. Location of application of biosolids is presented for 01 – 02 period only.

Schedule 10 Chemicals

Aluminium
Ammonia (insofar as it is a toxicant)
Arsenic
Barium
Benzidene
Boron
Cadmium
Chloride
Chromium
Cobalt
Copper
Cyanide
Dichlorobenzidine
Diphenylhydrazine
Halogenated aliphatic compounds, including chlorinated alkanes and alkenes
Iron
Lead
Manganese
Mercury
Molybdenum
Monocyclic aromatic compounds, including chlorinated benzenes, chlorinated phenols and phenolic compounds
Nickel
Nitrate and nitrite (insofar as they are toxicants)
Pesticides, including organochlorines and organophosphates
Polyaromatic hydrocarbons, including chlorinated naphthylenes, polychlorinated biphenyls (PCBs) and polycyclic aromatic hydrocarbons (PAHs)
Selenium
Silver
Sulphate
Surfactants
Tin
Trihalomethanes
Total residual chlorine, including available chloramines
Zinc

APPENDIX L
Environment Plan Compliance



Appendix L Environment Plan Compliance

Environment Plan				
Objective	Actions	Target	Compliance	Findings
1. Conserve water supplies and prevent the need for new dams.	1.1 Finalise Water Strategy component of Water Plan 21.	Water Strategy component of WaterPlan 21 to be finalised by December 2001	Partial compliance	The water strategy has not been finalised due to external constraints. However a draft Water Strategy has been submitted to NSW Health. Sydney Water will continue consulting with stakeholders regarding the goals and directions for water management contained in WaterPlan 21.
	1.1.1 Implement Demand Management Program.	Reduction of the quantity of water drawn from all sources to 364 litres per capita per day by 2004/2005. This represents a reduction of 142 litres per capita per day or 28% from the 1990/91 baselines.	No requirement	Observed per capita consumption is 412 litres per capita per day (12 months to 30 June 2002) which is down from 419 litres per capita per day for the same period in 2000. Sydney Water will require substantially greater effort to achieve the target by April 05.
	1.1.2 Implement Recycled Water Strategy.	Increase of between 4 and 59 ML/day in the projected amount of effluent reused, intercepted or otherwise prevented from discharge by 30 June 2005.	No requirement	Since June 2000, the volume of recycling has increased by 4 ML/day. This volume is expected increase following the signing of an agreement with a company to supply 20 ML/day.
		Effluent reuse schemes to be implemented for St Marys, Rouse Hill & West Camden STPs by end of 2003.	No requirement	Sydney Water has implemented reuse schemes for St Marys and Rouse Hill (August 2001) but the reuse scheme for West Camden is now due for completion in 2004.
		Majority of effluent to be re-used by irrigation in the Gerringong Gerroa and Picton Sewerage Schemes by mid 2002.	Partial compliance	Sydney Water achieved 100% reuse of dry weather effluent from Picton STP. The Gerringong-Gerroa Sewerage Scheme is available for connection by residents as of August 2002. A target of 80% recycling by the end of 2002/03 has been set.
2. Provide beneficial and environmental acceptable management of effluent.	2.1 Undertake Overflow Abatement Program in accordance with licence requirements (agreed priorities with the EPA):	Reduction in the number of odour complaints* lodged with the EPA and Sydney Water. <i>*validated as coming from Sydney Water's infrastructure.</i>	Full compliance	The total number of odour complaints decreased from 1036 in 2001 to 899 in 2002.
	2.1.1 Implement SewerFix.	Reduction in both wet and dry weather overflows from our sewage systems.	High compliance	The total number of overflows has decreased from 16,235 (2000/01) to 15,682 (2001/02). However the total number of overflows in 1995/96 was 15,000. Works are in progress in 29 catchments with a June 2004 completion target date.



Environment Plan				
Objective	Actions	Target	Compliance	Findings
	2.1.2 Implement SPS Overflow Risk Reduction Program.	On an annual basis 96% of customers connected to Sydney Water's sewerage systems will not experience an overflow on their land from a sewer owned or operated by Sydney Water.	Full compliance	In 2001/02 98.98% of customer's properties were unaffected by sewage overflows. This is well above the minimum level of 96%.
	2.1.3 Implement Sydney Harbour Wastewater Planning.	Northside Storage Tunnel to be operational by end of 2000.	High compliance	The tunnel was completed in September 2001 and became fully operational in July 2002.
	2.2 Improve wastewater treatment in accordance with Wastewater Strategy:	Compliance with Pollution Reduction Targets (PRT) set by the EPA.	Partial compliance	Sydney Water has not met all STP PRTs set by the EPA in 2001/02. Targets not met include Total Residual Chlorine target at four STPs and unionised hydrogen sulphide target at two STPs. All other PRTs were met.
		Compliance with all PRPs and licence conditions for STP discharges.	Partial compliance	In 2001/02 Sydney Water was either on-track or met the PRP requirements relating to STPs. With respect to licence conditions for STP discharges, a number of non-conformances were recorded. The non-conformances included exceedence of suspended solids and total residual chlorine requirements.
	2.2.1 Improve wastewater treatment at minor ocean plants.	Upgrade of Cronulla STP to tertiary treatment including disinfection to be completed by October 2001.	No requirement	Upgrade of Cronulla STP to tertiary treatment including disinfection completed in April 2001.
		Shellharbour STP upgrade to be completed by end to be 2003.	No requirement	Progress is being made on the upgrade of the Shellharbour STP. Sydney Water expects to complete the upgrade by 2003.
	2.2.2 Implement Illawarra Wastewater Strategy.	Consolidate flows from Bellambi, Port Kembla and Wollongong STPs and upgrade to tertiary treatment at Wollongong STP by June 2004.	No requirement	Under the Illawarra Wastewater Strategy, the upgrade of Wollongong STP is due for completion in mid-2004, while the conversion of Bellambi and Port Kembla STPs to storm flow plants is due for completion in mid-2005.
	2.2.3 Upgrade of Hawkebury-Nepean sewage treatment plants.	Reduce nutrients discharged from Hawkesbury-Nepean STPs by end of 2003.	No requirement	Since 1995, phosphorus and nitrogen discharges in the catchment have been reduced significantly.



Environment Plan				
Objective	Actions	Target	Compliance	Findings
	2.2.4 Develop strategy to encourage re-use, address population growth and reduce sewer overflows in the Georges River area and reduce flows from the Georges River STPs to Malabar STP.	Upper Georges River Wastewater Strategy developed, being implemented by 2005.	No requirement	Strategy due for completion in 2006-07 as per STS licence.
	2.3 Provide sewerage services to currently unsewered areas in accordance with agreed government priorities and funding arrangements.	Sewerage services to be provided to the twelve high priority areas on the Priority Sewage Program by end of 2004.	No requirement	A total of 5736 properties have been serviced under the program. However Sydney Water is currently reviewing the servicing options for some areas and will not provide services to all areas by the end of 2004.
		Effluent management plans for the South Ck (via an Interdepartmental Working Group to be set up by another Agency), Richmond and West Camden STPs developed.	Partial compliance	Draft Report on Summary of Effluent Management Options has been prepared. This report will form the basis of the Effluent Management Plan for South Creek. Effluent management plans have been developed for West Camden STP. Effluent management plan for Richmond STP is being formalised in conjunction with the University of Western Sydney.
3. Maximise beneficial reuse of by-products from Sydney Water's treatment processes	3.1 Implement Long term Biosolids Management Strategy.	Strategy for the transport and handling of biosolids from the major coastal STPs to be resolved by January 2001 (pending advice from DUAP).	Partial compliance	Strategy was submitted to PlanningNSW in August 2000. A Legislative Council Inquiry on the strategy reported to Parliament in November 2001. The recommendations made by the inquiry have been considered in the project to improve the North Head Sewerage Treatment Plant. Planning approval for this project is sought by mid 2004.
	3.2 Maximise beneficial reuse of water treatment residuals.	Report annually on where water treatment residuals are disposed and on beneficial reuse component.		38% of biosolids that Sydney Water produced were Stabilisation Grade A. Sydney Water has recycled or stored for later use, 100% of water treatment residuals from the 10 water filtration plants. 81% of the dry tonnes of residuals generated were recycled.
	3.3 Investigate opportunities and technologies to recover energy value (including methane) from sewage treatment processes.	No target set	Full compliance	Sydney Water stated that they are continuing to investigate the opportunities to capture methane for conversion to energy. Most effort to date however has been in the reuse of biosolids.



Environment Plan				
Objective	Actions	Target	Compliance	Findings
4. Manage stormwater systems under Sydney Water's control to minimise pollution	4.1 Implement Sydney Water's responsibilities under Stormwater Management Plans as adopted in the SEIP 2000 – 2005.	Stormwater Environment Improvement Program to be delivered to schedule.	Partial compliance	In March 2001 Sydney Water's Stormwater Environment Improvement Program (SEIP) was submitted to the EPA and subsequently approved. The first year of the SEIP has been delivered to schedule. The second year is slightly behind schedule.
		GPTs and trash racks to be maintained as per schedule.	Full compliance	All traps were inspected and cleaned as per schedule.
		Water quality improvements within the Alexandra Canal sub-catchment of the Cooks River catchment to be delivered as determined by Project Management Committee.	No requirement	Water quality improvement projects are to commence later in 2002.
		Maintenance practices such as land management, noxious weed control, cleaning of pollution control devices & stormwater channels to be reviewed by June 2001	Partial compliance	Review completed in June 2002.
		Botany Wetlands Plan of Management to be implemented.	High compliance	Botany Wetlands Environmental Management Plan completed in 1997. Actions under the plan have been progressively implemented. Review of the program is scheduled for late in 2002.
		Plan of Management for Trunk Drainage lands in Rouse Hill Development Area to be prepared and implemented.	Partial compliance	Draft Plans of Management have been completed and a pilot community bush regeneration project is being undertaken.
	4.2 Develop stormwater strategy component of WaterPlan 21	Contribution to integrated stormwater management.	Partial compliance	Sydney Water continues to communicate with government, industry, environment groups and the community on the need for a body to develop and implement integrated stormwater management plans.
5. Encourage waste minimisation and cleaner production in the commercial and industrial sectors	5.1 Implement Trade Waste Policy and Management Plan:	No target set	Full compliance	A Trade Waste Program, which includes a Trade Waste Policy has been implemented.



Environment Plan				
Objective	Actions	Target	Compliance	Findings
	5.1.1 Implement Source Control Education Program.	Quality specifications (with respect to trade waste contaminants) for achievement of Sydney Water targets for biosolids reuse to be met.	Full compliance	Preliminary results indicate that this target has been met for 2001/02.
	5.1.2 Implement Trade Waste Agreements.	Quality requirements (with respect to trade waste contaminants) for implemented recycled water schemes to be satisfied.	Full compliance	No specific quality requirements for trade waste contaminants have been included in recycled water schemes, but lithium and total dissolved solids are being monitored. Monitoring to date has indicated no problems with lithium and TDS.
	5.2 Assist Sydney Water to meet relevant environmental regulations.	Compliance with Pollution Reduction Targets for trade waste pollutants (following setting of targets by the EPA).	Full compliance	All PRT and licence conditions with respect to trade waste have been met.
		Compliance with EPA licences with respect to contaminants from trade waste sources.	Full compliance	All PRT and licence conditions with respect to trade waste have been met.
6. Minimise waste and maximise re-use, recovery and recycling waste products	6.1 Implement the Waste Minimisation Strategic Plan through the development and implementation of Annual Waste Minimisation Plans.	Mechanism for minimisation of construction and demolition waste to be included in all capital works projects by end of 2005.	No requirement	Waste management plans are included in all environment management plans prepared for all major capital works.
		Recycling rate for paper of 80% for Head Office by January 2001	High compliance	Paper recycling rate of 80% was achieved in July 2001.
		Waste minimisation awareness program to be completed in Head Office by January 2001 and to be completed across Sydney Water by July 2005.	No requirement	A Waste Minimisation Communications Plan has been developed and is facilitating waste minimisation awareness across Sydney Water.
		Program for incorporating waste minimisation into purchasing for major products and services to be developed by January 2001.	No requirement	A procurement program has been developed which is consistent with the NSW Government's Waste Reduction, Recycling and Purchasing Policy (WRAPP). The program addresses waste minimisation and supplier's environmental performance.
		Commence setting quantitative targets for waste and recycling from July 2001.	Full compliance	An overall recycling target for Head office was set in June 2002 at 55%. In June 2001, a target of 90% of water filtration plant residual removed from onsite storage are to be beneficially used.



Environment Plan				
Objective	Actions	Target	Compliance	Findings
7. Responsibly manage all Sydney Water's land and water assets.	7.1 Develop, maintain and implement policies for responsible management of the natural and cultural heritage values of Sydney Water assets.	E-Guide policies to be appropriately scoped and maintained.	Partial compliance	E-Guide has been developed for SWC staff and contractors. The E-Guide describes corporate requirements on a range of environmental issues and provides guidelines, policies, instructions and systems to improve understanding of environmental issues. Natural resource policies relating to vegetation, weeds, feral animals and pesticides/herbicides usage have recently been reviewed and updated.
		Policy to be established for Movable Heritage.	No requirement	The Moveable Heritage Policy has been deferred. However progress has been made by the undertaking of a pilot study for moveable relics. Plans to accelerate the Moveable Heritage Policy exist.
		Policy to be established for Aboriginal Heritage by 2001.	Partial compliance	Guidelines have been endorsed by SWC Heritage Committee and are being implemented.
	7.2 Develop and maintain natural and cultural heritage inventories to inform Sydney Water's planning, asset management, maintenance and construction activities.	Heritage and Conservation Register (s170) to be established by January 2001.	High compliance	Sydney Water's Heritage and Conservation Register was completed and endorsed by the Heritage Council in June 2002. 59 (Sydney Water) items exist on both the Sydney Water register and the State Heritage Register. Sydney Water's Heritage and Conservation Register has an additional 165 items of local significance. The Heritage Register is being converted for general access via ConnectNet (intranet). It is anticipated that conversion will be completed by December 2002.
		Natural Resources Inventory to be developed with entry of existing assessments and data by June 2001. Assessments for all sites to be completed and entered into inventory by December 2001.	Partial compliance	Natural resource information for approximately 1,050 of Sydney Water site's has been completed so far.
		Manage State Heritage Register items in accordance with gazetted Heritage Council guidelines.	No requirement	There is currently no Heritage Council guidelines for the management of State Heritage items. Sydney Water is managing four of its listed heritage items through conservation management plans. Furthermore, the Botany Wetlands are being managed by an environmental management plan which is considered equivalent to a conservation management plan. Therefore, five (or 8%) heritage listed items are managed under management plans. Sydney Water has also developed a 'Heritage Strategy' during 2001/02 which covers all aspects of heritage management.



Environment Plan				
Objective	Actions	Target	Compliance	Findings
	7.3 Contaminated Land Management Plan implemented.	All land acquisitions and disposals to be investigated for contamination risks.	Full compliance	All properties for acquisition or disposal in 2001/02 were assessed by a suitably qualified person for potential contamination issues.
	7.4 Implement and review Botany Wetlands Plan		High Compliance	Refer to clause 9.5 in Table 9.2.
8. Minimise the environmental impact of Sydney Water's use of energy.	8.1 Increase generation of renewable energy resources.	A minimum of 2.5% of total electricity consumption to be purchased as Green Power.	Full compliance	Since 1997, Sydney Water has purchased 2.5 % of its electricity as Green Power
	8.2 Implement the objectives of Sydney Water's Energy Management Plan to reduce energy use.	Subsequent reduction targets set by the NSW Government Energy Management Policy to be adopted.	No requirement	No additional targets set
		Co-generation plant at Cronulla STP to be commissioned by 2002.	Full compliance	The Cronulla cogeneration plant began operation in 2001/2002 and contributed 1,290,494 kWh of electricity. Application for accreditation by ORER lodged.
		Reduce the energy consumption of Sydney Water's buildings, where cost effectively feasible, by: <ul style="list-style-type: none"> • 15% of the 1995 level by 2001 • 25% of the 1995 level by 2005 	Partial compliance	By 2001 energy consumption had been reduced by 16.1% compared to 1995 levels. In 2002, a further reduction of 0.8% was achieved. Sydney Water expects to meet the 2005 target, by selling its existing Head Office building in the City of Sydney, and relocating to a purpose built highly energy efficient building in Parramatta.
		Review fleet operational procedures to ensure provision of fuel reduction incentives.	High compliance	In 2001/02 a reduction in fuel consumption was recorded. The reasons for this reduction have been considered and reported. The energy management policy includes fleet operations.
9. Continue to improve environmental management practices in Sydney Water.	9.1 Develop a Sydney Water to be wide Environmental Management System complying with ISO 14001.	Sydney Water EMS developed in accordance with ISO 14001 by June 2001.	Full compliance	Sydney Water EMS was developed during 2000/01 and was implemented during 2001/02. Further development occurred on the Sydney Water EMS during 2001/02.
		Program to provide training, advice and regular information to staff on environment management and ESD to be developed	High compliance	Sydney Water launched an 'ESD Awareness' Program in August 2001. 25% of staff have completed the ESD Awareness Training Program. Sydney Water's ConnectNet provides staff with information on environmental management.



Environment Plan				
Objective	Actions	Target	Compliance	Findings
	9.2 Review internal planning and EIA process to achieve better environmental and community outcomes.	EIA process to be reviewed by June 2001	High compliance	Sydney Water has completed a review of its EIA process. The review was completed in December 2001.
		Incorporate the principles of ESD into decisions and planning.	High compliance	Through EIAs, EMSs and EMPs and the Greenfield Manual Sydney Water incorporates to a degree, the principles of ESD into decision making.
	9.3 Implement Environmental Audit Program.	No target set	Full compliance	Sydney Water operates an environmental audit program.
	9.4 Develop and implement environmental due diligence requirements for contractors.	Environmental due diligence requirements for contractors to be implemented.	High compliance	Through disclosure of past environmental performance during tendering, contract clauses, EMPs, audits of contractor's work and appointments of environmental management representatives and environmental work method statements Sydney Water ensures due diligence requirements for contractors.
	9.5 Ensure compliance with environmental regulatory requirements.	Compliance with Protection of the Environment Operations Act (1997).	High compliance	There were no Tier 1 or Tier 2 prosecutions incurred by Sydney Water under the POEO Act during 2001/02. However there was one Tier 3 prosecution.
		Compliance with all Environment Protection Licence discharge conditions.	Partial compliance	Six non-compliances reported under Operating Licence for 2001-2002 Reporting Period.
		Environment Management Plans and conditions of approval in EIA to be complied with.	Partial compliance	During 2001/02 audits identified that most of the EMPs and conditions of approval for major projects were complied with. There were three matters where this was not the case. This included two instances of unapproved land clear and one instance of an alleged disturbance of an aboriginal site.
		Reduction in the number of noise complaints validated as coming from Sydney Water's activities.	Non compliance	Noise complaints rose from 78 in 2000/01 to 94 in 2001/02. Sydney Water has implemented a plan to determine where most noise complaints are coming from.
10. Contribute to collaborative research to improve the environmental performance of assets.	10.1 Implement Research & Development Strategy.	Programs to be developed under Research and Development Strategy over five year timeframe	No requirement	Programs under the R&D Strategy will be established by late 2002. Sydney Water has appointed a Research and Development Manager who will coordinate research and development initiatives.