

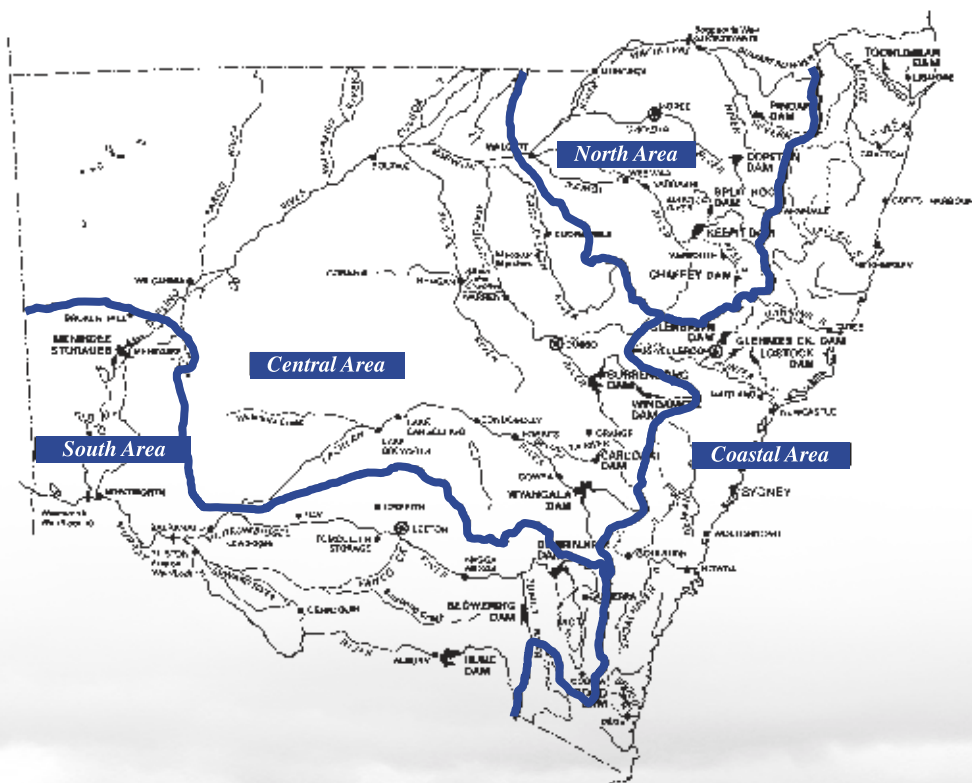
State
water

...improving life with water

ANNUAL
REPORT
2002 - 2003



State
Water



Cover Image: Wyangala Dam, with the new dam wall in the foreground and the original sandstone dam wall exposed. Wyangala Dam received State Water's 2003 JF Bate Medal for the best maintained storage.



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A Message from the Executive Director

I am pleased to present the 2002-03 State Water Annual Report. In my opening remarks to last year's annual report, I described the phase that State Water was entering at the end of 2001-02 as a consolidation and improvement stage for the business. This focus changed when State Water was transferred to the Ministry of Energy and Utilities (the Ministry) in April 2003.

We are now faced with a challenging and exciting time as we work to determine the future structure of the business. However, this transition created some uncertainty for staff and customers. In recent months we have worked very closely with our colleagues in the Ministry to assess the risks involved in our business, address a wide range of business continuity issues and to alleviate some of that uncertainty.

In the short term, State Water continues to have a close working relationship with the Department of Infrastructure, Planning and Natural Resources (DIPNR), formerly the Department of Land and Water Conservation. We have been working closely with DIPNR to develop protocols to ensure that we continue to meet the needs of all our customers and other stakeholders.

The next phase for State Water and the Ministry is to work with the central agencies (Treasury, The Cabinet Office and the Premier's Department) to determine the best business model for the future State Water. This will be an ongoing project over the coming months and will require input from key stakeholders, particularly staff and the Chairs of our eight Customer Service Committees.

I take this opportunity to thank all the staff of State Water for their efforts throughout the past year. The uncertainty they have faced recently came on top of what has proven to be the worst drought on record in a number of valleys.

With the third year of drought conditions our staff had to put in a lot of extra effort to meet our customers' needs. I thank all our staff for their professional and dedicated approach and also acknowledge the customers who displayed tolerance and understanding during these difficult times, as well as those who took the time to record their thanks. In several instances, customers even took the time to acknowledge the efforts of their local staff in the media.

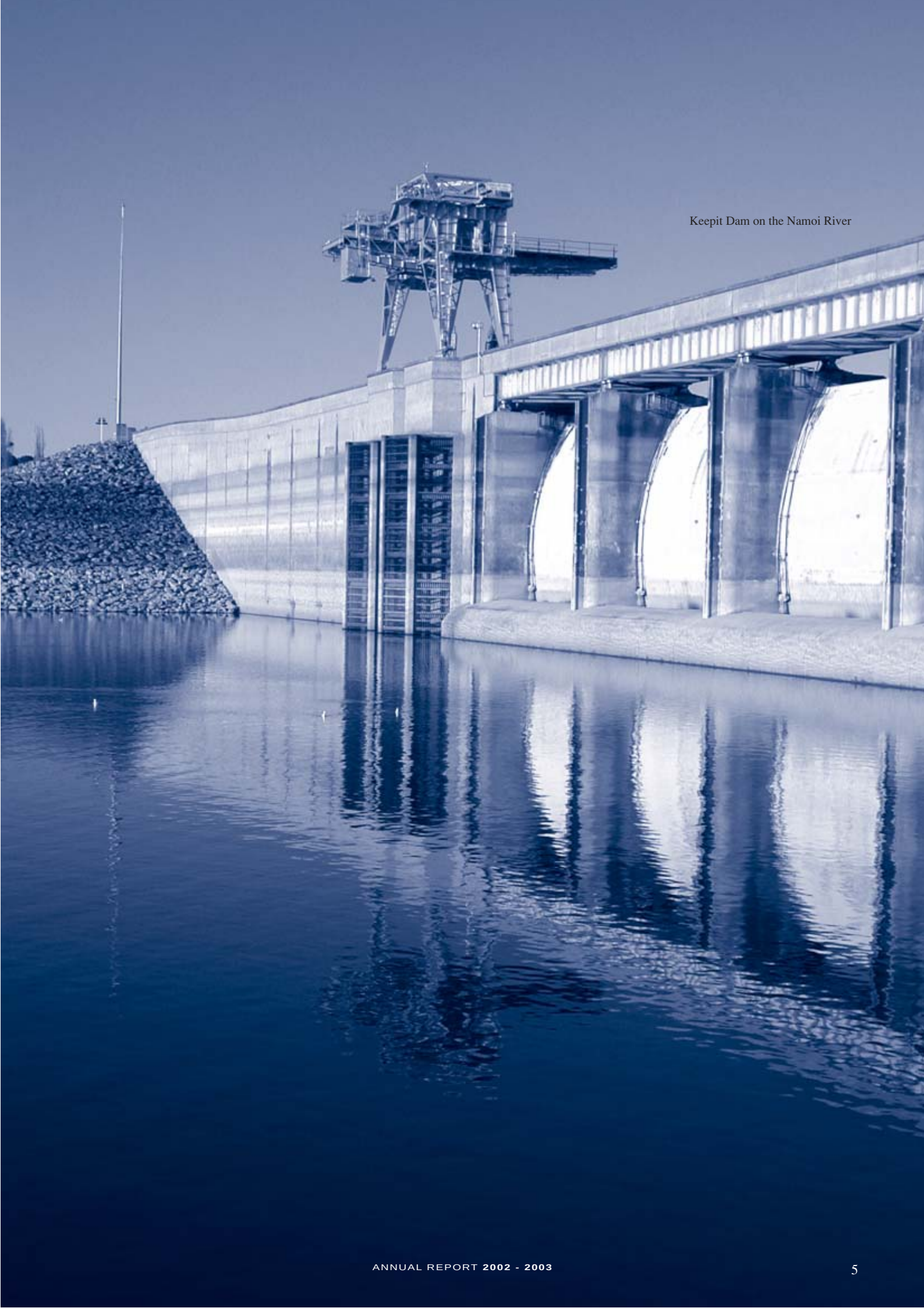
Customer satisfaction was a primary focus for State Water in 2002, with the results of our Customer Satisfaction Survey received in July. Our overall performance rating was seven out of 10, with high satisfaction ratings for water ordering and delivery; courteous staff and clear and accurate invoices.

The survey highlighted areas needing improvement, including local response times and decision making, responses to billing enquiries, asset management and ensuring our staff in Dubbo understand and are aware of the needs at the local level. I hope you have seen some improvements in those areas during the year and assure you that we will continue working towards meeting our customers' needs in the year ahead.

At the end of this financial year we conducted a staff survey to determine the areas we need to improve to ensure we have a satisfied workforce. A working group is addressing the key issues raised by the staff survey.

I encourage you to read this report to gain an understanding of what we achieved in 2002-03.

Abel Immaraj



Keepit Dam on the Namoi River

State Water Strategic Plan 2002-2003

Our Purpose

State Water seeks continuous improvement as a means of effectively meeting the expectations and needs of customers, stakeholders and staff. Our core purpose will continually guide us in everything we do because:

We add value to life through the physical management of water

Our Vision

The future for State Water customers, stakeholders, and staff will continuously improve through the delivery of our vision:
To be recognised as the leading water delivery business, improving life with water.

Our Stakeholders

- Customers • Staff • Minister • DIPNR
- Government • Environment • Community

OUR KEY RESULT AREAS

State Water will focus on the following five Key Result Areas at which we must succeed to deliver our vision. We will measure our success at meeting targets in these five Key Result Areas through the regular monitoring of Performance Indicators.

Customer Service demonstrated through customer satisfaction with our products and services.

Water Delivery demonstrated by water delivered with consideration for timeliness, price, quantity, quality, and environment.

We will measure our success in these five Key Result Areas (KRAs)

Our Values

These six core values will always guide us in the performance of our work.

We will be:

Accountable- We will deliver our charter in an effective manner

Consultative- We will communicate and consult with our stakeholders

Reliable- We will provide products and services that meet agreed expectations of stakeholders

Innovative- We will strive for better solutions to meet stakeholders' needs

We will have:

Integrity- Open and honest in everything we do

Respect- Regard and consideration for all stakeholders' needs

Asset Management demonstrated through the management of water infrastructure for future generations at acceptable cost and minimum risk.

Business Development demonstrated by continuous improvement of the business with appropriate financial performance.

Our People demonstrated by focussed, motivated and highly skilled staff.

KRA 1 Customer Service Aim: Our customers are satisfied with the products and services we provide		
Strategies	Key Actions / Tasks	Measures of Success
Good Communication and Consultation with customers	Maintain and resource Customer Service Committees	Increasing Customer Satisfaction Index
Timely access for all customers to: (1) information; and	Development of interactive electronic services Survey Customers to identify needs and satisfaction with products and services Provide easy access to customers for enquiries and feedback	Number of hits on Internet site Increasing Customer Satisfaction Index Decrease in number of complaints to the statewide call centre (1800 number)
(2) resource availability / sharing decisions	Develop a process and facilitate resource availability, water sharing, service level, and investment decisions	
Cost effective delivery of services	Develop customer and supplier service agreements with negotiated levels of service and standards	Evaluation of compliance with Customer Service Charter % Regulated metering costs/licensed works % Bulk delivery metering costs/bulk delivery works % Billing costs/invoices raised % Billing costs/revenue

KRA 2 Water Delivery Aim: We will deliver water in a manner which meets timeliness, price, quantity quality and environmental requirements		
Strategies	Key Actions / Tasks	Measures of Success
Continuous improvement in water delivery	Through better definition of products such as water sharing plan outcomes Review and enhance water ordering procedures and systems	% Compliance to rules Operational Surplus
Increased water delivery operations efficiency	Streamline operating procedures to maximise delivery of water to meet stakeholders needs Improve the analysis and access of real time and historical water data	% Time, shortfalls in Operational Targets % Water operation costs/ML delivered

KRA 3 Asset Management Aim: We will manage safe, reliable and cost efficient structures

Strategies	Key Actions / Tasks	Measures of Success
Further development and implementation of Total Asset Management Plan and its maintenance	Determine service level and functionality and heritage value in consultation with CSCs and other stakeholders Determine environmental impacts in consultation with CSCs and other stakeholders Benchmarking operational and maintenance procedures practices Develop Optimal Renewal Decision Making (ORDM) procedures	Number of life cycle programs developed Actual maintenance costs as a proportion of MEERA values
Business and Portfolio Risk Management	Determine and understand financial and business risk Documentation management and integration/enhancement of information systems	Number of risk mitigation strategies identified Insurance premiums that reflect risk % of total document scanned and catalogued
Compliance with Dams Safety Committee (DSC) requirements	Develop maintenance and surveillance procedures and audit to ensure compliance with established procedures Maintain a surveillance program for all major structures to ensure their safety Develop a five-yearly safety review program for major dams Update, maintain and trial Dam Safety Emergency Plans (DSEPs)	Total audits carried out 100% of immediate actions highlighted in audits completed Program maintained and updated as appropriate Program developed by 2003 DSEPs updated and maintained as appropriate 50% DSEPs trialled by 2005

KRA 4 Business Development Aim: We will operate a commercially viable business with appropriate financial performance

Strategies	Key Actions / Tasks	Measures of Success
Responsive business planning and development	Develop and implement business plan	Cash Flow
Performance management using the Balanced Scorecard Methodology	Implement integrated quality systems that successfully support the business Implement a Quality plan based on Balanced Scorecard approach	% Cash Flow/Asset Value % overhead \$/total budget expenditure % State Water share of revenue/user share of State Water costs
Compliance with COAG (Council of Australian Governments) and NCC (National Competition Council) requirements	Review existing processes and implement standardised processes	% Total Revenue/SW Total costs % \$Collected/\$Sales % Current Assets/Current Liabilities

KRA 5 Our People Aim: We will develop focussed, motivated and highly skilled staff

Strategies	Key Actions / Tasks	Measures of Success
Competency/motivation based recruitment and training	Identify competencies required and target recruitment actions for critical skills Develop training and accreditation procedures to match skill and quality requirements	Capacity to achieve required outcomes Increased staff satisfaction index
Good communication and consultation with staff	Develop internal communication strategy Involve staff in strategic planning activities and reward the application of business values	Number of Staff Consultative Committee meetings held
Compliance with OH&S requirements at all work sites	Utilise technology in the development of products Survey staff to improve worker involvement, levels of respect and career opportunities Communicate with and involve all staff in Strategic Direction and business operations	Increasing staff safety Productivity rate Rate of absenteeism Rate of staff turnover

Achievements Against the Strategic Plan 2002 -2005

KEY RESULT AREA 1: CUSTOMER SERVICE

Aim: *Our customers are satisfied with the products and services we provide*

KRA 1 Strategy 1: Good communication and consultation with customers

Achievements

Regular Customer Service Committee (CSC) meetings were held in all river valleys with senior managers attending in addition to the Customer Service Managers and Area staff. Customer Service Officers in particular have maintained regular contact with customers and water users, providing efficient service and timely and useful information.

The annual meeting of the eight Customer Service Committee Chairs was held in Sydney on October 2002. This meeting reinforced the positive relationship between State Water and the customers.

The CSC Terms of Reference were reviewed in anticipation of a call for new CSC nominations late in 2002-03. Due to the change of State Water's reporting arrangements from DIPNR to the Ministry, the election process was postponed. All sitting members' terms were extended until 30 June 2004.

In addition to the Customer Service Committees, two Community Reference Panels have been formed to help State Water identify impacts, develop options, select preferred options and implement solutions.

KRA 1 Strategy 2: Timely access for all customers to information and resource availability / sharing decisions

Achievements

Customer newsletters were circulated from State Water to regulated river customers in two of the four State Water Areas on a regular basis.

Off allocation notifications were sent to relevant customers, as soon as a decision was made by the Resource Manager, during all events in 2002-03.

State Water storage levels, water allocations, off allocation announcements and media releases were posted on the Internet for customers, the media and the general public to access. In several valleys, staff also issue this information direct to customers via fax and email. CSC meetings were scheduled to synchronise with critical periods for information dissemination. DIPNR staff were invited to attend and deliver resource management information to customers.

Key stakeholders have been kept informed through timely visits or calls from State Water staff at all levels.

Daily storage levels and release information was broadcast via regional radio and television.



KRA 1 Strategy 3: Cost effective delivery of services

Achievements

Service Level Agreements were negotiated with DIPNR and customers to define the services exchanged and the costs.

A Project Delivery System was developed and implemented during this year to ensure pre-project planning and appropriate risk management to provide cost effective outcomes.

Internal benchmarking and cost comparisons were provided to managers to enable effective control of costs.

Procurement procedures, guidelines and proformas were developed and implemented to ensure procurement was cost effective and compliant.

State Water developed a Memorandum of Understanding with NSW Fisheries to expedite the assessment of State Water structures and works.

KEY RESULT AREA 2: WATER DELIVERY

Aim: We will deliver water in a manner which meets timeliness, price, quantity, quality and environmental requirements.

KRA 2 Strategy 1: Continuous improvement in water delivery

Achievements

The Water Ordering and Usage system software was upgraded to cater for the requirements of the Water Management Act. Considerable additional functionality has been developed and installed in this system.

The Computer Aided Improvements to River Operations (CAIRO) software was further developed and a new version was successfully rolled out and deployed to the Area river operations.

Several State Water Customer Service Officers worked on a project to investigate improved metering efficiency. Comparative trials of a variety of meters were conducted to establish best practice.

State Water assumed a key role in the development of metering protocols to standardise metering practices statewide, to increase metering efficiency and reliability and to meet the requirements of the Water Management Act.

A Water Delivery Forum was held in Moree to allow all staff involved in water delivery to be brought up to date on emerging issues, peer review operations and to seek solutions to any operational problems with systems or software.

KRA 2 Strategy 2: Increased water delivery operations efficiency

Achievements

Throughout the drought period, customers have been encouraged to place, update and amend water orders, with considerable success in minimising operational losses.

The Interactive Voice Response (IVR) system was extended in the Murrumbidgee and Lower Murray valleys to allow customers to place and



amend water orders 24 hours a day.

Automation of valve and gate operations has progressed on three major dams.

KEY RESULT AREA 3: ASSET MANAGEMENT

Aim: We will operate safe, reliable and cost efficient structures

KRA 3 Strategy 1: Further development and implementation of Total Asset Management Plan and its maintenance

Achievements

All major individual assets now have a 30 year asset management program. All planned expenditure has been loaded on to EXPLAN, the Expenditure Planning Tool.

Current levels of service provided by structures were defined, utilising cross-functional groups.

State Water completed heritage assessments for all dams and river structures and prepared heritage guidelines for the Project Delivery System.

We commenced environmental assessments of assets and prepared draft environmental protocols for the Project Delivery System.

Maintenance costs were benchmarked over three financial years to 2001-02. Average maintenance cost were benchmarked at 0.33% of MEERA (Modern Engineering Equivalent Replacement Asset) value for dams and 1% of MEERA value for river structures.

Discussions were held with external experts to develop an Optimal Renewal Decision Making methodology. Model development work is due to start next financial year.

We are currently developing a procedure for the operation and maintenance of spillway gates as a pilot project.

Due to resourcing problems, updating the Total Asset Management Plan was delayed by six months.



KRA 3 Strategy 2: Business and portfolio risk management

Achievements

State Water completed a portfolio risk assessment for dam failure that identified three major and three minor dams with intolerable risks, as well as four major and five minor dams with unacceptable risks.

We developed short-term risk mitigation strategies for three major dams and implemented short-term risk reduction measures at Keepit Dam. Fuseplug works were completed at Keepit Dam to reduce risk. Significant progress has been made in shortlisting long-term options.

Risks were eliminated from two minor dams with the removal of Wellington Dam and the sale of Queen Charlotte Vale Dam. Wellington Dam decommissioning and disposal completed, with re-vegetation of site to be completed in 2003-04.

A Chaffey Dam Upgrade Community Reference Panel was formed and extensively consulted, to select interim works to reduce the level of risk at the dam.

We began discussions with local government representatives to finalise options for Bethungra Dam.

99% of known asset/structure plans and all known documents were scanned and catalogued.

KRA 3 Strategy 3: Compliance with Dams Safety Committee requirements

Achievements

Portfolio risk management actions were undertaken at five dams.

We completed all programmed Dam Safety Surveillance Surveys (20 structures).

We completed 65 surveillance audits at 18 major dams, 12 minor dams and 35 river structures, as well as 18 dam maintenance audits and 22 gated weir maintenance audits. We completed all immediate actions, as highlighted in audit reports.

Five-yearly surveillance inspections were undertaken at five major dams, in accordance with Dams Safety Committee requirements, including safety review.

Dam Safety Emergency Plans (DSEPs) were updated and a trial program developed. DSEPs were trialed at five major dams, with specific improvements to the implementation program.



KEY RESULT AREA 4: BUSINESS DEVELOPMENT

Aim: We will operate a commercially viable business with appropriate financial performance.

KRA 4 Strategy 1: Responsive business planning and development

Achievements

Seven key process improvement measures were implemented to standardise procedures statewide. These included the OH&S Management System, which defines the processes to comply with legislative requirements and the Project Delivery System, which ensures consistently high standards for project planning and risk management.

KRA 4 Strategy 2: Performance management using the Balanced Scorecard methodology

Achievements

State Water planned to refine the Strategic Plan in the last quarter of 2002-03 and implement a Balanced Scorecard approach. The move to the Ministry and the new protocol for Business Planning has delayed the Balanced Scorecard development to 2003-2004.

KRA 4 Strategy 3: Compliance with COAG and NCC requirements

Achievements

Ten processes were reviewed and standardised in 2002-03. Full cost recovery and user pays principles were applied as per the IPART Determination. State Water revenue grew as per the IPART Determination and debt recovery continued to improve, despite a drought year.

Further institutional separation of regulatory and operational functions occurred with State Water's separation from DIPNR.

KEY RESULT AREA 5: OUR PEOPLE

Aim: We will develop focussed motivated and highly skilled staff

KRA 5 Strategy 1: Competency / motivation based recruitment and training

Achievements

A Storages Staff Training and Accreditation Workbook was developed with extensive staff and management interaction. Three Certificate II Workplace Assessment courses were run for State Water staff as part of the Storages Staff Training and Accreditation System implementation.

A Consent Award for storages, operations and asset staff was finalised to the Director-General approval stage. The process has been transparent, consultative and assessed independently as fair and equitable.

Work started on an organisation-wide Training Policy, which will be integrated with the planned Communication and Personal Development program.

A Staff Survey was conducted, with a 72% response rate. In 2003-04 a staff and management working party will develop strategies to address the issues raised in the survey and a performance measurement and reporting



system to make sure actions address the staff concerns.

Four contract positions were terminated, permanent positions were created and three filled. This allowed cost savings as well as a build up of core expertise in house.

KRA 5 Strategy 2: Good communication and consultation with staff

Achievements

A vote was held in late 2002 to determine whether staff wanted the Staff Consultative Steering Committee to continue. The staff voted strongly in favour of continuing the process of area Staff Consultative Committees feeding issues to the central Staff Consultative Steering Committee.

The Staff Consultative Steering Committee met three times this year.

State Water planned to refine the 2002-05 Strategic Plan in a workshop involving management and staff. This process was put on hold with the transition to the Ministry and the changed process for business planning.

Ninety five per cent of the staff, including wages employees, now have an email account. State Water also developed an intranet site using internal resources. The site has delivered an effective communication medium, with core business functions and critical information available to all staff. The Project Delivery System and OH&S system, as well as the business's administrative processes are available to all staff on the intranet.

State Water has only a basic presence on the internet and is developing this presence to deliver services to customers, water users and the community.

KRA 5 Strategy 3: Compliance with OH&S requirements at all work sites

Achievements

State Water developed an Intranet based OH&S Compliance Management System, which has been deployed and implemented across the whole organisation. The initial annual system audit and remedial action strengthened the safety culture in State Water.

Risk Management Plans, Site Safety Plans, Work Method Statements have been developed for high risk areas.



Area Reports

The following are reports from each of State Water's four Customer Service Areas. These reports provide an overview of the Area's operations in 2002-03 and complement the Water Delivery reports for each of the eight valleys later in this document.

CENTRAL AREA REPORT

Water Delivery

This was another dry year for both the Macquarie-Cudgegong and Lachlan Valleys, with very restricted availability of allocation water. It was drier than 1997-98 when the last El Nino event occurred. Inflows to Wyangala Dam matched the historical low inflows recorded in the 1940s drought. Inflows to Burrendong Dam were critically low until February 2003 when the storage level was down to record low of 1.17%. Widespread rain in the catchment in late February brought Burrendong Dam back to about 9%.

The dry conditions warranted bulk water transfers from Windamere Dam to Burrendong Dam to maintain supplies in the Macquarie River. A total of about 105GL was transferred, simulating natural flows to reintroduce variability to the Cudgegong system.

In both Central Area valleys, staff processed a record number of temporary transfers. There were 580 temporary transfers in the Lachlan, totalling about 52,000ML and 422 in the Macquarie-Cudgegong, totalling 96,000ML.

Total resource availability in the Lachlan for the year was equivalent to 31% allocation for general security licences and 100% for the high security licences. General security allocation is from 28% of carryover and 3% of announced allocation. The total usage in the year was estimated at 225,000ML and the valley's average carryover into 2003-04 year is estimated at 1% allocation. On the Belubula River the allocation was 100% for high security licences and 48% of announced allocation and 27% of carryover for general security licences. Total usage was a record 12,000ML for the year.

Total resource availability in the Macquarie River was equivalent to about 59% for general security licences all from carryover and 100% for high security licences. In the Cudgegong Valley average carryover from previous year was equivalent to 140% of the valley's general security entitlements. The total usage in Macquarie Cudgegong was estimated at 376,000ML.

Lake Brewster was empty throughout the year and Lake Cargelligo was actively used to re-regulate flows in the lower Lachlan. Before the February rain, a sudden drop in the discharge capacity of Burrendong Dam caused supply problems to Macquarie Valley water users. A cooperative arrangement of cutbacks in extraction as low as 30% by water users was successfully negotiated, to overcome the capacity problems.

Both the Lachlan and Macquarie CSCs worked hard in resolving a number of operational issues during the year. The Lachlan CSC was instrumental in the development of the drought contingency plan for implementation in July 2003.

Asset Maintenance

Flood security related works were carried out at the spillway of Wyangala Dam. Approximately 50% of the construction work on Power Station B (4.5 MW) at Wyangala Dam was completed.

All the gate guides of intake towers at Wyangala Dam were painted while the water level was low. The fixed wheel gate at Wyangala Dam was refurbished. A part of the downstream steelwork of Wyangala Dam spillway gates was painted. The exterior surface of the penstocks of Carcoar Dam was wrapped with protective tape to minimise corrosion. The access roads of Burrendong Dam were resealed. The discharge valve at Windamere Dam was refurbished. Major periodic maintenance was carried out on time and expenditure in the Central Area was under budget.

Design and contract documentation for rehabilitation and reconstruction work on Warren, Gunningbar, Duck and Crooked Weirs was completed. The tenders for the construction work were called, with construction to start in late 2003. The drop boards of Gum Cowal Channel Regulator were replaced with vertical lift gates. Rehabilitation works on Lake Cargelligo Weir and Island Creek Weir were completed. All the regulator gates on the Lake Cargelligo and Lake Brewster systems were refurbished. Work on the automation of Lake Cargelligo inlet and outlet regulators was also completed during the year. River rehabilitation expenditure was \$90,000 over budget, with increased costs affecting scheduled works.

Approximately 95% of the routine maintenance work planned for the year at the dams, weirs and regulators was completed. The remainder will be completed with the planned routine maintenance work next year. The infrastructure maintenance and management cost for the year was \$200,000 over the \$1.7 million budget.

*Geoff Borneman
Customer Service Manager
Central Area*

Water Delivery

The 2002-03 water year started with all storages except Toonumbar Dam at a healthy level. Toonumbar Dam started the year at 53% of capacity.

Severe drought conditions were experienced in all valleys of the Coastal Area except the Paterson River. The drought resulted in a record high water usage by all customers on the regulated river systems, with record temporary transfers processed by Coastal Area staff.

During the year the Coastal Area received a record number of 122 temporary transfer applications across all river valleys. Besides reflecting on the severity of the drought, this shows that customers have started to embrace water trading.

The Coastal Area reviewed its communication with customers this year. Staff produced their first newsletter for customers. Notification of off allocation supplies was also sent direct to customers by fax or email, instead of relying on media announcements.

The drought and reduced allocations for Toonumbar Dam users improved metering standards on customers' pumping installations. State Water now has better information on water use in the system and customers have more knowledge on the water requirements of their various crops.

The drought on the North Coast highlighted the value of irrigation water to the farms supplied from Toonumbar Dam. They were able to achieve increased production when compared to relying on natural rainfall. There has been an increase in the amount of irrigation plant in the area, with a prediction that water deliveries will increase in future years. It is expected that Toonumbar will no longer be used as a means of drought proofing some properties and that the dam's supplies will be essential for future farming activities.

Coastal Area staff prepared a Resource Assessment or Available Water Determination from base data for the Toonumbar system to enable the system's first ever allocation announcement. The Department of Infrastructure, Planning and Natural Resources will now use this information for the water sharing plans.

Scone Shire Council made a formal application during the year to supply their town water supply directly from Glenbawn Dam by connecting directly with the dedicated penstock provided in the outlet works.

Environmental Flow targets for the announcement of off allocation flows in the Hunter River regulated system were met except for three days when the actual flow dropped below the off allocation flow threshold. On all occasions, the first 12 hours of fresh inflows passed before off-allocation announcements were made.

Asset Maintenance

Both routine and major periodic maintenance works programs saw storage and engineering staff well occupied during the year. A large amount of this work focused on rehabilitation to outlet works and the overhaul of outlet control valves. Design work was completed for remedial work on the Glenbawn Dam outlet channel damaged by releases of water from the flood mitigation zone in 2000-01.

Design work was completed for remedial work on the Glenbawn Dam outlet channel damaged by releases of water from the flood mitigation zone in 2000-01. Glenbawn's hollow jet valves were overhauled.

The overhaul of the 1600mm diameter butterfly valves was started in 2003 at Glennies Creek Dam.

The 610mm diameter and the 750mm diameter FDC (Fixed Dispersion Cone) valves were overhauled at Toonumbar Dam, where the top half of the intake tower access ladder was also replaced.

A new control house was built at Lostock Dam and the village water supply pumping installation replaced. The hydraulic controls for the outlet valves will be relocated inside the control house in 2003.

Five-yearly surveillance inspections were carried out at both Glennies Creek and Lostock Dams.

Greg Hillis
Customer Service Manager
Coastal Area

Water Delivery

Continuing dry conditions made the past year very challenging for State Water in the North Area for both operations and asset management. All the dams had minimal inflows before the start of the season. Namoi Valley had the best reserves with 95% allocation, while Gwydir had 55%, Border Rivers had 50% availability and Peel Valley had a 60% allocation.

Delivery of allocated water was achieved through close consultation with all water users. Higher than average delivery losses were experienced with the dry and hot conditions. This meant river operators had to be vigilant with releases and extractions. The CSCs were closely involved in the consultation process to ensure customer requirements were met with the best water delivery efficiency.

A bulk water transfer from Split Rock Dam to Keepit Dam was needed to deliver the Namoi Valley's demand. This needed environmental approval to ensure the release matched historical flow patterns, with flow variations from 1,500ML per day to 4,000ML per day. The storage capacity of Split Rock Dam was reduced from 95% to 11%. This operation was successfully carried out with the cooperation of landholders downstream of Split Rock Dam and the Namoi-Peel CSC.

In addition to a number of meetings with local landholders, State Water provided daily river flow information to alert all users of the changing river flow conditions. Environmental monitoring of the bulk transfer also proved positive. This ensured the Namoi Valley water demand was met on time from Keepit Dam, including town water requirements for Walgett.

River operation activities for Peel Valley had to be intensified as dry conditions resulted in high irrigation demand. Tamworth City Council's decision to source all its water from Chaffey Dam resulted in daily orders in the Peel. While Tamworth City Council did put in place water restrictions, sustained peak demand was a cause for concern. Improved communication and close liaison between the plant operators and Chaffey Dam staff ensured no disruption to water supply in the city.

This year saw a record number of temporary transfers of allocation, with 321 transfers involving 95,350ML. Continuous accounting is proving to be a better water allocation management system with customers having up to date transaction reports and knowing available water balances. Improved water ordering and regular meter reading ensured the system provided accurate information.

Asset Maintenance

The dry and low flow conditions provided an opportunity to carry out major periodic maintenance on Barwon River weirs. The weirs at Walgett, Collarenebri and Angeldool were refurbished. The weir crest at Walgett was reinstated to its original height to improve Walgett town water security.

Low dam levels also provided an opportunity to inspect and carry out maintenance on areas of the dams that are normally submerged for long periods. The low level outlet valves at Pindari Dam were refurbished, painted and reinstalled. A break in the bulkhead lifting chain required the engagement of specialist divers working to depth of 30 metres to lift the gate and make the low level outlet works operational.

The nine spillway gates at Copeton Dam were painted during the year - their first complete repaint since installation. Low storage levels at Split Rock Dam allowed a detailed investigation of the face slab movement. This led to remedial works on both the right and left toe and face slabs. Blasting sheds at Keepit Dam and Copeton Dam were upgraded to comply with safety standards. Dust extraction and filtration equipment that comply with EPA air quality standards were installed at each location.

Most of the routine maintenance was carried out as scheduled. Inspection and testing of Macalloy Bars at Copeton Dam was delayed due to the gate painting. Dewatering and inspection of the penstock, inspection of butterfly and FDC valves were also completed.

The winter maintenance of weirs was also completed at all North Area weirs. The gearboxes were inspected and oil and grease changes carried out. All gate ropes were cleaned and new grease applied. This opportunity was also used to paint the trashracks at Boolaroo Weir and Tareelaro Regulator. New grease lines on the trunnion bearings will improve safety and the component can be greased with greater frequency. All works were completed within budget.

The major works were contracted out, with staff involvement in managing the projects. Area staff carried out remedial work on the Split Rock Dam face slabs, Keepit Dam bulk head gate painting, weir maintenance as well as all routine maintenance. They also carried out site supervision on the large capital projects.

*Jubrahil Khan
Customer Service Manager
North Area*

Water Delivery

In the South Area, 2002-03 was a difficult year of drought and bush fires, uncertain inflows to the storages, record low water allocations, high volume water trading, and complex water rules. The South Area implemented the delivery of additional water to both the Murrumbidgee and Murray valleys, after negotiations between Snowy Hydro, irrigators and the Department of Infrastructure, Planning and Natural Resources, allowing advanced water delivery from future seasons.

South Area provided design and field support to the Department of Infrastructure, Planning and Natural Resources to complete drought relief construction at Menindee Lakes to secure water supply to Broken Hill and irrigators on the lower Darling River.

Murray irrigators benefited from the introduction of a telephone water ordering system below Torrumbarry Weir this year. This enabled better estimations of flows in the Murray River, and the collection of crop statistics. Yanco Creek operations were improved through separation from the Murrumbidgee River operating system. Staff also initiated a natural resources management plan for the Yanco Creek system, an effluent creek system of the Murrumbidgee River with a 150GL allocation and high water losses.

State Water South processed a record 2,140 water transfer applications, an increase of 141% on 2001-02 and 246% on 2000-01. This was achieved with a 56% reduction in processing time for interstate transfers and 67% reduction for intra-valley transfers.

The two South Area CSCs undertook field visits to appreciate the local water supply and asset management issues. The Murray-Lower Darling CSC met at Menindee Lakes and Mathoura, while the Murrumbidgee CSC met at Balranald.

Asset Maintenance

The drought and low storage levels allowed an opportunity to undertake additional routine maintenance. At Burrinjuck Dam, additional resources were diverted to repair damage from a bushfire that originated from Wee Jasper. A design deficiency in the floodgates at Burrinjuck Dam was corrected.

At Menindee Lakes, damage to concrete normally underwater was discovered and a remedial program is now underway. Remedial works were carried out on the fuse plug.

Installation of an emergency power generator for Blowering Dam is mostly complete, with a considerable

cost saving. Fabrication of steelwork for repairs to the bulkhead gate at Blowering Dam is well underway and expected to be over budget. A contract is yet to be let for a personnel winch at Blowering Dam.

At Burrinjuck Dam many of the small construction projects are nearing completion. Due to their small nature, most are over budget, but due to their size the total cost is insignificant. A major project at Burrinjuck Dam is to decide the future of the heritage-listed cableway, with a recommendation to be considered in 2003-2004. The expenditure on this project is well under allocation, partly due to the uncertainty around whether to retain or replace the structure. All river structures were inspected and no damage found. Hay Weir concrete and rock spalling has been repaired and restored. All the doors at Berembend Offtake were replaced. These projects were within budget.

The doors for the Gulpa Creek regulator were installed late in the year. Due to changes in operating criteria and design, this project was over budget. An automation program also began at Gulpa Creek and should be completed by December 2003. All bridges on the Bundigerry Channel have been provided with signs and safety railing at a cost under the budget. Three weirs in the South Area required inspection of components of the lifting mechanisms, the counterweight rods. The replacement of the rods has been combined into one contract with some savings. This contract is underway.

The community consultation stage of the plan to upgrade Balranald Weir was completed, with community support of a preferred option. An options report on Hartwood Weir on the Billabong Creek is in draft form. The lack of construction information has resulted in costly geotechnical investigations. Reconstruction of this weir was deferred to allow integration with studies of the whole creek system that will be completed in 2003-04.

Reconstruction of Colligen Creek Weir on an effluent stream of the Murray River has been delayed due to additional and lengthy negotiations on environmental issues. Construction is due to start in September 2003.

The downstream face of embankment four was rebuilt at Hume Dam and the spillway electrical works were completed. At Blowering Dam public consultation and option development began for the staged dam upgrade.

Robert Shuttle
Acting Customer Service Manager
South Area



CUSTOMER SERVICE CHARTER REPORT

State Water adopted a Customer Service Charter in February 2003 as part of a process of improving customer service standards. To make significant gains in customer service, State Water relies on the cooperation and support of staff and other stakeholders. For this reason, the Charter is based on the concept of mutual obligation and recognises that customers and other stakeholders have rights, as well as responsibilities.

Responsibilities of State Water customers include obtaining a licence where required by the Water Management Act, complying with licence conditions, ordering water in accordance with the correct procedures, paying water accounts on time, etc.

As its part of the mutual obligation, State Water must clearly communicate the information it requires and standards that must be met and will strive to meet the levels of service included in this Customer Service Charter. The Customer Service Charter nominates levels of service targets designed to provide a benchmark and to facilitate service delivery improvement.

The categories of the Charter relate to State Water's five Key Result Areas (KRA) which are indicators of the success of the business. Each element of undertaking in the Charter is categorised under a KRA, then by one or more of the three requirement areas: Legal/Standards Requirements; Financial Requirements; and Customer Service Requirements.

State Water's Customer Service Charter is a clear expression of the services State Water provides. The Charter enables customers to check their expectations against what is offered and provides a mechanism for giving feedback if those expectations are not met. It also enables the organisation to describe the realistic levels of service they can expect, relative to the resources available.

The Charter defines targets against which State Water's performance can be benchmarked and consequently improved. The first edition of the Charter will be reviewed in consultation with the CSCs late in 2003, with an amended version expected to be issued for 2004-06.

State Water is striving to educate staff about the Charter's targets and aims for staff to reach those targets. In many cases, sophisticated and expensive data collection systems may be required to accurately measure performance. Consequently, the targets for the second edition will be carefully selected to ensure practicable measuring systems are available.

Some of the key achievements in response to the Charter during 2002-03 have included:

- Customer communiques issued quarterly in the Central Area
- Coastal Area customer communiques introduced
- CSC business paper process refined and minutes distributed within two weeks of meetings
- CSC process operating well with issues being raised by customers.
- All issues at storages identified by audit were repaired within 12 months
- Total capital and recurrent expenditure was below budget
- Basic State Water information provided on the Internet, providing access to CSO contact details
- Voice mail introduced in some areas to assist meeting phone answering obligations
- Financial reports prepared on time
- Debts collected as per Debt Collection Policy
- All IPART determination requirements were met
- Staff survey carried out in May 2003
- Formal communication and education feedback system for staff under development
- Wages staff pay rates based on achieving competencies
- Operational training competencies maintained for river and storage staff

A NSW Perspective

Water delivery in 2002-03 was dominated by the ongoing drought. The total water volume in July 2002 was 48% of storage capacity. This dropped to 17.6% by March 2003 and rose marginally by the end of the financial year to 20.7%. This was significantly down from a high of 78% in September 2001.

Allocations were restricted in all valleys, except the Hunter, and the allocations in the Murrumbidgee and Murray were the lowest in the history of those irrigation valleys. Total water deliveries of 4,100GL were about 60% of previous maximum deliveries.

Deliveries to high security customers were not restricted. This meant that all of State Water's town, stock and domestic, industrial and high security irrigation customers received their full allocation for the year and despite the intensity of the drought conditions, State Water delivered all ordered water to these customers.

General security customers received various levels of restricted allocations, depending on the water available in the storage in their particular valley. State Water delivered all water ordered for general security customers, except for a minor shortfall in the Bega valley in January and February 2003. The Namoi, Border, Macquarie and Hunter valleys all benefited from water available from dams that were built in the 1980s and 1990s.

To meet commitments, water was successfully transferred from upstream storages to lower storages. Most notably, Split Rock Dam and Windamere Dam made substantial releases to Keepit and Burrendong Dams respectively. Split Rock Dam went from 95% in July to 11% in January, while Windamere Dam dropped from 87% in July to 50% the following March. These releases were managed to provide as much environmental benefit while minimising inconvenience to customers. River Murray Water made similar releases from Dartmouth to Hume Dam and from Hume Dam to Lake Victoria.

Murray Valley

The Murray Valley had the lowest availability in its allocation history. The general security availability was only 22%, made up of 12% carryover from last year, plus a 10% allocation for this year.

Releases were made from the upper storages (Dartmouth and Hume Dams) to Lake Victoria to ensure supplies to South Australia were met. Hume Dam fell to its lowest-ever summer levels and inflows to the system were the lowest recorded over more than 100 years of records.

Less than 10% of the usual NSW Murray rice crop was

planted. Irrigators negotiated an advance of Snowy Hydro releases for the autumn of 2003. Reserves for 2003-04 were held in Dartmouth Dam and the Snowy storages.

Lower Darling Valley

There was no restriction in this valley and the allocation was 100%. Channel works at Lake Tandure and at Lake Cawndilla maintained supplies in the Lower Darling River, but there were periods when sections of the river stopped flowing.

The 2003-04 supplies for Broken Hill were not secure until autumn flows in the Darling tributaries made their way to Menindee. Additional restrictions were placed on upstream irrigators to ensure these flows reached Menindee.

Murrumbidgee Valley

The allocation announcements in the Murrumbidgee for 2002-03 were the lowest on record. The valley had a full year availability of 47%, made up of 9% carryover and an allocation of 38%. However, a volume equivalent to only 36% could be supplied by 28 February, with the remainder available from Snowy Hydro releases only after 1 March. Some irrigators bought an additional advance of about 9% from Snowy Hydro.

The estimate for the Murrumbidgee rice crop was about 40% of last year's crop. Both Burrinjuck and Blowering Dams fell to less than 5% in early April and all supplies relied on releases from Snowy Hydro.

Lachlan Valley

The valley had an availability of 31%, which was the second lowest on record. This was made up of 28% carryover and an allocation of 3%. The total availability (high plus general security) provided enough water for about 58% of the typical dry year's use.

The Lachlan cotton crop was only about 30% of previous year's crop and most of the valley's available water was used on lucerne, other fodder crops and maize. Wyangala Dam was at its lowest level since 1983, at 9%. This was insufficient for essential requirements in the following year, so drought contingency plans were put in place at the end of the year.

Macquarie Valley

The valley had an availability of 59%, all from last year's carryover. Between August and February, 105GL of water was transferred from Windamere Dam, near Mudgee, to augment supplies in Burrendong Dam and meet the Macquarie Valley's commitments.

During this time, debris blocked some pump filters and some Cudgegong irrigators experienced pumping problems.

Releases were made in August 2002 from Burrendong Dam for the Macquarie Marshes. The Macquarie cotton crop was estimated at about 45% of previous year's crop. Burrendong Dam fell to a new record low of 1.17% in February, before a storm and flooding around Mudgee increased the dam's water level to 9%.

Nyngan and Cobar towns enforced water restrictions and additional high security water had to be allocated to ensure that essential supplies were maintained.

The storage reserves in Windamere and Burrendong Dams, in combination with drought minimum inflows, will be sufficient for next year's essential requirements in the Macquarie Valley and for the Cudgegong Valley's essential requirements and irrigation for the next seven years.

Namoi Valley

The valley had an availability of 95%, all remaining from continuous accounting balances from the previous year. There were no increments in 2002-03.

The release from Split Rock Dam to augment supplies in Keepit Dam began in August 2002 and ended on 29 January 2003. A total of 315 gigalitres was transferred between the dams. The remaining storage volume will secure essential requirements for 2003-04.

Gwydir Valley

The valley had an availability of 55%, all remaining from continuous accounting balances from the previous year. This year's cotton crop was estimated at about 50% of last year's crop. Copeton Dam had enough water at the end of the season to secure essential requirements for 2003-04.

Border Rivers

The NSW availability was 50%, all remaining from continuous accounting balances from last year. There was a partial increment of the "A" component of general security licences, but this was after the end of the summer growing season. There is enough water in Pindari and Glenlyon Dams to meet essential requirements in 2003-04.

Hunter Valley

There was no restriction in the valley and the allocation was 100%, with an additional 10% overdraw from next year. Water use was very high, with most of this water being used on lucerne and other fodder crops, some of which supplied inland NSW with stock feed.

Bega River

An allocation of 60% was announced. This was the lowest announcement on record. Irrigation was suspended on 17 January when Brogo Dam fell to 11%. However, town water supplies continued. This restriction was lifted in late February when rains refilled Brogo Dam.

Toonumbar Dam

Toonumbar Dam experienced record low dam levels all year. An allocation of 45% was made. The dam made a modest recovery during the year and was at 45% of capacity by the end of June.

	Sources of Water				Distribution of Water				
	Storage Inflows	Downstream Tributary Inflows	Decrease in Storage	Total	Environment	End of System	Licensed Water Use	Storage Net Evaporation	Total
North Area									
Border	45	95	207	347	66	70	197	13	347
Gwydir	145	156	296	598	191	117	279	11	598
Namoi	46	26	343	415	106	36	237	36	415
Total North Area	236	277	847	1359	363	223	713	60	1359
Central Area									
Macquarie	116	13	457	586	174	7	376	30	586
Lachlan	48	15	416	479	158	38	237	46	479
Total Central Area	164	28	872	1065	332	44	613	75	1065
South Area									
Murrumbidgee	1631	257	415	2303	282	275	1735	12	2303
Total South Area	1631	257	415	2303	282	275	1735	12	2303
Coastal Area									
Hunter	65	122	224	411	0	154	230	28	411
Total Coastal Area	65	122	224	411	0	154	230	28	411
State Water Total	2096	684	2358	5138	977	695	3291	175	5138

Notes

All figures in Gigalitres (GL). One gigalitre is 1,000 megalitres (ML). One megalitre is 1,000,000 litres (L)

Downstream tributaries includes flows measured at gauging stations on the tributaries and well as ungauged tributary flows measured at the gauging stations on the main river.

Environment includes evaporation from the river, transpiration from the riparian zone and wetlands, over-bank flows and flows to ungauged effluents, basic rights extractions and seepage to groundwater.

Licensed Water Use includes high security, general security and supplementary (Off-allocation).

Storage Net Evaporation is derived from daily pan evaporations and surface area, and is corrected for rainfall.

North Area Namoi does not include any analysis of the Peel, but does include the flow from the Peel into the Namoi.

South Area does not include the Murray as these figures are reported by the Murray Darling Basin Commission.

Coastal Area does not include an analysis of North Coast and South Coast. Hunter includes the Patterson.

Lachlan Valley

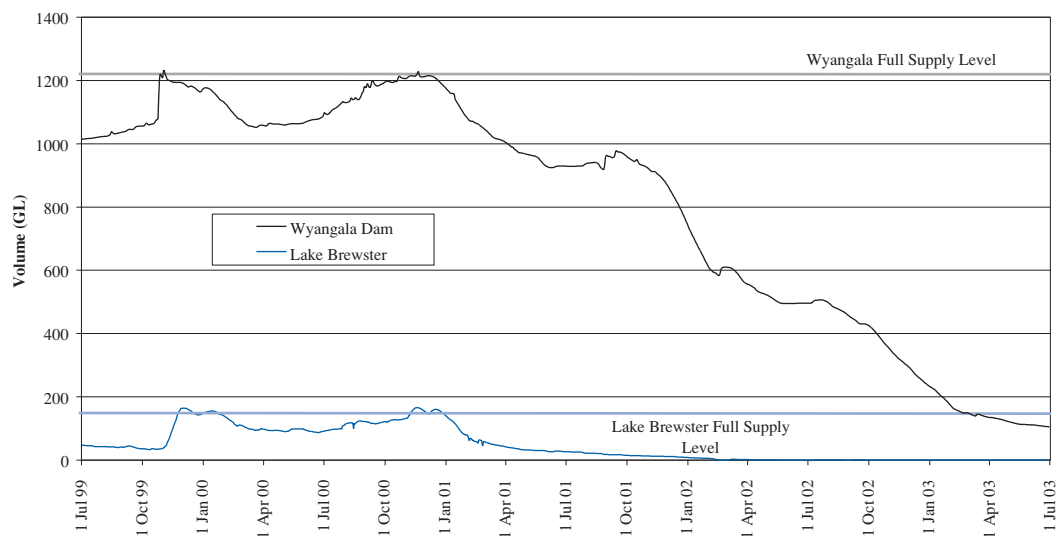
Lachlan Valley water delivery operations were significantly impacted by the drought in 2002-03. Inflows to Wyangala Dam were as low as any recorded in the past 113 years. Wyangala Dam fell from 41% to 9% by the end of the year. Carcoar Dam fell from 78% to 24% and Lake Brewster remained empty for the year.

The following chart shows the storage levels for Wyangala Dam and Lake Brewster for the four years from July 1999 to June 2003. Wyangala Dam has fallen each season since it was last full in December 2000.

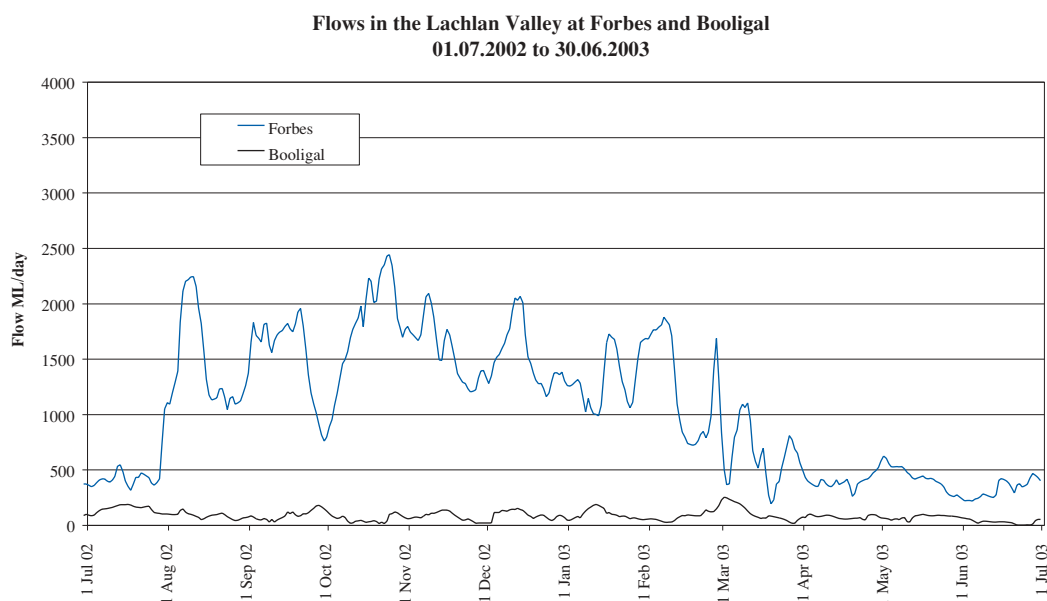


Wyangala Dam at 22% capacity, December 2002, showing the original Dam wall

Lachlan Valley Storages
1.7.1999 to 30.6.2003



The following chart shows flows in the Lachlan River at Forbes and at Booligal. Almost all of the flows in the year came from the storages. Despite the low storage levels and drought conditions, all essential requirements were met. This included all town water supplies and stock and domestic commitments on the river, ana-branches and effluents.



Water Access

High security licence holders in the Lachlan Valley had access to 100% of entitlement for the year. General security licence holders received a 3% allocation in August 2002, as well as a commitment to supply the carryover from 2001/02 of 28%. Almost all of these allocations were called on during the year and the remaining allocation at the end of June was less than 1% of entitlement.

The annual allocation plan for 2002-03 did not allow any access to supplementary water (off-allocation). Due to the drought, there would not have been access to supplementary water under any of the previous rules.

Water Balance

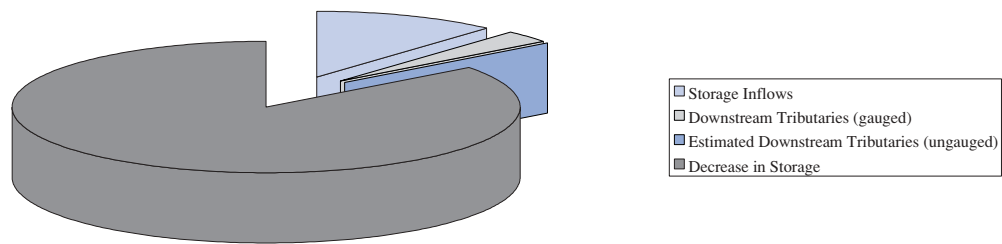
The following table and pie charts set out the sources and distribution of water in the Lachlan Valley. Flows into the dams and in the tributaries downstream of the dams were extremely low. Most of the water in the valley this year came from the reduction in storage volumes, 85% of the total. Flows to the environment (167GL) and flows out of the Lachlan (Corrong plus Willandra homestead, totalling 38GL) were almost three times more than would have gone to the environment from stream flows under natural conditions this year.

The combined inflow to the dams and from downstream tributaries was only 72GL and the river would have stopped flowing for a number of months under natural conditions. These environmental flows include evaporation from the river and effluents, transpiration from riparian vegetation, and seepage to groundwater.

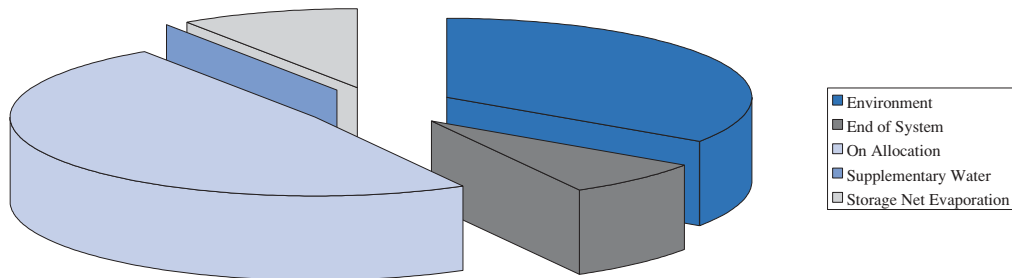
The decrease in storage volume was more than the sum of the water use for the year and the storage evaporation losses.

Sources of Water	GL	%	Distribution of Water	GL	%
Storage Inflows	57	12%	Environment	167	34%
Downstream Tributaries (gauged)	15	3%	End of System	38	8%
Estimated Downstream Tributaries (ungauged)	0	0%	On Allocation	237	49%
Decrease in Storage	416	85%	Supplementary Water	0	0%
			Storage Net Evaporation	46	9%
Total	488	100%	Total	488	100%

Sources of Water - Lachlan



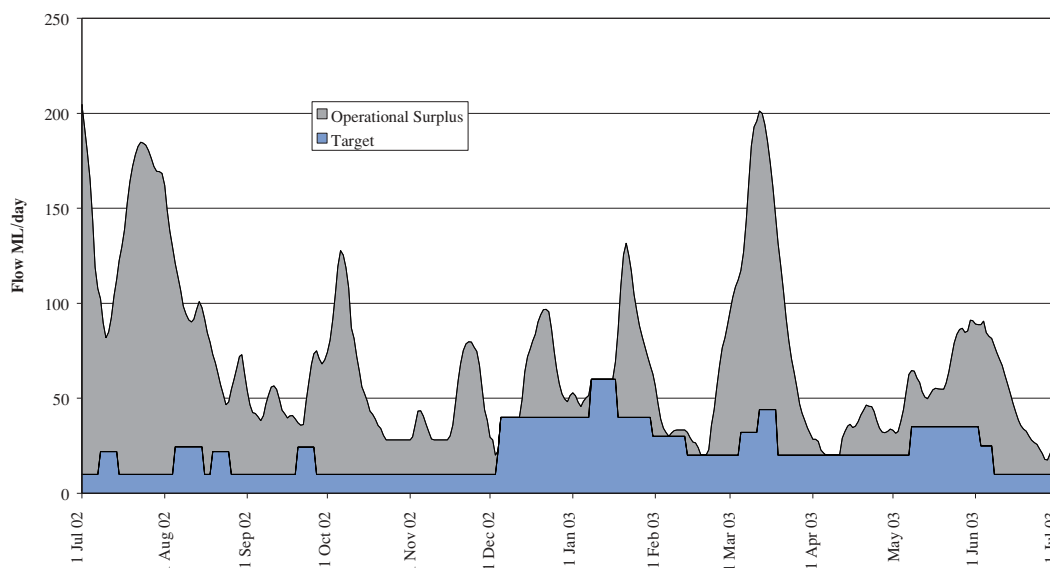
Distribution of Water - Lachlan



Operational Performance

The following chart shows the combined flow of the Lachlan River at Corrongo (upstream of the Great Cumbung Swamp). This total flow is divided into two categories: operational surplus and target flow. The operational surplus is any flow above target that has come from dam releases and in hindsight, was an over-release. The total operational surplus for the year was 17,389ML and was only 4.1% of the water released from Wyangala Dam and about 12.9% of the water released from Brewster Weir.

Operational Surplus at Corrongo
1.07.02 to 30.06.03



The other indicator of State Water's operational efficiency is the number of days of flow shortfalls. That is, the periods when not enough water has been released to supply customers' orders. For the Lachlan Valley at Corrongo there were 27 days (7.4%) when flows were below target. There were no significant problems for customers as a result of these shortfalls.

Macquarie Valley

The Macquarie Valley water delivery operations were significantly impacted by the drought in 2002-03. Burrendong Dam fell from 37% to a record low of 1.17% on 20 February 2003 before rising to 9.3% by the end of the year. Windamere Dam fell from 87% to 50%.

Releases from Windamere Dam to Burrendong Dam began in August 2002 and continued until the rain and Mudgee flood on 22 February 2003.

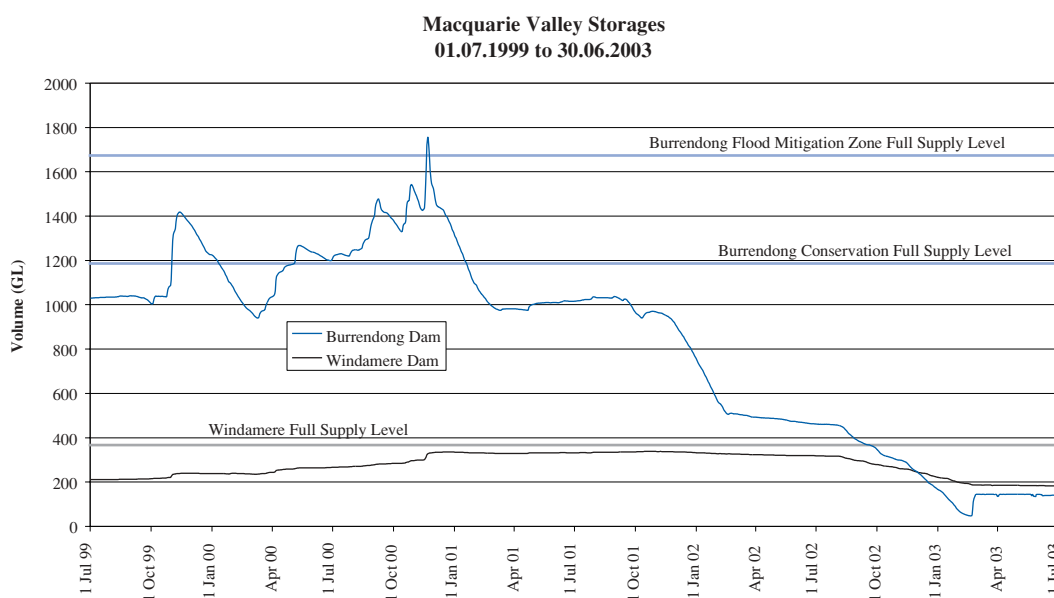
A total of 105GL was transferred between the dams. The releases fluctuated through each month to mimic natural flows and benefit the riverine environment.



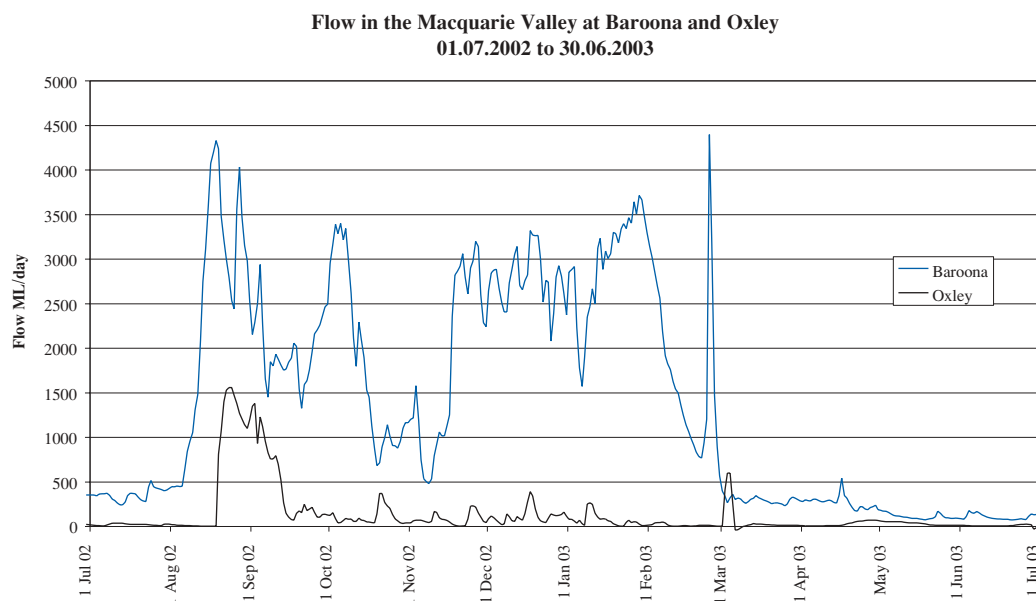
Releasing water from Windamere Dam

Customers along the Cudgegong River reported a number of pumping problems from algae and debris blocking foot valves and filters. The low levels in Burrendong Dam in February 2003, and the subsequent reduction in release capacity, forced rescheduling of the final week's orders in the Macquarie and a plan to further modify the releases from Windamere Dam. State Water worked with the CSC to modify the Windamere release pattern to increase flows at Burrendong Dam and restrict Macquarie extractions, however the February rains allowed these plans to be cancelled. In hindsight, the releases from Windamere Dam should have started about 10 days earlier in August 2002 or have been at about 5% higher.

The following chart shows the storage levels for Burrendong and Windamere Dams for the four years from July 1999 to June 2003.



The following chart shows flows in the Macquarie River at Baroona (upstream of Narromine) and at Oxley. The increased flows at Oxley in August and September 2002 reflected the delivery of 47GL of Wildlife Allocation to the Macquarie Marshes. Almost all of the flows in the year came from the dams. Widespread rain in late February ended the irrigation season and the dams were on low releases until the end of the year.



Water Access

High security licence holders in the Macquarie Valley had access to 100% of entitlement for the year. General security licence holders received no allocation during the year and carried over balances equivalent to about 59% of entitlement on 1 July. This fell to about 3% by 30 June. Cudgegong licence holders carried over about 140% of entitlement, but after usage and temporary transfers to the Macquarie Valley this fell to about 100% of entitlement.

There was no access to supplementary water in the Macquarie Valley in 2002-03.

Water Balance

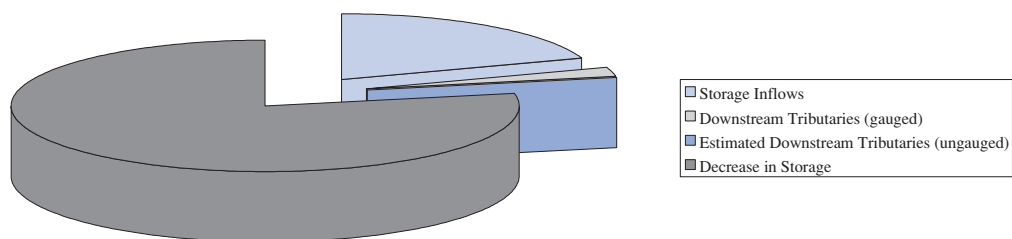
The following table and pie charts set out the sources and distribution of water in the Macquarie Valley. Flows into the dams and in the tributaries downstream of the dams were very low until the rain of February 2003. Most of the water in the system this year came from the reduction in storage levels. Flows to the environment (174GL) and flows out of the Macquarie (7GL) were about 40% more than would have gone to the environment from stream flows under natural conditions this year.

The combined inflows to the dams and from downstream tributaries were only 129GL and the river would have stopped flowing for a number of months under natural conditions. These environmental flows include flows to the Macquarie Marshes, evaporation from the river and riparian vegetation, seepage to groundwater and over-bank flows.

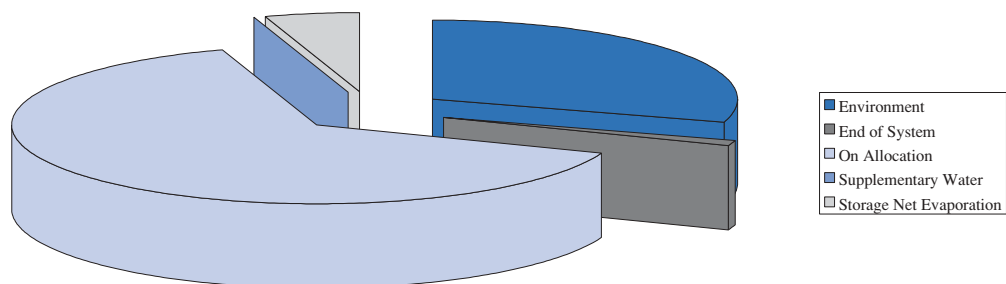
The decrease in storage volume was more than the sum of the water use for the year and the storage evaporation losses.

Sources of Water	GL	%	Distribution of Water	GL	%
Storage Inflows	116	20%	Environment	174	30%
Downstream Tributaries (gauged)	13	2%	End of System	7	1%
Estimated Downstream Tributaries (ungauged)	0	0%	On Allocation	376	64%
Decrease in Storage	457	78%	Supplementary Water	0	0%
			Storage Net Evaporation	30	5%
Total	586	100%	Total	586	100%

Sources of Water - Macquarie Cudgegong Valley



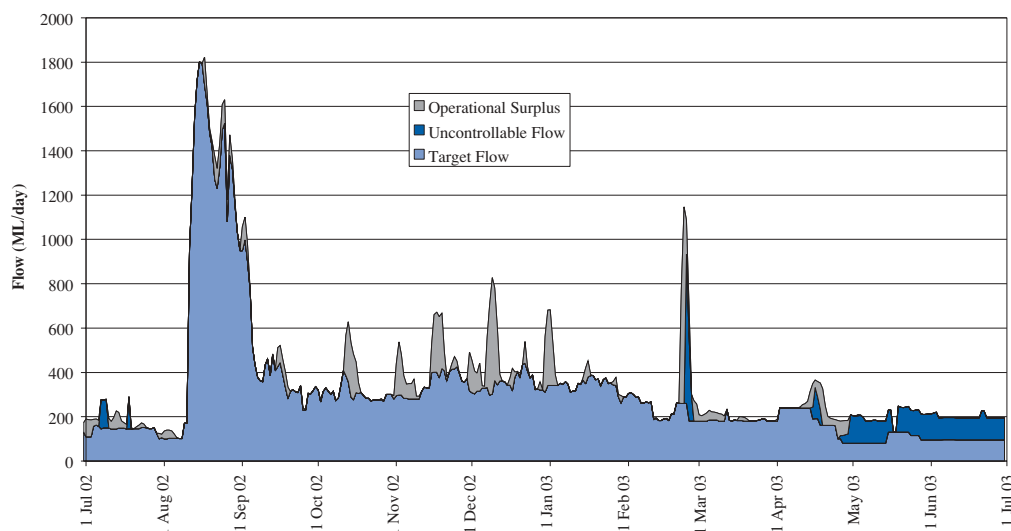
Distribution of Water - Macquarie Cudgegong Valley



Operational Performance

The following chart shows the combined flow of the Macquarie River at Oxley and the Gunningbar Creek offtake for each day during 2002-03. This total flow is then divided into three categories: operational surplus, uncontrollable flow and target flow. The operational surplus is any flow in excess of target that has come from dam releases and, in hindsight, was an over-release. Uncontrollable flow is water from the downstream tributaries that could not be used to satisfy customers' orders. The total operational surplus for the year was 13,810ML and was only 2.6% of the water released from the dam.

Operational Surplus at Oxley and Gunningbar Ck
01.07.2002 to 30.06.2003



The other indicator of State Water's operational efficiency is the number of days of flow shortfalls. That is, the periods when not enough water has been released to supply customers' orders. For the Macquarie Valley there were 150 days (41%) when flows were below target. There were no significant problems for customers as a result of these shortfalls. This high percentage of shortfalls is a reflection on the impact of the drought and the need to minimise operational surpluses.

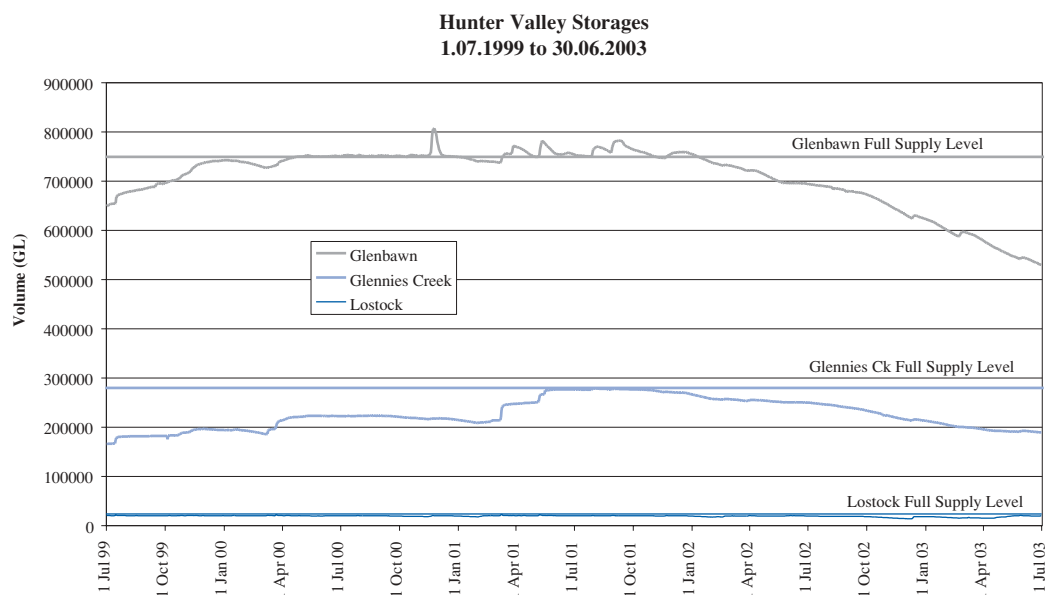
Hunter Valley

Hunter Valley water delivery operations were significantly impacted by the drought in 2002-03. Glenbawn Dam fell from 92.3% to 70.1% over the year. Glennies Creek Dam started at 88.2% and fell to 66.7%. Lostock Dam began at 96.3%, fell to 67.9% by 10 February, then filled and spilled between 27 May and 6 June. It ended the year at 98.3%

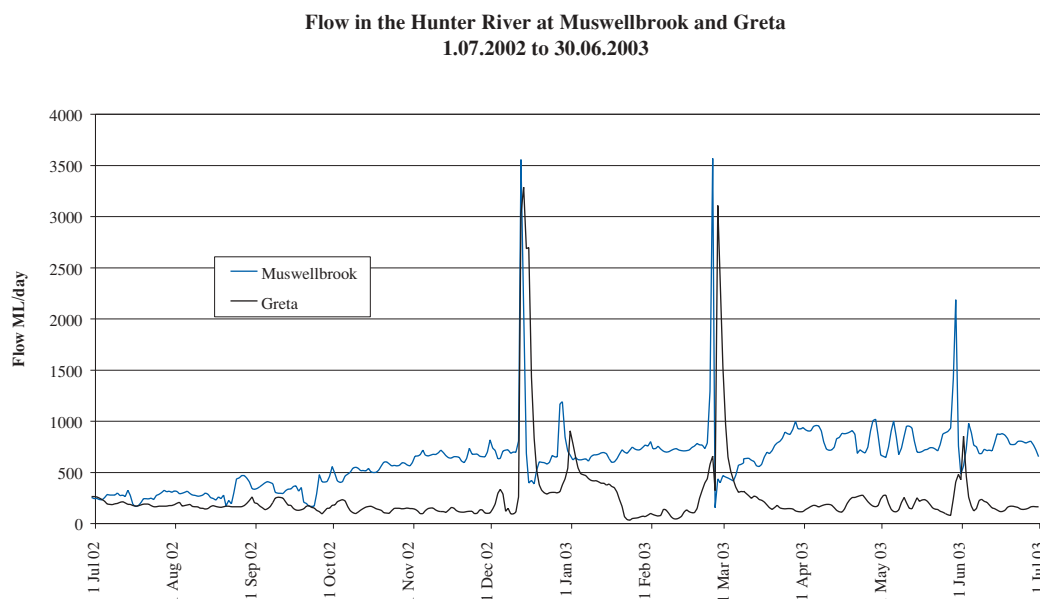


Removing the butterfly valve at Glennies Creek Dam

The following chart shows the storage levels for Glenbawn, Glennies Creek and Lostock Dams for the four years from July 1999 to June 2003.



The following chart shows flows in the Hunter River at Muswellbrook and at Greta. Most of the flows in the year came from the dams. There were significant flows in the downstream tributaries in December, February and May.



Water Access

High security licence holders in the Hunter Valley had access to 100% of entitlement for the year. General security licence holders also received a 100% allocation.

There were three off-allocation events this year: 12 to 18 December, 22 February to 6 March, and 28 May to 2 June.

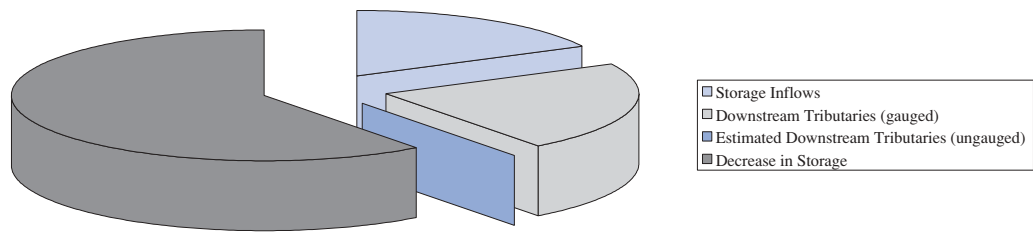
Water Balance

The following table and pie charts set out the sources and distribution of water in the Hunter Valley. Flows into the dams and in the tributaries downstream of the dams were very low. Most of the water in the system this year came from the reduction in storage levels. The environmental flows of 20GL include evaporation from the river and riparian vegetation, and seepage to groundwater. The sum of this environmental flow and the end of system flow was 174GL and this was more than the natural flow into the dams and the downstream tributaries of 147GL. In drought years the environment receives more water than it would have under natural conditions where the river would have stopped flowing for some periods.

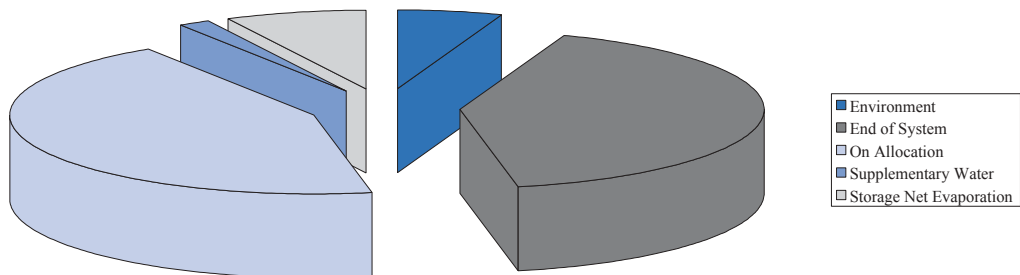
The decrease in storage volume was more than the water use and the storage evaporation losses for the year.

Sources of Water	GL	%	Distribution of Water	GL	%
Storage Inflows	65	17%	Environment	20	5%
Downstream Tributaries (gauged)	82	22%	End of System	154	41%
Estimated Downstream Tributaries (ungauged)	0	0%	On Allocation	163	44%
Decrease in Storage	224	60%	Supplementary Water	6	1%
			Storage Net Evaporation	28	8%
Total	371	100%	Total	371	100%

Sources of Water - Hunter & Paterson



Distribution of Water - Hunter and Patterson



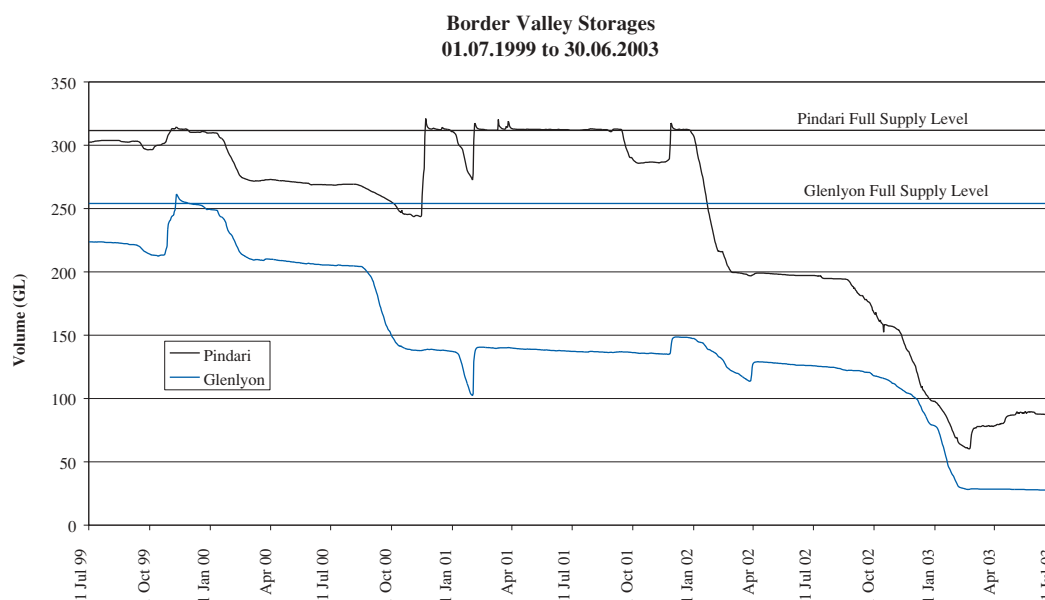
Border Valley

The Border Valley water delivery operations were significantly impacted by the drought in 2002-03. Pindari Dam fell from 63% to a low of 19% on 22 February 2003, before rising to 28% by the end of the year. Glenlyon Dam started at 50% and fell to 11% by the end of June.

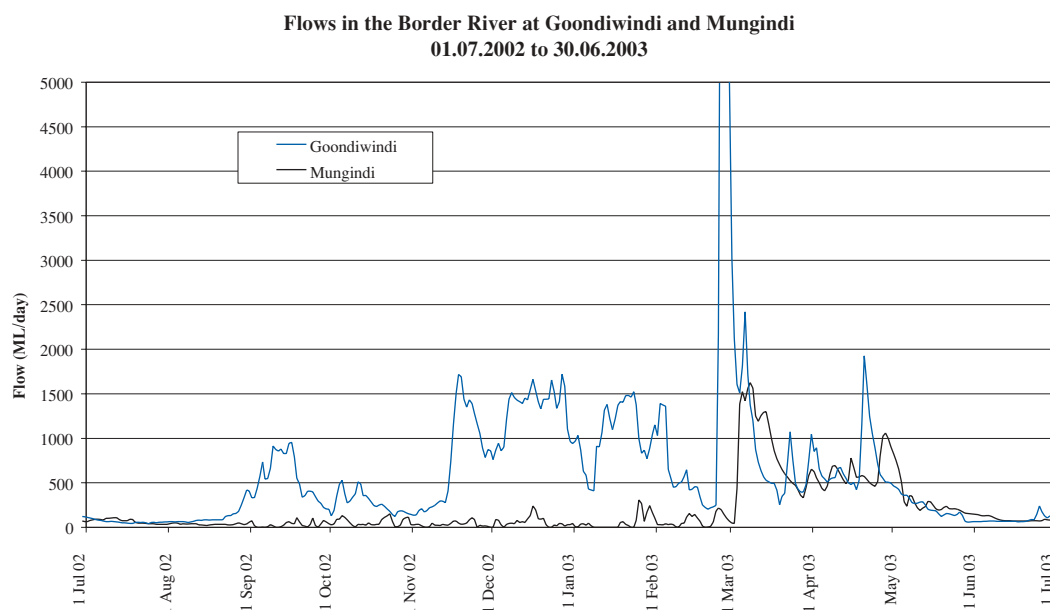
The following chart shows the storage levels for Pindari and Glenlyon Dams for the four years from July 1999 to June 2003.



The effect of the drought at Pindari Dam



The following chart shows flows in the Macintyre River at Goondiwindi and the Barwon River at Mungindi. Almost all of the flows between July and late February came from the dams. Widespread rain in late February ended the irrigation season and the dams were set on minimum releases. Flows in the rivers from then on came from the tributaries below the dams. Initially there was no supplementary access allowed to these tributary flows because of the urgent need for water at Menindee Lakes.



Water Access

High security licences in the Border Valley had access to 100% of entitlement for the year. General security licences received no increments during the year until the A component of general security licences received 55% in May 2003. General security account balances were equivalent to about 50% of entitlement on 1 July 2002 and fell to about 5% by 30 June 2003.

There was a short period of access to supplementary water of 2% from 1 to 7 May 2003.

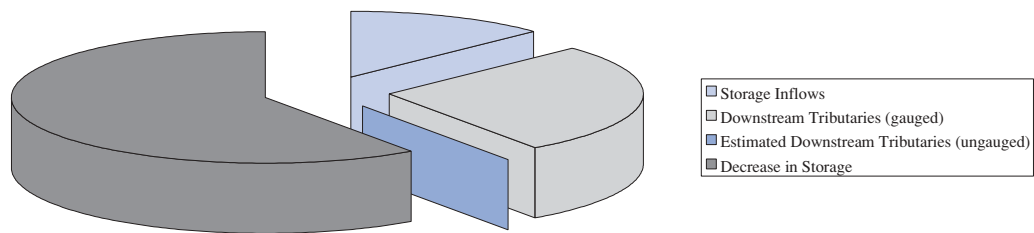
Water Balance

The following table and pie charts set out the sources and distribution of water in the Border Valley. Flows into the dams and in the tributaries downstream of the dams were very low until rain fell in February. Most of the water in the system this year came from the reduction in storage levels. Flows to the environment (66GL) and flows out of the Barwon (70GL) were about the same share that would have gone to the environment from stream flows under natural conditions (139GL). These environmental flows include evaporation from the river and riparian vegetation, seepage to groundwater, and over-bank flows.

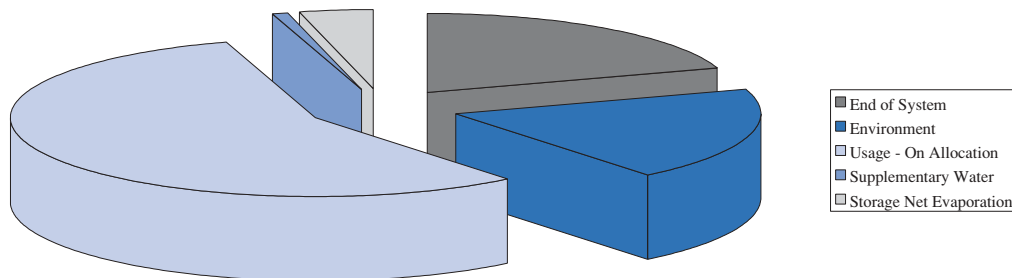
The water use totals in these figures include NSW and Queensland customers.

Sources of Water	GL	%	Distribution of Water	GL	%
Storage Inflows	45	13%	End of System	70	20%
Downstream Tributaries (gauged)	95	27%	Environment	66	19%
Estimated Downstream Tributaries (ungauged)	0	0%	Usage - On Allocation	194	56%
Decrease in Storage	207	60%	Supplementary Water	4	1%
			Storage Net Evaporation	13	4%
Total	347	100%	Total	347	100%

Sources of Water - Border Valley



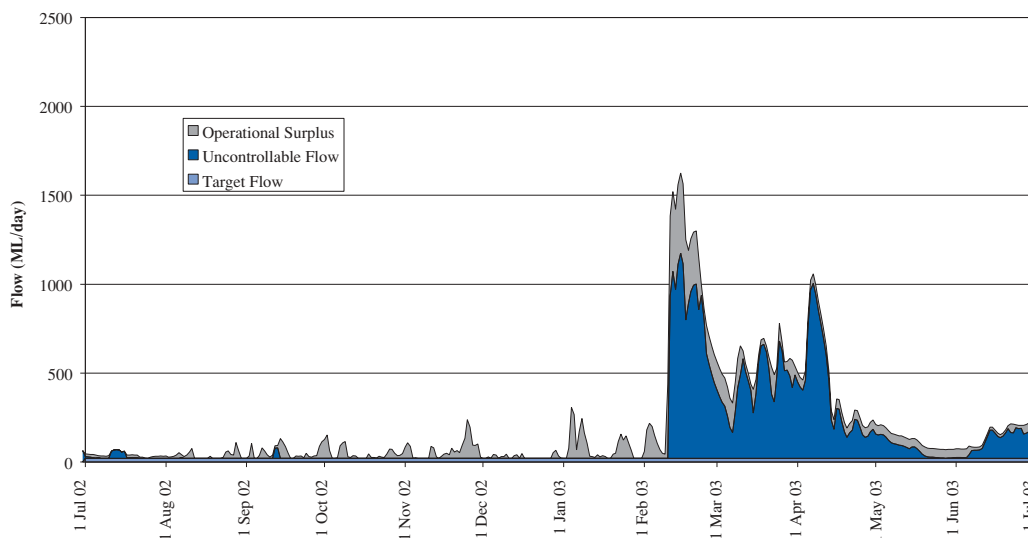
Distribution of Water - Border Valley



Operational Performance

The following chart shows the flow of the Barwon River at Mungindi for each day during 2002-03. This total flow is then divided into three categories: operational surplus, uncontrollable flow and target flow. The operational surplus is any flow above target that has come from dam releases and, in hindsight, was an over-release. Uncontrollable flow is water from the downstream tributaries that could not be used to satisfy customers' orders. The total operational surplus for the year was 23,923ML and was 8.5% of the water released from the dams.

Operational Surplus at Mungindi
01.07.2002 to 30.06.2003



The other indicator of State Water's operational efficiency is the number of days of flow shortfalls. That is, the periods when not enough water has been released to supply customers' orders. For the Barwon River at Mungindi there were 55 days (15%) when flows were below target. This was the same percentage as last year, but the shortfalls were not as serious as those experienced in that year.

Gwydir Valley

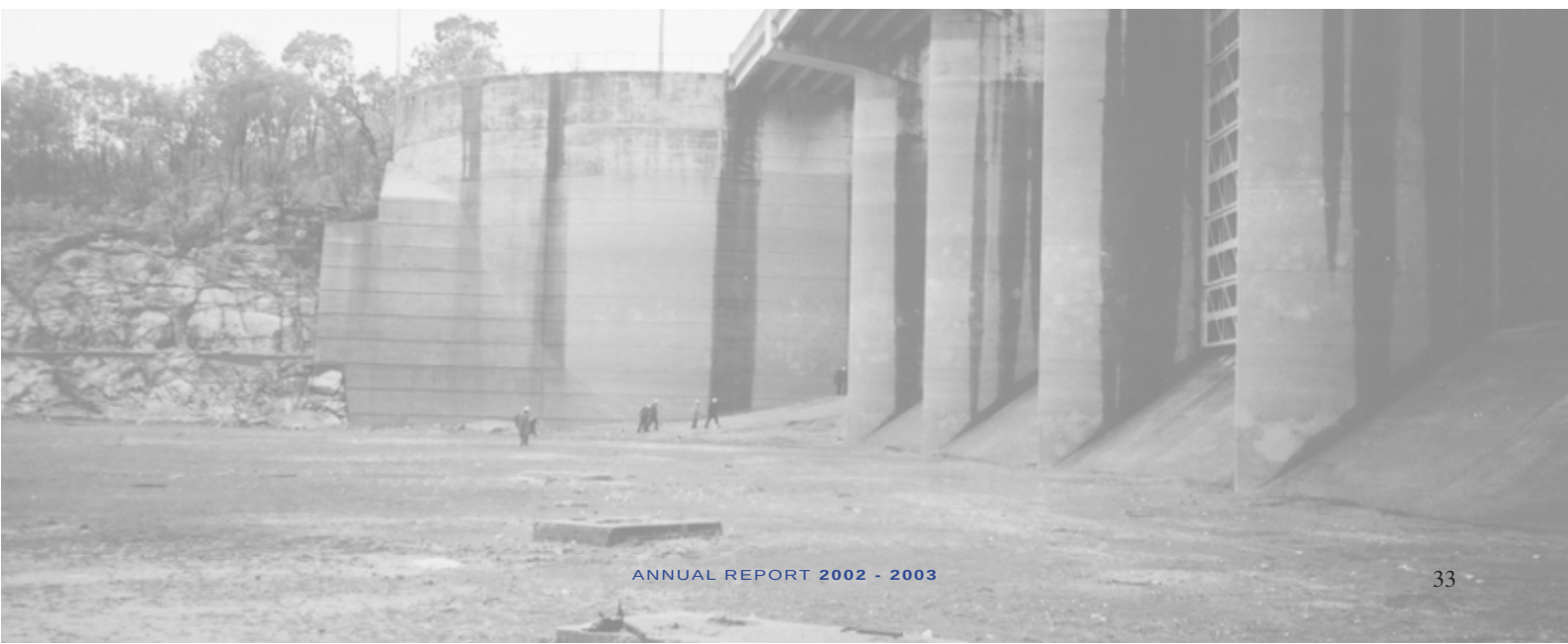
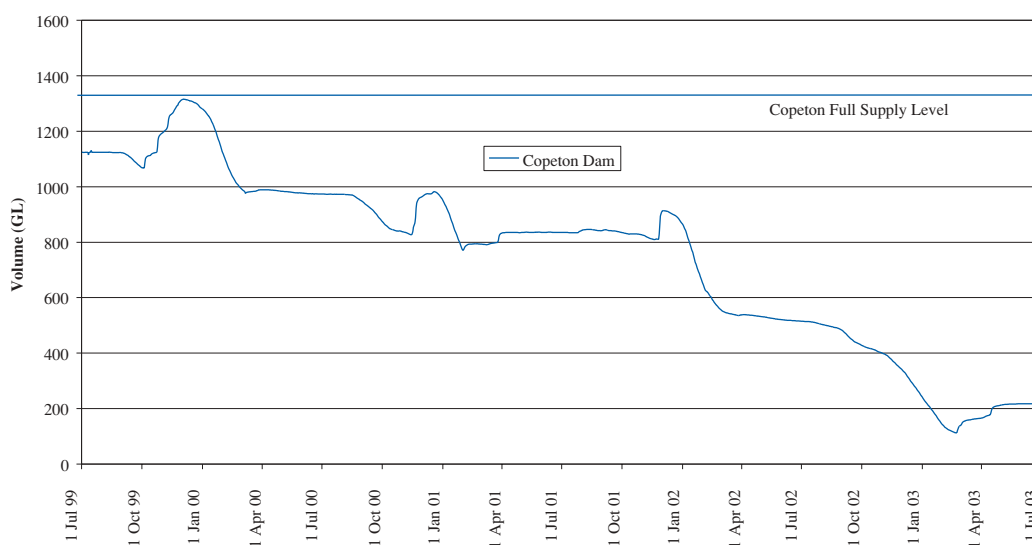
The Gwydir Valley water delivery operations were significantly impacted by the drought in 2002-03. Copeton Dam fell from 37% to a low of 7% on 22 February before rising to 15% by the end of the year.

The following chart shows the storage levels for Copeton Dam for the four years from July 1999 to June 2003. Copeton Dam has generally been falling over this whole period, with only three small inflows occurring in period prior to this year and two small periods of inflow late this year.

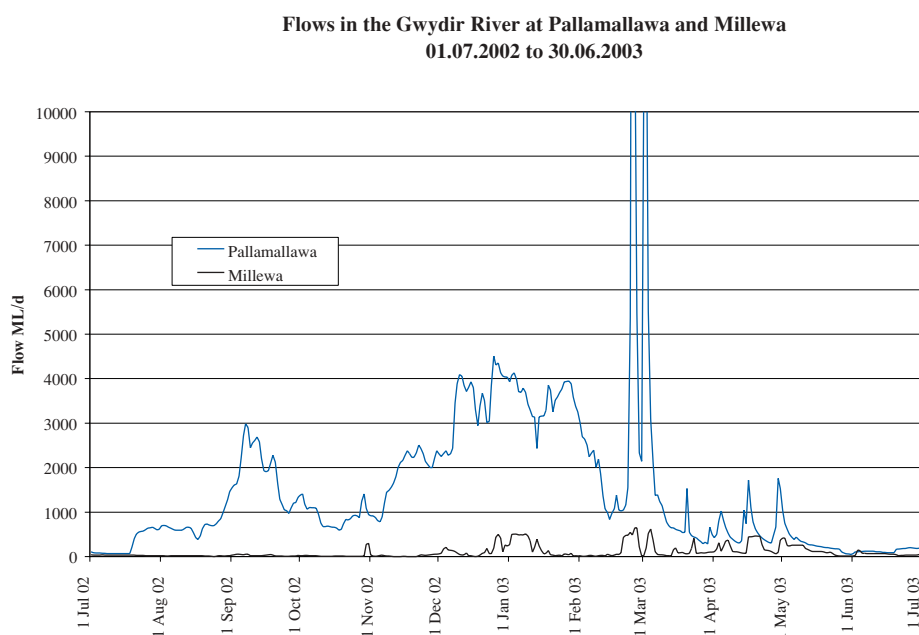


Tareelaro Weir on the Gwydir River, near Moree

Gwydir Valley Storage
01.07.1999 to 30.06.2003



The following chart shows flows in the Gwydir River at Pallamallawa and Millewa. Almost all of the flows between July and late February came from the dams. Widespread rain in late February ended the irrigation season and the dam was on minimum releases until the end of the year. Flows in the rivers from then on came from the tributaries below the dams. There was very restricted supplementary access to these tributary flows because of the urgent need for water at Menindee Lakes.



Water Access

High security licences in the Gwydir Valley had access to 100% of entitlement for the year. General security licences received no increments during the year. General security account balances were equivalent to about 55% of entitlement on 1 July 2002 and fell to about 2% by 30 June 2003.

There were two short periods of access to supplementary water in parts of the river and effluents. There was a 4% event between 24 and 27 February and a 2% event between 2 and 4 May 2003.

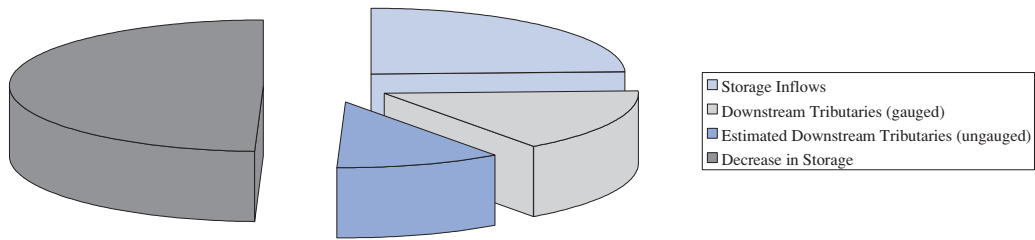
Water Balance

The following table and pie charts set out the sources and distribution of water in the Gwydir Valley. Flows into the dams and in the tributaries downstream of the dams were very low until rain fell in February 2003. Most of the water in the system this year came from the reduction in storage levels. Flows to the environment (191GL) and flows out of the Gwydir (117GL) were about the same share that would have gone to the environment from stream flows under natural conditions (301GL). These environmental flows include evaporation from the river and riparian vegetation, seepage to groundwater, and over-bank flows.

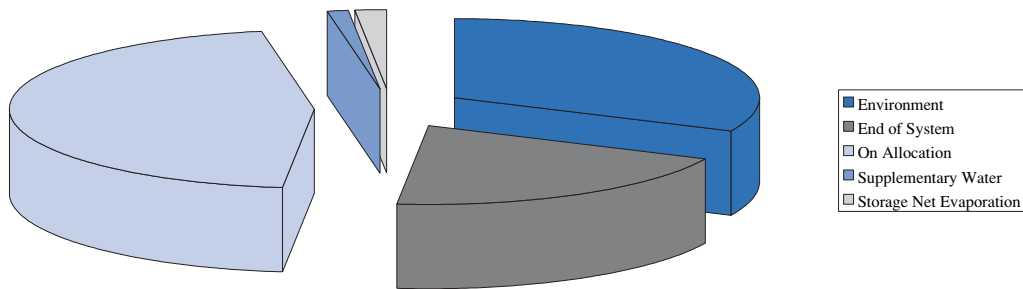
Total water use for the year, plus the storage evaporation losses, was about the same as the reduction in storage volume.

Sources of Water	GL	%	Distribution of Water	GL	%
Storage Inflows	145	24%	Environment	191	32%
Downstream Tributaries (gauged)	94	16%	End of System	117	20%
Estimated Downstream Tributaries (ungauged)	62	10%	On Allocation	273	46%
Decrease in Storage	296	50%	Supplementary Water	6	1%
			Storage Net Evaporation	11	2%
Total	598	100%	Total	598	100%

Sources of Water - Gwydir



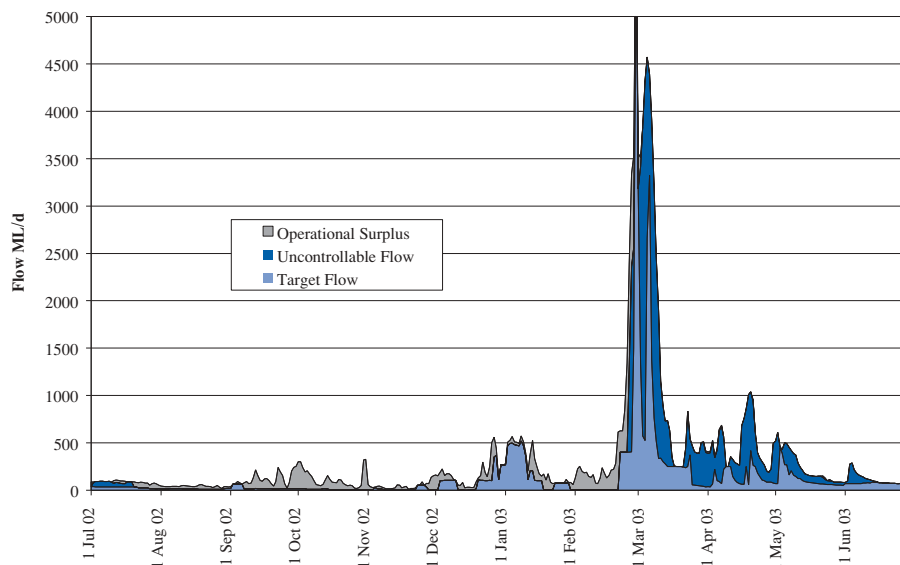
Distribution of Water - Gwydir



Operational Performance

The following chart shows the combined flow of the Gwydir River at Millewa, the Mehi River at Collarenebri and the Carole Creek at Gallaway for each day during 2002-03. This total flow is then divided into three categories: operational surplus, uncontrollable flow and target flow. The operational surplus is any flow in excess of target that has come from dam releases and, in hindsight, was an over-release. Uncontrollable flow is water from the downstream tributaries that could not be used to satisfy customers' orders. The total operational surplus for the year was 22,991ML and was 5.3% of the water released from the dam.

Operational Surplus for the Gwydir Valley
01.07.2002 to 30.06.2003



The other indicator of State Water's operational efficiency is the number of days of flow shortfalls. That is, the periods when not enough water has been released to supply customers' orders. For the Gwydir Valley there were 36 days (10%) when flows were below target. There were no significant problems for customers as a result of these shortfalls.

Namoi Valley

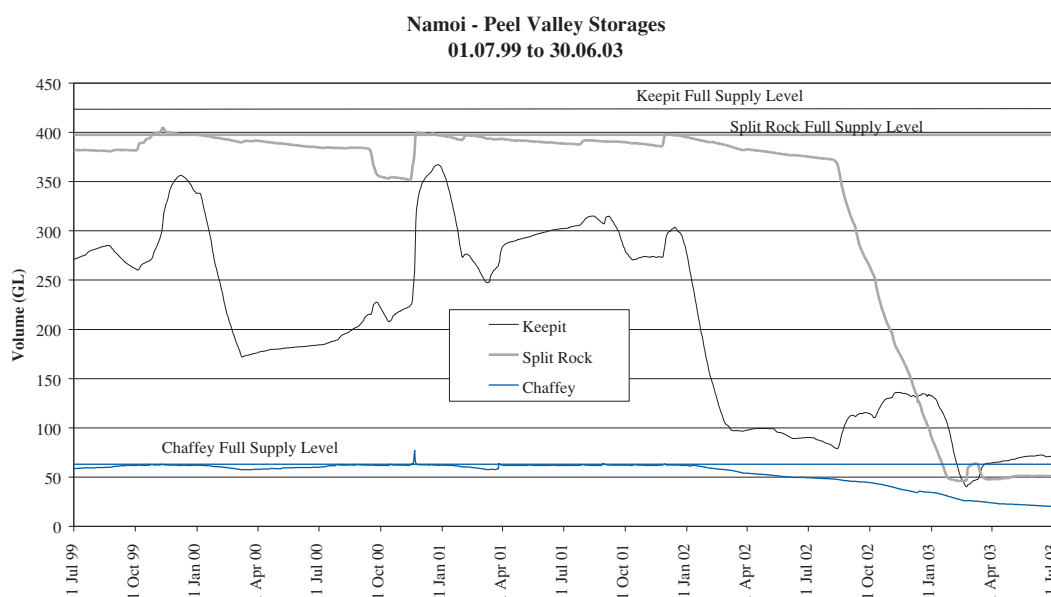
The Namoi Valley water delivery operations were significantly impacted by the drought in 2002-03. However, storage levels and allocations in the Namoi were the highest of State Water's inland valleys. General security continuous accounting balances were equivalent to an average of 104% of entitlement on 1 July 2002. The account balances had dropped to about 86% by October as the drought lead to significant watering of winter crops.

Total water use for the year was 237,000ML and the remaining balances were equivalent to about 9% of entitlement by the end of June 2003. There was no supplementary water access during the year.

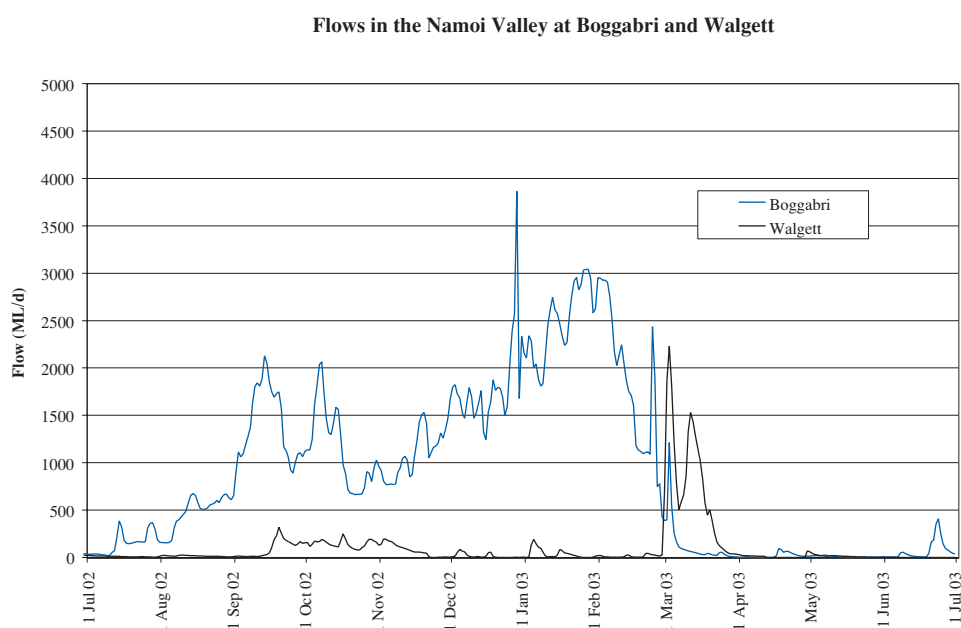


Transferring water from Split Rock Dam to Keepit Dam, September 2002

The following chart shows the storage levels for Keepit, Split Rock and Chaffey Dams for the four years from July 1999 to June 2003. The 2002-03 season was highlighted by the drawdown of water from Split Rock Dam to Keepit Dam. Split Rock went from 95% of capacity in July 2002 to 11% in February 2003, with a total of 315GL transferred between the dams. Keepit only rose and fell in this period as its releases varied with downstream demand, while Split Rock releases were relatively constant each month. Daily flow rates from Split Rock were varied to mimic natural flows and benefit the riverine environment. Manilla River landholders also had input into the pattern of Split Rock Dam flows to ensure minimum disruptions to their farming operations.



The following chart shows flows in the Namoi River at Boggabri and Walgett. Almost all of these flows were releases from Keepit Dam, with the exception of some relatively small freshes in March 2003. There was no supplementary access to these freshes because of the urgent need for water at Menindee Lakes.



Water Access

High security licence holders in the Namoi Valley had access to 100% of entitlement for the year. General security licence holders received no increments during the year. General security account balances were equivalent to about 104% of entitlement on 1 July 2002 and had fallen to about 9% by 30 June 2003. The initial account balances were made up of water remaining from the increments to accounts from the large inflows in December 2000 and smaller inflows in March and November 2001.

There were no periods of access to supplementary water in 2002-03 in the Namoi Valley.

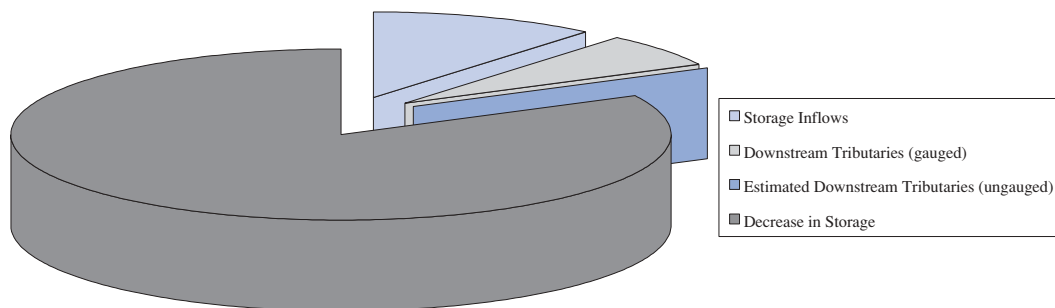
In the Peel Valley, high security licence holders had access to 100% of entitlement for the year. General security licences received a 60% allocation. There was a short period of supplementary access in December 2002.

Water Balance

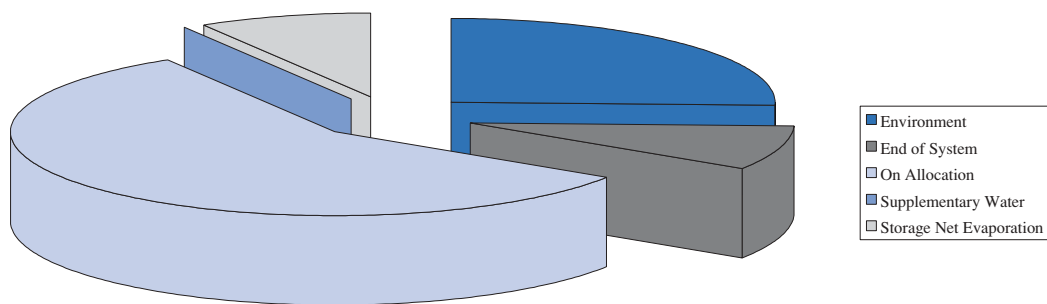
The following table and pie charts set out the sources and distribution of water in the Namoi Valley. Flows into the dams and in the tributaries downstream of the dams were very low because of the drought. Most of the water in the system this year came from the reduction in storage levels. Flows to the environment, 106GL and flows out of the Namoi, 36GL, were well in excess of the amount that would have gone to the environment from stream flows under natural conditions, 72GL. These environmental flows include evaporation from the river and riparian vegetation, seepage to groundwater, and over-bank flows.

Sources of Water	GL	%	Distribution of Water	GL	%
Storage Inflows	46	11%	Environment	106	26%
Downstream Tributaries (gauged)	26	6%	End of System	36	9%
Estimated Downstream Tributaries (ungauged)	0	0%	On Allocation	237	57%
Decrease in Storage	343	83%	Supplementary Water	0	0%
			Storage Net Evaporation	36	9%
Total	415	100%	Total	415	100%

Sources of Water - Namoi



Distribution of Water - Namoi



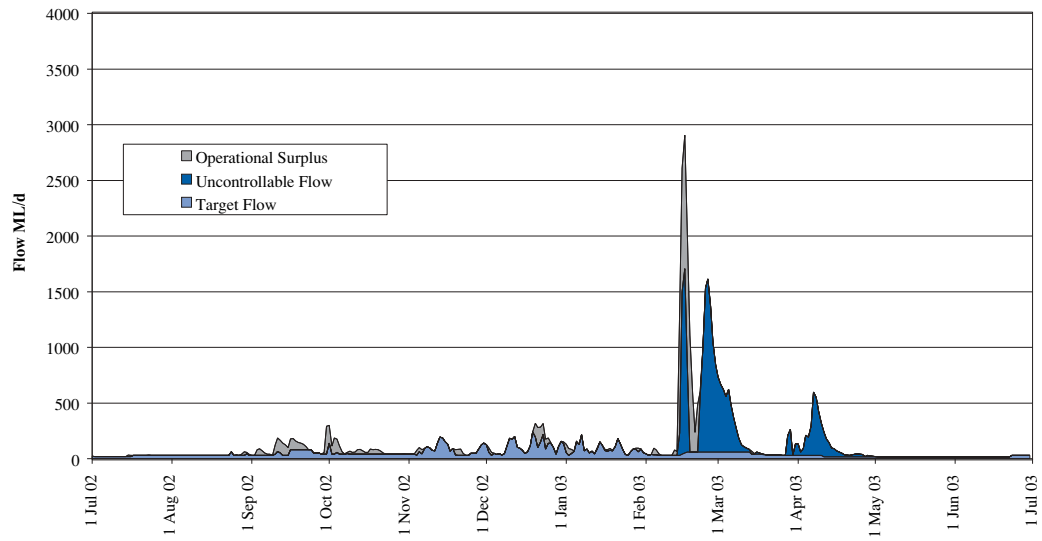
Operational Performance

The following chart shows the combined flow of the Namoi River at Goangra and the Pian Creek at Waminda for each day during 2002-03. This total flow is then divided into three categories: operational surplus, uncontrollable flow and target flow. The operational surplus is any flow in excess of target that has come from dam releases and, in hindsight, was an over-release.

Uncontrollable flow is water from the downstream tributaries that could not be used to satisfy customers' orders. The total operational surplus for the year was only 11,121ML and was only 3% of the water released from Keepit Dam.

The other indicator of State Water's operational efficiency is the number of days of flow shortfalls. That is, the periods when not enough water has been released to supply customers' orders. For the Namoi River at Goangra, there were 139 days (38%) when flows were below target. However, there were no major shortfalls where customers were unable to take enough water to satisfy their crops' demands. The high percentage of reported shortfalls is merely a reflection of the severity of the drought and the recognition that very low end of system flows were expected by the community this year.

Operational Surplus for the Namoi Valley
01.07.2002 to 30.06.2003



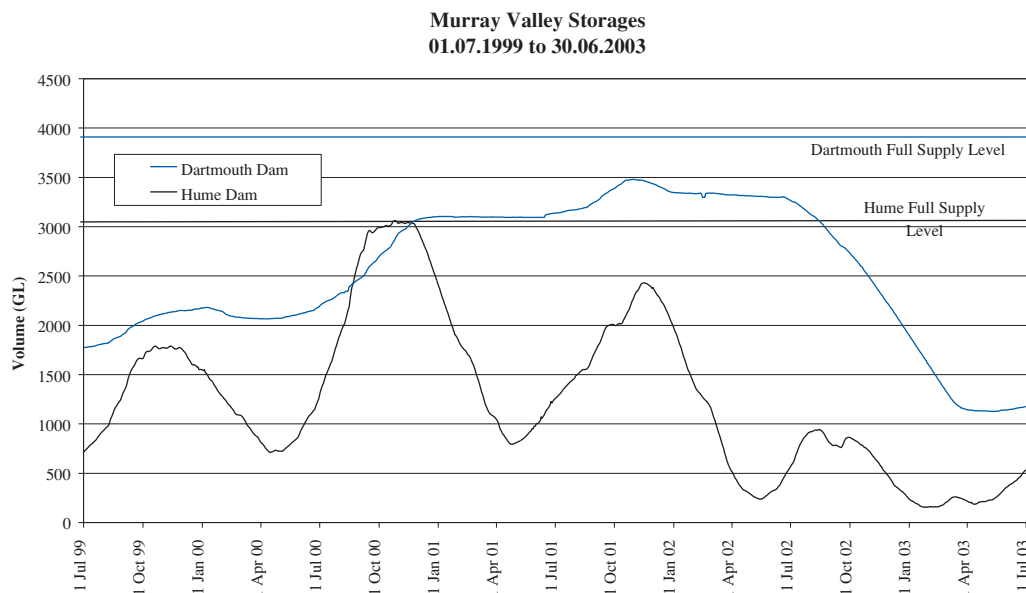
Murray Valley

Murray Valley water delivery operations were significantly impacted by the drought in 2002-03. Allocations in the Murray were the lowest in the history of the valley's irrigation industry. The general security allocation remained at only 10% and some customers had access to their remaining allocation from the previous year. Average carryover was equivalent to 12% of the general security entitlement. There was no supplementary water access during the year.



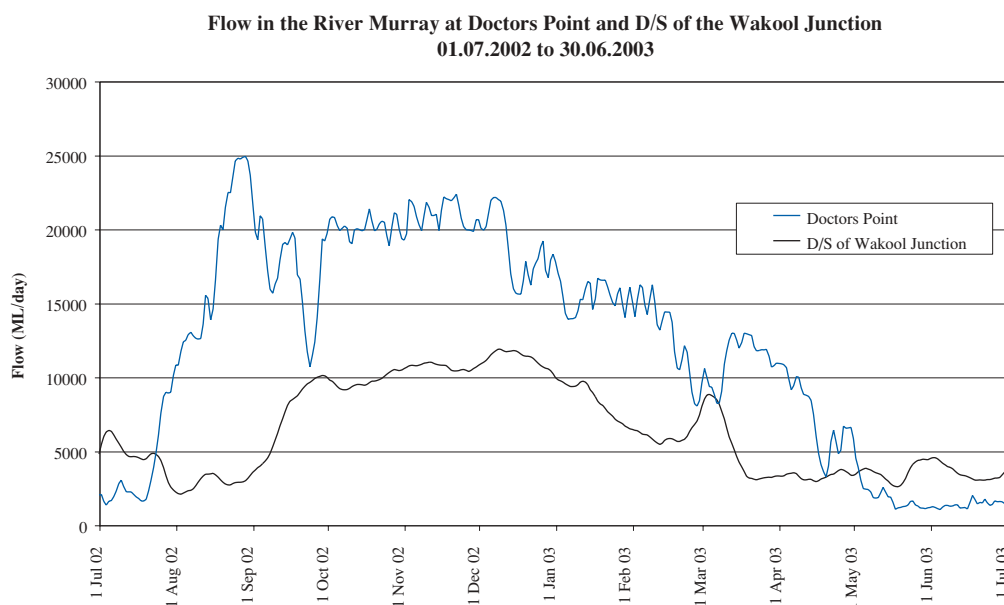
Euston Weir

The following chart shows the storage levels for Dartmouth and Hume Dams for the four years from July 1999 to June 2003. This season was highlighted by the draw-down of water from Dartmouth Dam to Hume Dam. Dartmouth went from 84% of capacity in July to 29% in April, with a total of 2,372GL transferred between the dams. Inflows to the Murray system were the lowest in more than 100 years of records.



The following chart shows flows in the Murray River at Doctors Point and downstream of the Wakool River junction. Almost all of these flows were releases from Hume Dam with very little contribution from the tributaries.

The flow to South Australia was not restricted due to the drought. The flow across the border was maintained at the rates set out as entitlement flow.



Water Access

High security licence holders in the Murray Valley had access to 100% of entitlement for the year. General security licences received a 5% announcement on 15 July. This was increased to 10% on 15 August. There were no further increases due to the drought and lack of inflows.

A carry over scheme operates in the Murray Valley, allowing customers to retain access to water allocated in 2001-02 that was not used in that season. The individual limit on the proportion of carryover is 50% of licensed entitlement. The average carry over in the valley was equivalent to about 12% of general security entitlement. This carry over was available on top of the 10% allocation announcement, making the total available to general security licences equivalent to 22%.

There were no periods of access to supplementary water in 2002-03 in the Murray Valley.

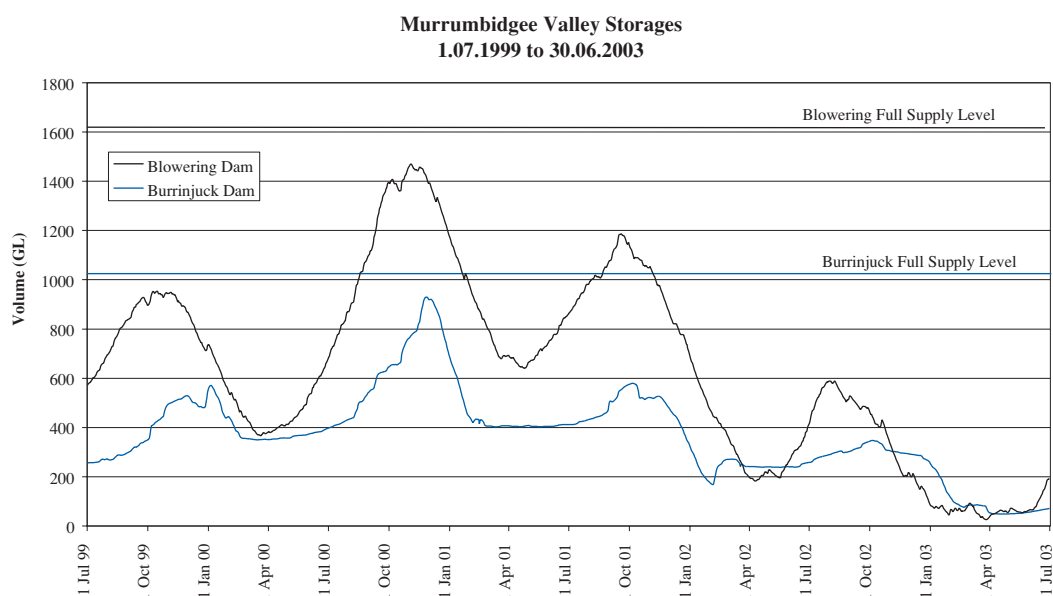
Murrumbidgee Valley

Murrumbidgee Valley water delivery operations were significantly impacted by the drought in 2002-03. Inflows to Burrinjuck Dam were very low and Blowering Dam didn't receive anything substantially above entitlement flow. Burrinjuck Dam started the year at 24.9%, rose to 33.7% by 10 October, then fell to a low of 4.4% on 12 April, before rising to 6.7% by 30 June 2003. Blowering Dam started at 24.7% and rose to 35.2% on 8 August, before falling to a record low of just 0.1% on 26 March. It rose to 10.5% by the end of the year. Blowering was below 5% from 2 January to 14 June, but continued to release the flows from Snowy Hydro during this period.

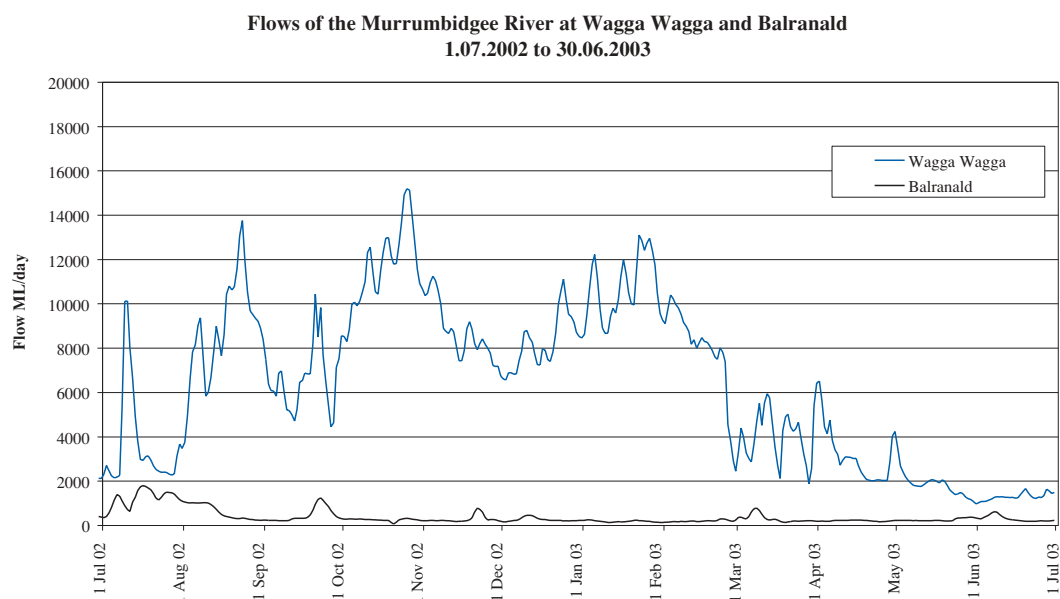


Hay Weir on the Murrumbidgee River

The following chart shows the storage levels for Burrinjuck and Blowering Dams for the four years from July 1999 to June 2003.



The following chart shows flows in the Murrumbidgee River at Wagga Wagga and at Balranald. Almost all of the flows in the year came from the storages, with very little contribution from downstream tributaries.



Water Access

The 2002-03 year saw the lowest water availability in the history of the Murrumbidgee irrigation system. High security licences for non-irrigation purposes, including town water supplies, had access to 100% of entitlement for the year, while irrigation high security had 95% allocation. General security licence holders received an initial allocation of 34% on 26 July. This was increased to 38% on 8 August. However, only 27% of the general security announcement could be delivered before the end of February, with the remainder available from Snowy Hydro releases between March and June. Customers also had access to carryover from the previous year's remaining allocation and the average carryover was 9%. This meant that the amount of deliverable general security was 36%. An advance was negotiated with Snowy Hydro and some customers chose to purchase a volume equivalent to an additional 9%.

A volume equivalent to 5% of general security entitlement remaining at the end of the year will be carried over into 2003-04.

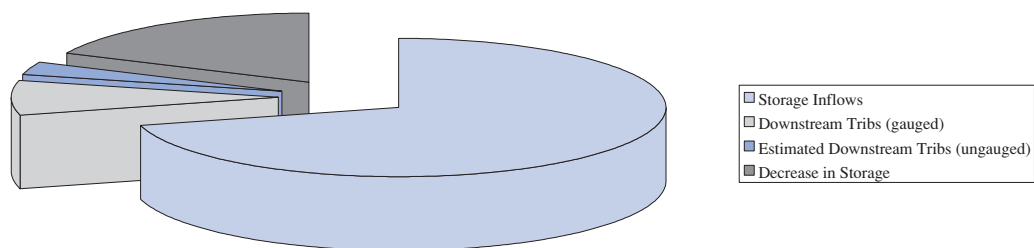
There was one short period of supplementary access (off-allocation) in September.

Water Balance

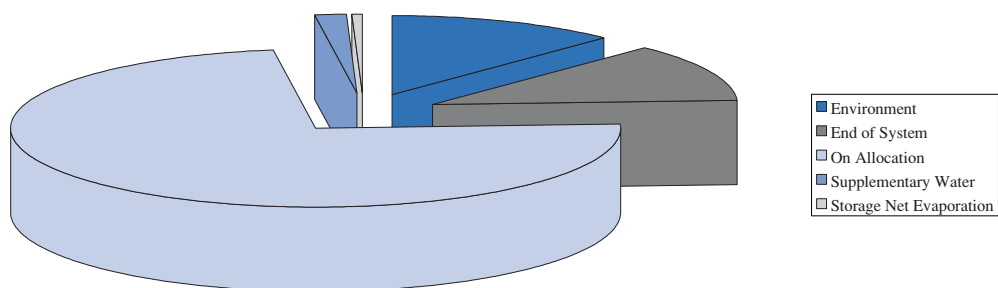
The following table and pie charts set out the sources and distribution of water in the Murrumbidgee Valley. Flows into the dams and in the tributaries downstream of the dams were extremely low. Almost all of the storage inflows (about 82%) were from Snowy Hydro into Blowering Dam. Flows to the environment totalled 282GL, while flows out of the Murrumbidgee (Balranald, Darlot, and Lowbidgee) were 275GL. These environmental flows include evaporation from the river and effluents, transpiration from riparian vegetation, and seepage to groundwater.

Sources of Water	GL	%	Distribution of Water	GL	%
Storage Inflows	1631	71%	Environment	282	12%
Downstream Tribs (gauged)	184	8%	End of System	275	12%
Estimated Downstream Tribs (ungauged)	73	3%	On Allocation	1696	74%
Decrease in Storage	415	18%	Supplementary Water	39	2%
			Storage Net Evaporation	12	1%
Total	2303	100%	Total	2303	100%

Sources of Water - Murrumbidgee



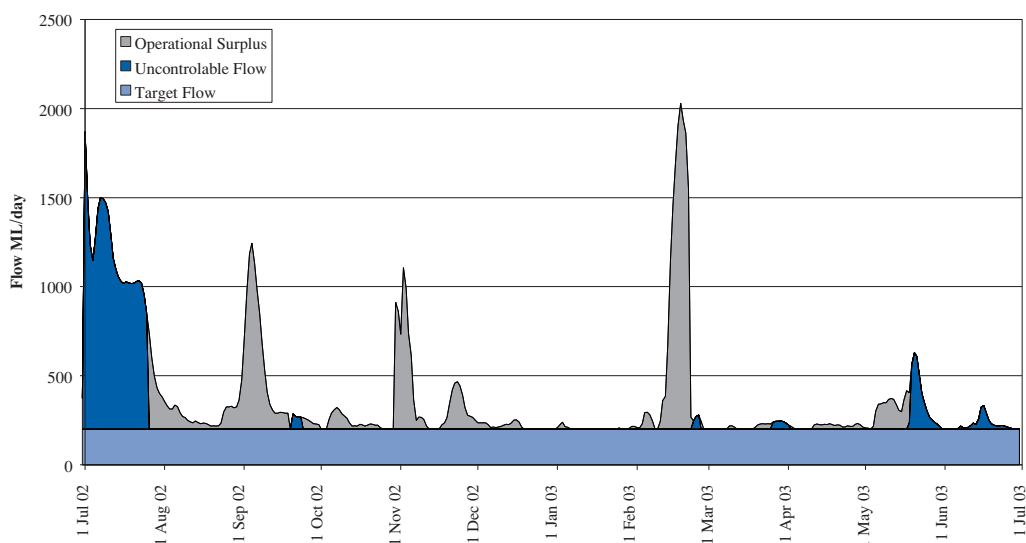
Distribution of Water - Murrumbidgee



Operational Performance

The following chart shows the combined flow of the Murrumbidgee River at Balranald and flows into Lowbidgee. This total flow is divided into three categories: operational surplus, uncontrollable flow and target flow. The operational surplus is any flow in excess of target that has come from dam releases and, in hindsight, was an over-release. Uncontrollable flow is water from the downstream tributaries that could not be used to satisfy customers' orders. The total operational surplus for the year was 36,797ML and was only 1.8% of the water released from the dams.

Operational Surplus for the Murrumbidgee Valley
01.07.2001 to 30.06.2002



The other indicator of State Water's operational efficiency is the number of days of flow shortfalls. That is, the periods when not enough water was released to supply customers' orders. For the Murrumbidgee Valley at Balranald there were 75 days (20%) when flows were below target. There were no significant problems for customers as a result of these shortfalls.

Water Licence Numbers

Total Water Licences (as at 1 August 2003)

Area	Regulated	Unregulated	Groundwater
North	878	1322	14341
Central	1733	1930	15377
South	2601	1545	9280
Coastal	1062	8345	22588
Total	6274	13142	61586

State
water

Asset Management Report

The area reports from the Customer Service Managers cover all routine and major periodic maintenance.

Capital works project progress reports for 2002-03

Macquarie River Weirs

- Review of Environmental Factors and Concept Design Report finalised.
- Economic appraisal completed.
- Final draft drawings and documentation received for approval.
- Three potential tenderers selected through expressions of interest.
- Ready to call tenders for civil and mechanical works.
- Construction expected to be completed in 2003-04.

Blowering Dam Upgrade

- Option evaluation and modelling analyses in progress.
- Consultations with stakeholders commenced.
- Condition assessment of the clay core due to the past settlement behaviour in progress.
- Staged approach is being investigated to reduce the risk of dam overtopping. Interim works will partially reduce the risk, whereas long-term works will cater for total reduction of flood risk. Long-term process will consider other related issues such as thermal impacts, environmental and other operational improvements.

Burrendong Dam Upgrade

- Detailed seismic analysis of the intake tower, modification to outlet works valves and SCADA systems completed.
- Revised operation and maintenance manuals for radial gates electrical upgrade completed.
- Portfolio Risk Assessment completed.
- Recommendations for increasing outlet works capacity prepared.
- Review of Dam Safety Risk Reduction options and piping risk evaluation in progress.

Wyangala Dam Upgrade

- Detailed seismic analysis of old concrete dam interfacing the main earth dam completed.
- Portfolio Risk Assessment and specification for mechanical and electrical upgrade completed.

Wellington Dam

- Works related to decommissioning and removal of the dam completed.
- Landscaping and revegetation of the decommissioned storage underway.
- Heritage information sign assembled.

Bethungra Dam

- Option studies for remediation works completed.
- Community consultation in progress for selection of preferred option.
- Early Warning System upgraded.
- Hydrology being revised.

Copeton Dam Upgrade

- Condition assessment of the eroded spillway channel in progress.
- Option evaluation of safe discharge capacities and revision of the hydrology in progress.
- Requirement for an Early Warning System underway.

Keepit Dam Upgrade

- Continuing assessment of structural, risk, engineering, environmental and safety review requirements.
- New probable maximum flood hydrology data completed.
- Interim dam safety works completed, including:
 - Lowering of the subsidiary wall and installation of trigger release plugs which significantly increased the protection of the main dam wall from failure from very large floods (reducing annual probability of occurrence from 1:3,000 to about 1:30,000);
 - Extension of main dam parapet wall and installation of access bridge shear brackets to prevent early failure of the main dam;
 - Early Warning System installed for the downstream community of Carroll.
- Extensive initial community consultation in the region on the interim works and long-term option evaluation and approval process completed.
- Long-term options refined, including investigations and development of environmental improvements such as cold water releases, variable flows, fish passage and increased capacity for environmental allowance, flood mitigation and overall sustainable regional development.
- First round of evaluation of long-term options completed by Community Reference Panel to determine a small set of options for public consultation before selection of a preferred option.

Chaffey Dam Upgrade

- Project scoping, issues identification, investigations and planning approved to cover four main upgrade objectives:
 - Dam safety principally associated with very large to extreme floods;
 - Environmental improvements including water quality, fish passage and overall system integration;
 - Potential for further flood mitigation;
 - Sustainable regional development including improved reliability of supply.
- Past safety upgrade options and storage augmentations and associated implications reviewed and updated.
- Community Reference Panel created, with representatives from local government, water users, community groups, landowners and regional departments. Panel is chaired by Mayor of Parry Shire Council and will assist State Water with assessing both interim and long-term options and recommending a preferred solution.
- Interim dam safety works comprising installation of a small temporary reusable parapet wall on the existing crest, recommended by the panel, subject to a review of environmental factors. These works will improve the protection of the main dam from overtopping in a very large flood until a long-term solution is implemented.

River Structures

- Seepage and soft mortar joints of aged existing Island Creek Weir structure required to be replaced by construction of a new gated structure
- Lake Cargelligo Weir – first stage of rehabilitation completed, following safety audit concerns regarding stability of the structure.

- Monorail/Gantry constructed on Gwydir Weirs.
- Handrails and guarding installed at Berembé Canal Bridges.
- Project plan, design and specification prepared for major rehabilitation of Colligen Creek Weir.

Total Asset Management Plan (TAMP) and EXPLAN

- The Expenditure planning tool EXPLAN is now available through Metaframe system, with staff trained in its use.
- Heritage Conservation Management Plan for Burrinjuck Dam completed.
- All Section 170 Heritage assessments for dams, weirs, regulators and associated structures completed.
- A heritage procedures manual for the management of State Water's large dams developed.
- Pilot study risk assessment in progress, workshop held with staff where agreement was reached on proposed methodology.
- Risk Reduction Studies (minor dams) - continued revision of methodologies based on workshop findings, discussions with Department of Commerce on methodology and scoring.
- River Structures Replication Valuations were finalised after some amendments by Department of Commerce.
- The Total Asset Management Plan is being updated.
- ORDM – proposal received from consultants for process / methodology development.



SCADA Project Report

The State Water Supervisory Control and Data Acquisition (SCADA) System improves information and control to manage water delivery to customers and the environment with more precision. In the past year the SCADA Project has achieved numerous outcomes in the areas of development of statewide plans and standards, water delivery and asset management.

The automation and remote sensing of various Macquarie River, Murray River and Murrumbidgee River weirs has reduced the cost of water delivery, while increasing the level of compliance with water delivery targets.

Standard systems for electronic acceptance of water orders have been developed as prototypes for the whole state. These Interactive Voice Response units allow customers to order water whenever it suits them 24 hours a day, seven days a week. Developing these systems has increased the level of service to customers, without increasing costs.

The interaction with the Department of Infrastructure, Planning and Natural Resources has been improved through development of processes for joint access to data supply equipment and cooperative testing and reporting to reduce mutual costs. The formation of the statewide SCADA project team has also increased the cost effectiveness of project development and testing.

Public security has been increased with the completion of Bethungra Dam, Keepit Dam and Chaffey Dam Early Warning Systems. These systems measure the level of water in storages and raise alarms if the water reaches a predefined level.

The SCADA team has also increased the standardisation of systems, processes and software and provided a vehicle for sharing knowledge acquired over the years.

Major Capital Works Summary 2002-03

Project	2002-03 Expenditure
Chaffey Dam Flood Security	\$524,000
Burrendong Dam Flood Security	\$227,000
Copeton Dam Flood Security	\$335,000
Keepit Dam Flood Security	\$2,697,000
Wellington/Bethungra Dam Works	\$486,000
Wyangala Dam Upgrade	\$297,000
Total Asset Management Plan	\$1,977,000
Blowering Dam Flood Security	\$217,000
River Structures	\$4,623,000
Macquarie River Systems	\$254,000
Major Periodic Maintenance of Dams	\$3,258,000
Staff Housing Dams	\$111,000
Supervisory Control and Data Acquisition	\$782,000
Total	\$15,788,000

Asset Values

2001-02

Area	MEERA* Value (\$M)	MEERA* Written Down Value (\$M)	Replacement Value (\$M)
North	578.7	478.0	707.9
Central	584.6	453.4	667.1
South	772.9	634.9	1108.3
Coastal	372.3	327.2	414.1
Total	2308.5	1893.5	2897.4

*Modern Engineering Equivalent Replacement Asset

2002-03

Area	MEERA* Value (\$M)	MEERA* Written Down Value (\$M)	Replacement Value (\$M)
North	579.3	470.1	708.5
Central	585.0	446.7	667.5
South	780.0	590.0	1115.4
Coastal	373.5	323.8	415.3
Total	2317.8	1830.6	2906.7





Hydro Power Summary

There are hydro-electric power stations on 10 of State Water's 17 major dam sites. These hydro power generators have a total power generation capacity of 244MW and avoiding the burning of 360,000 tonnes of coal and the production of 686,850 tonnes of greenhouse gases per year.

All hydro-electric generators on State Water sites have been constructed by external organisations, with royalties paid to State Water. Income to State Water from hydro-power in 2002-03 totalled \$705,325 (including site lease rentals).

State Water pursued the construction of a number of new generators in response to a 1998 study commissioned by the Sustainable Energy Development Authority (SEDA), which identified the potential to develop mini hydro-electric generators on 30 existing sites in NSW.

Hydro power is an efficient new green energy source for regional and rural NSW because transmission losses are minimised when power does not need to be transported over long distances.

Water is not released from storages for the purpose of power generation. All power stations are operated in conjunction with planned releases to match customer orders and environmental flows.

Power Station Locations

Dam	Year Generator Built	Capacity (megawatts)
Burrendong Dam	1996	19
Copeton Dam	1995	21
Glenbawn Dam	1994	6
Pindari Dam	2001	6
Hume Dam	1957	60
Burrinjuck Dam	Upgraded 2002	28
Blowering Dam	1968	80
Keepit Dam	1960	6
Wyangala Dam	1991	18
Toonumbar Dam	2000	0.1
Total		244.1



Staffing Report

Absenteeism

677 days in 2000-01
738 days in 2001-02
980 days in 2002-03

Lost Time Injuries

471 days in 2001-02
402 days in 2002-03

Turnover of staff

Nine new staff joined State Water in 2002-03, while 10 departed

State Water Staff Location Summary

Customer Service	Customer Service Managers Customer Service Officers - water account management, metering, customer management Program Support - CSC support, administrative, reception and customer service
Field Staff	Electricians, fitters, labourers, carpenters, machinemens, dogmen, maintenance workers, cleaners
Asset Maintenance	OICs and 2ICs at Storages - storage management and operations Asset Maintenance Staff - routine maintenance of assets Dam Safety, Audit and Survey branch - statutory surveillance and risk management Asset Engineers - area asset management, major periodic maintenance, contract work
Water Operations	Operations Engineers - water delivery operations, customer service Operations Officers - river operations
Capital Works	Project Management - specific capital project management Asset Management Planning - Total Asset Management (TAMP), portfolio risk management
Commercial Services	Business Management - business development, planning, system development and support Accounts and Finance - commercial accounting, finance, billing and receipting

Area	Location	Customer Service Staff	Field Work Staff	Asset Maintenance Staff	River Operations Staff	Capital Works Project Staff	Commercial Service Staff	TOTAL
North Area	Goondiwindi	1.0			1.0			2.0
	Moree	4.0		1.0	5.0			10.0
	Narrabri	3.0		1.0	1.0			5.0
	Tamworth	2.0		3.0				5.0
	Chaffey		2.2	2.0				4.2
	Copeton		6.3	2.0				8.3
	Keepit		7.3	2.0				9.3
	Pindari		1.3	2.0				3.3
	Split Rock		2.2	2.0				4.2
South Area	Albury	1.0						1.0
	Balranald		2.0		1.0			3.0
	Buronga	2.0						2.0
	Deniliquin	3.0			2.0			5.0
	Hay	2.0		2.0				4.0
	Leeton	5.0		3.0	7.0			15.0
	Wakool	1.0						1.0
	Blowering		3.1	2.0				5.1
	Burrinjuck		6.3	2.0				8.3
	Hume		9.0	5.0				14.0
	Wentworth		1.0	2.0				3.0
	Euston		1.0	2.0				3.0
	Menindee		7.2	2.0				9.2
Central Area	Condobolin	1.0						1.0
	Cowra	1.0						1.0
	Dubbo	4.0		2.0	5.0			11.0
	Forbes	3.0			1.0			4.0
	Hillston	1.0						1.0
	Warren	2.0	2.0	1.0	1.0			6.0
	Lake Cargelligo		3.0	2.0				5.0
	Burrendong		4.3	2.0				6.3
	Carcoar		2.1	2.0				4.1
	Windamere		2.1	2.0				4.1
	Wyangala		5.3	2.0				7.3
Coastal Area	Maitland	1.0						1.0
	Muswellbrook	3.0		1.0	3.0			7.0
	Brogo		1.3	2.0				3.3
	Glenbawn		2.3	2.0				4.3
	Glennies Ck		1.3	2.0				3.3
	Lostock		1.3	2.0				3.3
	Toonumbar		2.9	2.0				4.9
Asset Services	Parramatta	2.0		15.0		18.0	2.0	37.0
Head Office	Dubbo	2.0			4.0		17.0	23.0
	TOTAL EFT	44.0	76.7	74.0	31.0	18.0	19.0	262.7

Revenue and Expenditure 2001 - 2003

	\$000			
	Total Revenue 2001-2002	Total Expenditure 2001-2002 ¹	Total Revenue 2002-2003 ⁷	Total Expenditure 2002-2003 ^{1,5&6}
North Area				
Namoi	3,826	6,281	8,828	8,663
Peel	521	2,043	1,410	1,930
Gwydir	3,471	6,176	5,955	6,321
Border Rivers	0	0	171	0
(inc Barwon Darling)	2,474	2,560	2,103	2,491
Total North	10,292	17,060	18,467	19,405
Central Area				
Macquarie	5,498	7,798	6,074	7,140
Lachlan	5,217	6,855	8,212	7,816
Total Central	10,715	14,653	14,286	14,956
South Area				
Murrumbidgee	7,298	9,371	13,164	9,923
Murray LMD ³	19,742	14,055	16,671	15,061
Total South	27,040	23,426	29,835	24,984
Coastal Area				
Hunter	2,728	5,876	3,489	5,565
South Coast ⁴	1,597	842	2,033	934
North Coast	503	1,119	1,000	1,164
Total Coast	4,828	7,837	6,522	7,663
Grand Total	52,875	62,976	69,110	67,008

Notes:

1. 02-03 Total Expenditure (full cost) (includes capital for State Water \$15.7million and MDBC \$3.8million).

2. 01-02 Total Expenditure (full cost) (includes capital for State Water \$14.9million and MDBC \$3.9million).

3. Includes MDBC expenditure.

4. Includes revenue from Sydney Catchment Authority.

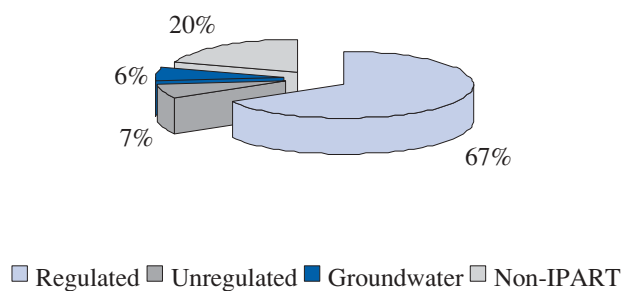
5. Expenditure in budget papers shows \$67.31million, excluding capital. This was based on forecasts at April 2003.

6. Expenditure excludes DIPNR Resource Management Charge of \$12.8million and DIPNR funding adjustment of \$9.7million.

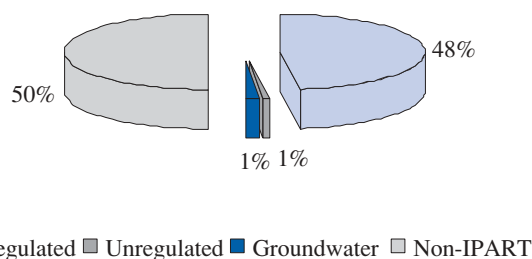
7. Revenue includes \$16.5M capital appropriation. This was credited to State Water accounts for the first time on separation from DIPNR.



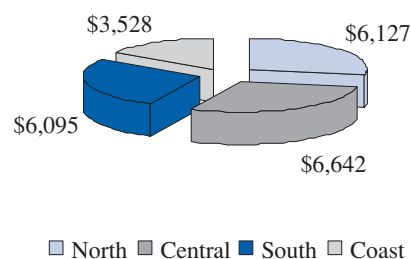
State Water Revenue 2002/03



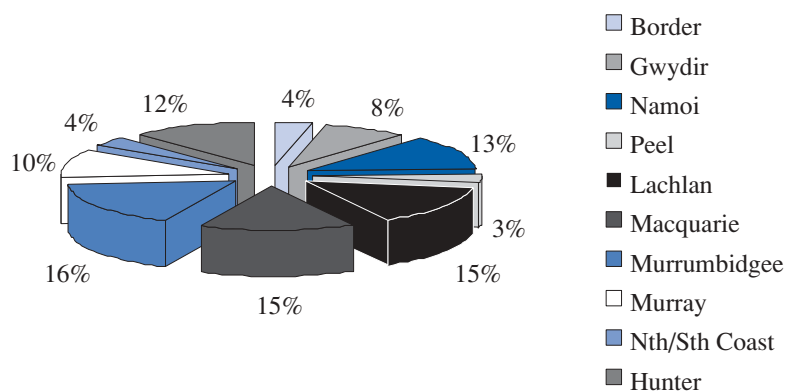
State Water Operating Costs 2002/03



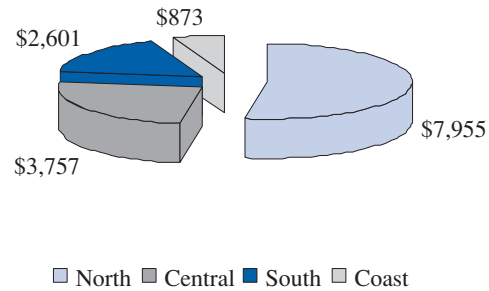
State Water Regulated Operating Costs by Area 2002/03 \$'000



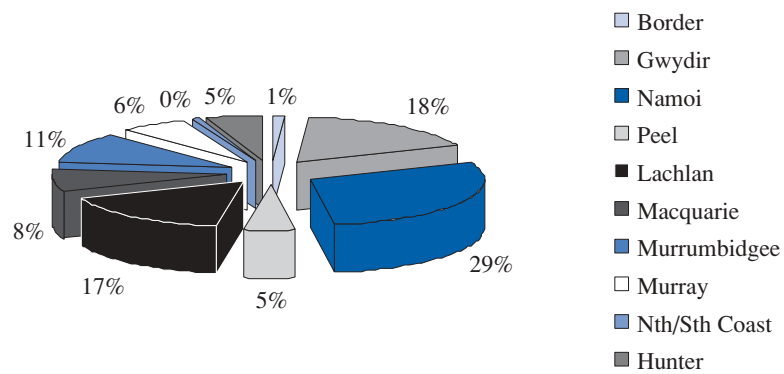
State Water Regulated Operating Costs by Valley 2002/03



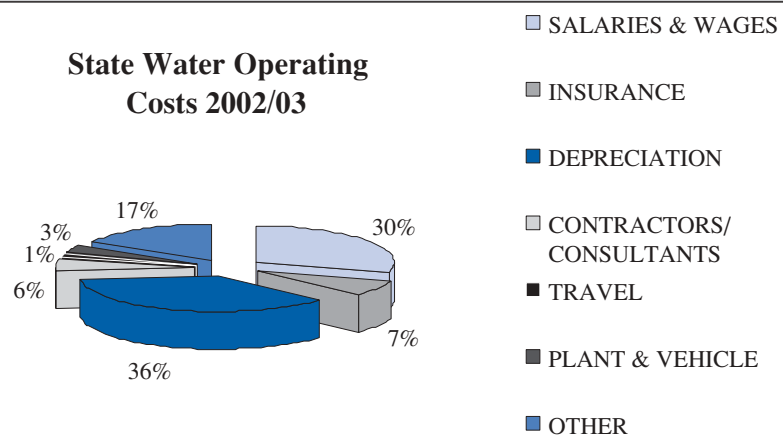
State Water Capital Expenditure 2002/03 \$'000



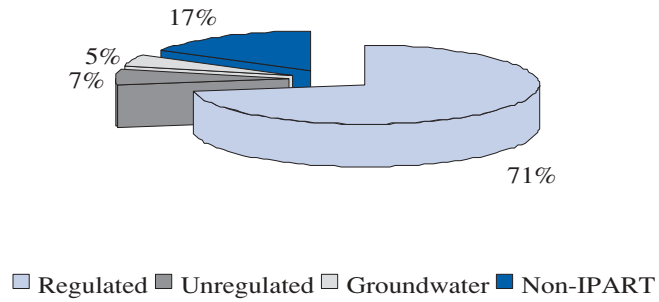
State Water Capital Expenditure by Valley 2002/03



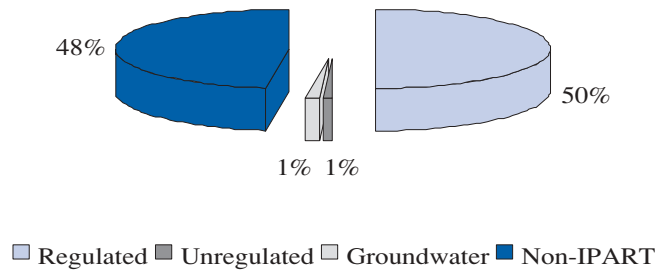
State Water Operating Costs 2002/03



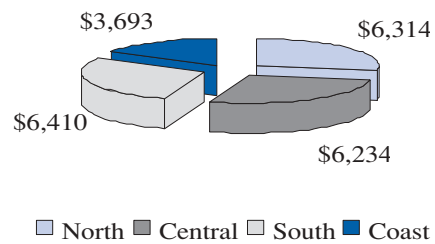
State Water Revenue 2001/02



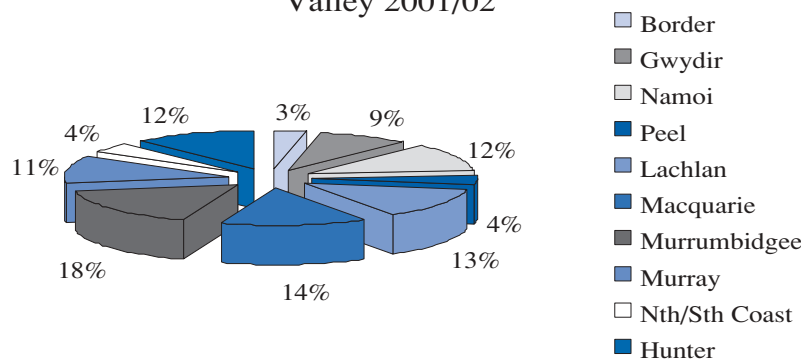
State Water Operating Costs 2001/02



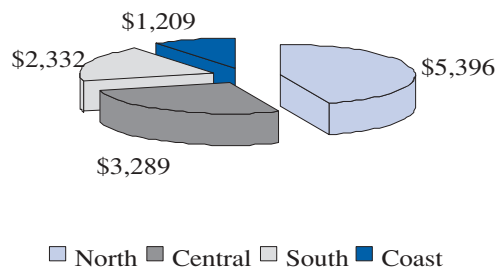
State Water Regulated Operating Costs by Area 2001/02 \$'000



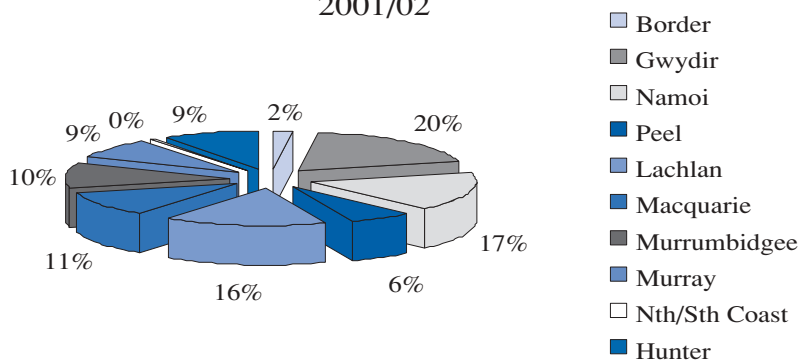
State Water Regulated Operating Costs by Valley 2001/02



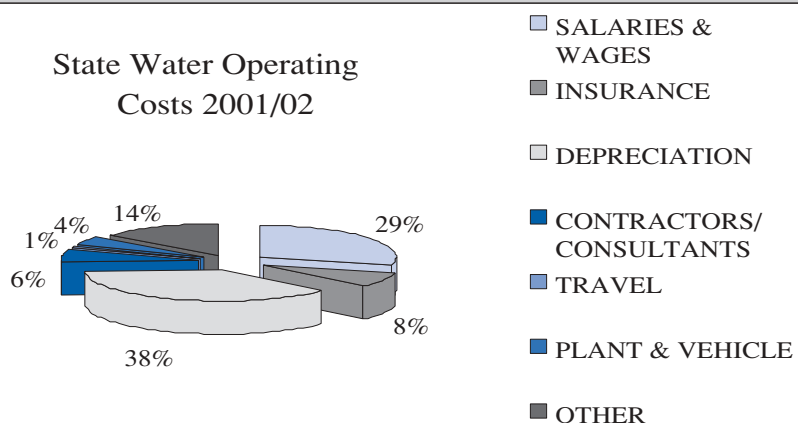
State Water Capital Expenditure 2001/02 \$'000



State Water Capital Expenditure by Valley 2001/02



State Water Operating Costs 2001/02



Statement of Financial Performance 01.07.2002 to 30.06.2003

	State Water		
	State Water	Lowbidgee Irrigation District	TOTAL
	\$	\$	
Expenses			
Operating expenses	-	-	-
Employee related	15,375,061	189,121	15,564,182
Other operating expenses	28,152,374	444,069	28,596,443
Maintenance	9,559,691	951	9,560,642
Depreciation and Amortisation	15,856,818	472,372	16,329,190
Grants and subsidies (excl transfer payments)	-	-	-
Borrowing costs	71	-	71
Other expenses (excl transfer payments)	-	-	-
Total expenses:	68,944,015	1,106,513	70,050,528
Less:			
Retained Revenue			
Sales of goods and services	52,001,749	350,848	52,352,597
Investment Income	266,432	-	266,432
Retained taxes, fines and fees	-	-	-
Grants and contributions	-	-	-
Other revenue	20,818	-	20,818
Total Retained Revenue:	52,288,999	350,848	52,639,847
Gain/(loss) on disposal of non-current assets	(159,105)	-	(159,105)
Net Cost of Services	16,814,121	755,665	17,569,786
Government Contributions			
Recurrent appropriation (excl transfer payments)	-	-	-
Capital appropriation	16,500,000	-	16,500,000
	16,500,000	-	16,500,000
Acceptance by the Crown Entity of employees entitlements and other liabilities	2,836,407	-	2,836,407
Asset sale proceeds transferred to the Crown Entity	-	-	-
Total Government Contributions	19,336,407	-	19,336,407
Surplus (Deficit) for the Year from Ordinary Activities	2,522,286	(755,665)	1,766,621
Non-Owner Transaction			
Changes in Equity			
Net increase (decrease) in asset revaluation reserve	-	-	-
Total changes in equity other than those resulting from transactions with owners as owners	2,522,286	(755,665)	1,766,621

Statement of Financial Position as at 30 June 2003

	State Water		
	State Water	Lowbidgee Irrigation District	TOTAL
	\$	\$	
ASSETS			
Current Assets			
Cash	3,451,775	(367,161)	3,084,614
Other financial assets	-	-	-
Receivables	35,181,224	463,740	35,644,964
Inventories	-	-	-
Other - Superannuation prepaid	-	-	-
Total Current Assets	38,632,999	96,579	38,729,578
Non-Current Assets			
Property, Plant and Equipment			
Land and Buildings	91,680,510	169,170	91,849,680
Plant and Equipment	2,252,389	181,809	2,434,198
Infrastructure Systems	1,879,367,864	36,455,781	1,915,823,645
Total Property, Plant and equipment	1,973,300,763	36,806,760	2,010,107,523
Receivables	-	-	-
Total Non-Current Assets	1,973,300,763	36,806,760	2,010,107,523
TOTAL ASSETS	2,011,933,762	36,903,339	2,048,837,101
LIABILITIES			
Current Liabilities			
Payables	20,210,938	6,122	20,217,060
Interest Bearing liabilities	-	-	-
Provisions	2,417,769	-	2,417,769
Other	-	-	-
Total Current Liabilities	22,628,707	6,122	22,634,829
Non-Current Liabilities			
Interest Bearing liabilities	-	-	-
Provisions	507,161	-	507,161
Other	-	-	-
Total Non-Current Liabilities	507,161	-	507,161
TOTAL LIABILITIES	23,135,868	6,122	23,141,990
NET ASSETS	1,988,797,894	36,897,217	2,025,695,111
Equity			
Reserves	-	-	-
Accumulated Funds	1,988,797,894	36,897,217	2,025,695,111
TOTAL EQUITY	1,988,797,894	36,897,217	2,025,695,111

Regulated Rivers - IPART prices - Determination No. 3, 2001 Issued December 2001, effective from 1 October 2001

	2001-2002					
	01.07.01 to 30.09.01			01.10.01 to 30.06.02		
Region/river valley	High Security (\$/ML)	General Security (\$/ML)	Usage (\$/ML)	High Security (\$/ML)	General Security (\$/ML)	Usage (\$/ML)
Border* ¹				4.87	3.26	3.79
Gwydir ¹				4.52	3.00	3.50
Namoi ¹				8.17	5.45	6.52
Peel ¹				8.66	5.02	6.91
Lachlan	5.20	3.46	3.97	5.62	3.74	4.29
Macquarie	4.37	3.36	4.54	4.37	3.36	4.54
Murray	4.18	3.79	1.02	4.51	4.09	1.10
Murrumbidgee	3.39	3.22	0.84	3.54	3.36	0.88
North Coast	6.85	5.27	3.51	7.88	6.06	4.04
Hunter	5.36	3.83	3.81	6.16	4.40	4.38
South Coast	6.85	5.27	3.51	7.88	6.06	4.04
	2002-2003			2003-2004		
	01.07.2002 to 30.06.2003 [#]			01.07.2003 to 30.06.2004 [#]		
Region/river valley	High Security (\$/ML)	General Security (\$/ML)	Usage (\$/ML)	High Security (\$/ML)	General Security (\$/ML)	Usage (\$/ML)
Border* ¹	5.39	3.61	4.19	5.97	4.00	4.65
Gwydir ¹	4.93	3.27	3.82	5.39	3.58	4.17
Namoi ¹	9.12	6.08	7.28	10.20	6.81	8.14
Peel ¹	10.25	5.17	8.18	12.15	5.33	9.69
Lachlan	6.25	4.16	4.77	6.95	4.63	5.31
Macquarie	4.36	3.35	4.53	4.36	3.35	4.53
Murray	5.01	4.55	1.22	5.58	5.06	1.36
Murrumbidgee	3.81	3.61	0.95	4.10	3.89	1.02
North Coast	9.32	7.17	4.78	11.06	8.50	5.67
Hunter	7.29	5.21	5.18	8.64	6.17	6.15
South Coast	9.32	7.17	4.78	11.06	8.50	5.67

* Pindari Levy is charged on Border Rivers usage at the rate of \$12 per ML for 2001-2002; 2002-2003 rate is \$12.60 per ML; 2003-04 rate is \$13.23 per ML. This is not an IPART determined price but is indexed at 5% each year.

¹ Border, Gwydir, Namoi & Peel are billed for period 01 Oct to 30 Sept and are not affected by split pricing for 2001-2002

[#] Includes valley specific % increase plus CPI increase of 2.9% 2002/2003 and 3.1% for 2003/2004

Gol Gol Delivery Service Charge - This is NOT an IPART determined price- 2001-2002 \$2.94 + GST; 2002-2003 \$4.94 + GST

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