



# **NSW Implementation Plan for the National Water Initiative**

**2006**

# TABLE OF CONTENTS

<b>Introduction</b>	5
<b>Implementation Plan</b>	
NWI ELEMENT NO 1: WATER ACCESS ENTITLEMENTS AND PLANNING FRAMEWORK .....	7
Action 1: Implementation of the framework – IGA Para 26 ( i ) & (iii)	7
NWI ELEMENT NO 1: WATER ACCESS ENTITLEMENTS AND PLANNING FRAMEWORK .....	9
Action 1 A: Implementation of the framework – IGA Para 26 ( ii )	9
NWI ELEMENT NO 1: WATER ACCESS ENTITLEMENTS AND PLANNING FRAMEWORK .....	11
Action 2: Water access entitlements to be defined and implemented – IGA Para 27-34	11
NWI ELEMENT NO 1: WATER ACCESS ENTITLEMENTS AND PLANNING FRAMEWORK .....	15
Action 3: Water to meet environmental and other public benefits – IGA Para 35 & 37	15
NWI ELEMENT NO 1: WATER ACCESS ENTITLEMENTS AND PLANNING FRAMEWORK .....	18
Action 4: Water plans based on characteristics and components of Schedule E – IGA Para 36, 39 & 40	18
Action 5: Addressing over allocation as per NCC commitments – IGA Para 41 & 43-44	21
NWI ELEMENT NO 1: WATER ACCESS ENTITLEMENTS AND PLANNING FRAMEWORK .....	24
Action 6: Implementation of Risk Assignment Framework – IGA Para 26 (v), 46-50,	24
NWI ELEMENT NO 1: WATER ACCESS ENTITLEMENTS AND PLANNING FRAMEWORK .....	27
Action 7: Water plans to address indigenous water issues – IGA Para 52-54	27
NWI ELEMENT NO 1: WATER ACCESS ENTITLEMENTS AND PLANNING FRAMEWORK .....	30
Action 8: Interception Activities IGA Para 55-57	30
NWI ELEMENT NO 2: WATER MARKETS AND TRADING.....	34
Action 1: Publicly accessible compatible trading registers IGA Para 59	34
NWI ELEMENT NO 2: WATER MARKETS AND TRADING.....	37
Action 2: Compatible institutional and regulatory arrangements to facilitate trade IGA Para 60 & 62	37
NWI ELEMENT NO 2: WATER MARKETS AND TRADING.....	40
Action 3: Complete studies and consider implementation of recommendations IGA Para 61	40
NWI ELEMENT NO 2: WATER MARKETS AND TRADING.....	42
Action 4: Removing trade barriers in Southern MDB IGA Para 63	42
NWI ELEMENT NO 3: BEST PRACTICE WATER PRICING .....	46
Action 1: Complete implementing COAG pricing policies IGA Para 65	46
NWI ELEMENT NO 3: BEST PRACTICE WATER PRICING .....	49
Action 2: Metropolitan pricing IGA Para 66	49
NWI ELEMENT NO 3: BEST PRACTICE WATER PRICING .....	51
Action 3: Rural and Regional IGA Para 66	51

NWI ELEMENT NO 3: BEST PRACTICE WATER PRICING .....	54
Action 4: Cost recovery for planning and management IGA Para 67	54
NWI ELEMENT NO 3: BEST PRACTICE WATER PRICING .....	56
Action 5: Water Infrastructure IGA Para 69	56
NWI ELEMENT NO 3: BEST PRACTICE WATER PRICING .....	58
Action 6: Release of unallocated water - IGA Para 70-72	58
NWI ELEMENT NO. 3: BEST PRACTICE WATER PRICING .....	60
Action 7: Environmental externalities managed through a range of regulatory measures IGA Para 73	60
NWI ELEMENT NO 3: BEST PRACTICE WATER PRICING .....	62
Action 8: Benchmarking efficient performance IGA Para 75 & 76	62
NWI ELEMENT NO 3: BEST PRACTICE WATER PRICING .....	64
Action 9: Independent Regulator IGA Para 77	64
Action 10: Subsidies IGA Para 66, 68 & 74	65
NWI ELEMENT NO 4: INTEGRATED MANAGEMENT OF ENVIRONMENTAL WATER.....	67
Action 1: Institutional arrangements and water recovery principles IGA Para 79	67
NWI ELEMENT NO 5: WATER RESOURCE ACCOUNTING .....	69
Action 1: Benchmarking of Accounting Systems IGA Para 81	69
NWI ELEMENT NO 5: WATER RESOURCE ACCOUNTING .....	71
Action 2: Consolidated Water Accounts IGA Para 82 and 83	71
NWI ELEMENT NO 5: WATER RESOURCE ACCOUNTING .....	74
Action 3: Environmental water accounting - IGA Para 84-85	74
NWI ELEMENT NO 5: WATER RESOURCE ACCOUNTING .....	77
Action 4: Information Measures IGA Para 86	77
NWI ELEMENT NO 5: WATER RESOURCE ACCOUNTING .....	79
Action 5: Metering and measuring actions IGA Para 87 & 88	79
NWI ELEMENT NO 5: WATER RESOURCE ACCOUNTING .....	81
Action 6: National guidelines on water reporting IGA Para 89	81
NWI ELEMENT NO 6: URBAN WATER REFORM.....	83
Action 1: Demand Management Measures IGA Para 91	83
Action 2: Innovation and capacity building to create water sensitive Australian cities IGA Para 92	88
NWI ELEMENT NO 7: COMMUNITY PARTNERSHIPS AND ADJUSTMENT.....	92
Action 1: Timely consultation and information IGA Para 95 & 96	92
NWI ELEMENT NO 7: COMMUNITY PARTNERSHIPS AND ADJUSTMENT.....	95
Action 2: Adjustment issues IGA Para 45 & 97	95
NWI ELEMENT NO 8: KNOWLEDGE AND CAPACITY BUILDING .....	97
Action 1: Key Knowledge and Capacity Building priorities IGA Para 101	97
NWI ELEMENT: IMPLEMENTATION.....	99

Action 1: Review the 1992 Murray-Darling Basin Agreement for consistency with the NWI IGA Para 14 99	
NWI ELEMENT: INTERPRETATION .....	100
Action 1: Common lexicon IGA Para 17	100
<b>Acronyms</b>	101
<b>Glossary of Terms</b>	103

# NSW National Water Initiative Implementation Plan:

## Introduction

NSW signed the Intergovernmental Agreement on a National Water Initiative (NWI) at the Council of Australian Governments meeting on 25 June 2004.

The NSW NWI Implementation Plan sets out the actions that NSW has already completed and provides detailed information, for each NWI action, on the tasks and timeframes to complete remaining commitments, and the context within which these actions are being implemented.

### Legislative and Regulatory Framework

NSW effected fundamental reforms to its water management framework by way of the *Water Management Act 2000*. Further reforms that implemented all but two elements of the NWI framework were achieved by way of the *Water Management Amendment Act 2004*.

Under these reforms, NSW has gazetted and initiated water sharing plans, consistent with the requirements of the NWI, that regulate approximately 80 percent of water use in NSW. Under these plans, fully tradeable water access licences, separate from land title and water works and use approvals, and consistent with NWI requirements, are being created and registered.

Two key obligations of the NWI require implementation in NSW by way of further legislative amendments:

- the risk assignment framework; and
- giving effect to a Heads of Agreement between the Government and major Irrigation Corporations to permit increased water trade.

Legislation to facilitate these changes is proposed for the 2005 spring Parliamentary session.

### Implementation

Many of the actions progressed so far have been implemented within the resources of the former Department of Infrastructure, Planning and Natural Resources. NSW has recently undergone administrative changes in the management of natural resources. The Department of Natural Resources (DNR) is in the process of being established. Hence it is difficult to specify the resources allocated to specific programs at this stage. However, resources will continue to be allocated in the future for the implementation of the NWI.

The NSW NWI Implementation Plan demonstrates that many NWI actions are already significantly progressed in NSW. In addition to the various nationally coordinated studies and implementation processes, actions of the NWI requiring significant implementation activity within NSW are:

- completion of the water planning and licence conversion process across NSW for the remaining 20 percent of water use;
- implementing indefeasibility of water title;
- regulating floodplain harvesting;
- further development of the water title register;
- steps to facilitate increased water trading;

- further development of the water accounting framework; and
- knowledge and capacity building efforts.

### **Monitoring**

NSW will monitor its progress in water reform with reference to key performance indicators developed by the national Natural Resource Management Ministerial Council (NRMMC). In the interests of cross-jurisdictional consistency, NSW considers it important that the NWI signatories use the NRMMC's agreed performance indicators as a tool to indicate the relative progress of different jurisdictions. A national framework such as this will allow jurisdictions to learn from each other and work together towards a high standard of water resource management Australia-wide.

A second source for performance indicators specific to NSW's activities will be the NSW Natural Resources Commission (NRC), the independent statutory body responsible for providing advice and making recommendations to Government on major policy actions related to environmental and natural resource management. The NRC has already established a strong record of public consultation and offering meaningful and clear state-wide standards and targets.

## NSW National Water Initiative Implementation Plan

### NWI Element No 1: Water Access Entitlements and Planning Framework

#### Action 1: Implementation of the framework – IGA Para 26 ( i ) & (iii)

##### Actions

Substantially complete plans to address any existing over-allocation for all river systems and groundwater sources in accordance with commitments under the 1994 COAG agreement.

Review any plans developed for the 1994 COAG framework to ensure that they now meet the requirements of the NWI in terms of transparency of process, reporting arrangements and risk assignment.

**IGA Date:** 26 (i) end of 2005, 26 (iii) Immediate

##### Context

NSW commenced 31 WSPs on 1 July 2004 that address existing over-allocation for rivers and coastal groundwater sources. The plans were developed by community based local Water Management Committees. These plans set the rules for providing water for the environment and direct how the water available for extraction is to be shared between users. The plans are available on the DNR website, [www.dipnr.nsw.gov.au](http://www.dipnr.nsw.gov.au). The 2004 amendments to the WMA and amendments to the individual plans gazetted on 1 July 2004 ensure that NSW WSPs and new water licensing system are consistent with the NWI and operate within its ambit.

Plans for most of the remaining water sources are expected to be ready for public exhibition in 2006 for progressive implementation from 2006/07 as resources are available to convert existing licences to WMA licences (refer Element 1, Action 3).

Collectively the 31 WSPs commenced on 1 July 2004 return around 220 GL of water to the environment (taking as a base 1993-94 MDBC cap levels). Commencement of a further 6 plans for major inland groundwater sources that have been gazetted will complete NSW's remaining commitments on over-allocated systems under the 1994 COAG water reform framework.

##### Implementation Timetable

Steps/Deliverables	Start date	End date	Status/ Comments	Lead Agency
Substantial completion of plans to address any existing over allocation for all river systems and groundwater resources in accordance with commitments under the 1994 COAG water reform framework by end 2005			The definition and extent of overuse and the on-going evaluation of the impacts of the plans to address overuse are areas where existing knowledge is limited. Future action in this area links strongly to the Knowledge and Capacity Building Actions of the NWI (paras 98 to 101).	DNR
Commencement of 31 WSPs		1 July 2004	Plans have commenced and will apply for a period of 10 years up to 2014. They will be reviewed as soon as possible after year 5 by the NRC in the context of catchment health. The NRC will then advise the Minister for Natural Resources on whether a WSP should be remade or extended. The NRC review will address environmental, socio-economic and education aspects of WSPs. Information and data for the reviews will be provided to the NRC by DNR, the CMAs and relevant agencies.	

Steps/Deliverables	Start date	End date	Status/ Comments	Lead Agency
Immediate review of existing water plans to ensure they meet the requirements of the NWI		July 2004	Complete	
zetting amendments to plans to include NWI requirements		1 July 2004	Complete	
Commencement of 6 Groundwater WSPs	1 July 2006		Plans are scheduled to begin in July 2006 following negotiations on structural adjustment assistance with Commonwealth Government and subsequent amendments to the plans.	

### **Cooperation with other jurisdictions**

A number of WSPs will deal with cross border resources, such as the Border Rivers, Upper Murray, Snowy Rivers and Googong. Cross-jurisdictional consultation, including relevant Intergovernmental Agreements, will be undertaken in the development of these plans.

#### **Link to NWI outcomes**

This action helps achieve:

*NWI objectives 23 ( i ) to (iv)*

Clear and nationally compatible characteristics for secure water access entitlements;

Transparent, statutory based water planning;

Statutory provisions for environmental and other public benefit outcomes, and improved environmental management practices;

Complete the return of all currently over-allocated or overused systems for environmentally sustainable levels of extraction.

*NWI outcomes 25 (i) to (v)*

Enhance the security and commercial certainty of water access entitlements by clearly specifying the statutory nature of these entitlements;

Provide a statutory basis for environmental and other public benefit outcomes in surface and groundwater systems to protect water sources and their dependent ecosystems;

Be characterised by planning processes in which there is adequate opportunity for productive, environmental and other public benefit considerations to be identified and considered in an open and transparent way;

Provide for adaptive management of surface and groundwater systems in order to meet productive, environmental and other public benefit outcomes;

Implement firm pathways and open processes for returning previously over-allocated and/or overdrawn surface and groundwater systems to environmentally-sustainable levels of extraction;

#### **Link to relevant performance indicators**

NSW will provide links to relevant NRMCM indicators and NRC targets when they are available.

## NWI Element No 1: Water Access Entitlements and Planning Framework

### Action 1 A: Implementation of the framework – IGA Para 26 ( ii )

#### Action

Amend legislative and administrative regimes to incorporate the elements of the entitlements and allocation framework in the NWI

**IGA Date:** end 2006

#### Context

While the WMA as first passed implemented many of the elements that were to be included in the NWI, the 2004 amendments to the WMA ensure that NSW's WSPs and new water licensing system are consistent with the NWI and operate within its ambit.

#### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status/Comments	Lead Agency
Legislative and administrative regimes amended to incorporate the elements of entitlements and allocation framework by end 2006				DNR
Amendments made to the WMA 2000		1 July 2004	Complete.	
Amendments made to WSPs		1 July 2004	Complete.	

#### Cooperation with other jurisdictions

Not applicable.

#### Link to NWI outcomes

This action helps achieve:

*NWI objectives 23 ( i ) to (iv) & (vii) to (x)*

Clear and nationally-compatible characteristics for secure water access entitlements;

Transparent, statutory-based water planning;

Statutory provision for environmental and other public benefit outcomes, and improved environmental management practices;

Complete the return of all currently over-allocated or overused systems to environmentally-sustainable levels of extraction;

vii) Water accounting which is able to meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management;

viii) Policy setting which facilitate water use efficiency and innovation in urban and rural areas;

ix) Addressing future adjustment issues that may impact on water users and communities; and

x) Recognition of the connectivity between surface and groundwater resources and connected systems managed as a single resource

*NWI outcomes 25 (i) to (v), (viii), (ix) & (xi)*

Enhance the security and commercial certainty of water access entitlements by clearly specifying the statutory nature of those entitlements;

- Provide a statutory basis for environmental and other public benefit outcomes in surface and groundwater systems to protect water sources and their dependent ecosystems;
- Be characterised by planning processes in which there is adequate opportunity for productive, environmental and other public benefit considerations to be identified and considered in an open and transparent way;
- Provide for adaptive management of surface and groundwater systems in order to meet productive, environmental and other public benefit outcomes;
- Implement firm pathways and open processes for returning previously over-allocated and/or overdrawn surface and groundwater systems to environmentally-sustainable levels of extraction;
- viii) Reflect regional differences in the variability of water supply and the state of knowledge underpinning regional allocation diversions;
- ix) Recognise indigenous needs in relation to water access and management;
- xi) Protect the integrity of water access entitlements from unregulated growth in interception through land-use change.

The 2004 amendments to the WMA incorporate the following key NWI features into the NSW water management system:

- the issuing of perpetual licences for most categories of licence
- transparent and robust planning processes
- a robust access entitlement register and
- increased opportunities for trade

**Link to relevant performance indicators**

NSW will provide links to relevant NRMCC indicators and NRC targets when they are available.

## **NWI Element No 1: Water Access Entitlements and Planning Framework**

### **Action 2: Water access entitlements to be defined and implemented – IGA Para 27-34**

#### **Key actions**

Separation of water access entitlement from land described as a perpetual or open-ended share of the *consumptive pool* of a specified water resource, as determined by the relevant *water plan*.

The allocation of water consistent with a *water plan*.

Regulatory approvals enabling water use at a particular site for a particular purpose specified separately to the *water access entitlement*, consistent with the principles set out in Schedule D.

*Water access entitlements* should be:

- able to specify the essential characteristics of the water product;
- exclusive; traded, given, bequeathed or leased;
- subdivided or amalgamated;
- mortgageable (and in this respect have similar status as freehold land when used as collateral for accessing finance);
- enforceable and enforced; and
- recorded in publicly-accessible reliable water registers that foster public confidence and state unambiguously who owns the entitlement, and the nature of any encumbrances on it.

*Water access entitlements* will also:

- clearly indicate the responsibilities and obligations of the entitlement holder consistent with the *water plan* relevant to the source of the water;
- only be able to be cancelled at Ministerial and agency discretion where the responsibilities and obligations of the entitlement holder have clearly been breached;
- be able to be varied, for example to change extraction conditions, where mutually agreed between the government and the entitlement holder; and
- be subject to any provisions relating to access of water during emergencies, as specified by legislation in each jurisdiction.

The provisions in paragraphs 28-32 are subject to the following provisions:

- fixed term or other types of entitlements such as annual licences will only be issued for consumptive use where this is demonstrably necessary (e.g. poorly understood and/or less developed water resources) and/or where the access is contingent upon opportunistic allocations, and/or where the access is provided temporarily as part of an adjustment strategy, or where trading may otherwise not be appropriate. In some cases, a statutory right to extract water may be appropriate; and
- an ongoing process will be in place to assess the risks of expected development and demand on resources in poorly understood or undeveloped areas, with a view to moving these areas to a full entitlement framework when this becomes appropriate for their efficient management.

Special circumstances facing the minerals and petroleum sectors that may need to be addressed by policies and measures beyond the scope of this Agreement.

**IGA Date:** Immediate

#### **Context**

In the water sources covered by the 31 commenced WSPs, the licensing arrangements now come under the WMA and are consistent with all the key actions listed above. Amendments were made to the WMA in June 2004 specifically to ensure that NSW licensing arrangements are compatible with the NWI. The water access licence (the water access entitlement): is separate from the water use and works approvals; entitles the holder to a specified share in the available water; is open to a range of new water dealings (trade, subdivision, lease); and has

conditions aligned with the relevant WSP. Water access licences for commercial purposes are issued in perpetuity, while those for specified purposes such as town water supply, domestic and stock use are issued for as long as the purpose remains (i.e. are open ended). Supplementary water licences in the regulated river systems are issued for as long as the relevant WSP provides for such licences.

The majority of holders in these WSP areas have been formally notified of their water access licence and approval conditions. As the licence ownership and mortgage arrangements are finalised (with the licence holder and financial institutions), water access licences are being progressively recorded on the Water Access Licence Register (which operates similarly to the Land Titles Register) and the water access licence certificate issued. Under the transitional provisions of the WMA, security interest holders must be given two years from the date licences are converted to the WMA to have their security interests registered on the Register. For the licences in the initial 31 WSPs, the deadline for registration of security interests is June 2006. DNR has been working closely with the major financial interests and all registered interests to finalise this process and will also be advertising to alert all small unregistered security interests of this requirement. Indefeasibility of water licence titles for the licence holders in the initial 31 WSP areas should be available by 2007.

All remaining water licences in NSW will be similarly converted to water access licences and approvals under the WMA as WSPs are implemented in their areas. The development of WSPs, and therefore the timing for conversion of water licences, falls within 4 groupings:

**Group A** – the 31 WSPs which have been commenced. These cover the most stressed river systems in NSW (i.e. the major regulated river systems) plus a number of individual unregulated rivers and 5 coastal groundwater systems. These 31 WSPs account for about 80% of surface water use and some 25% of licences.

**Group B** – WSPs for 5 major inland groundwater systems have been gazetted (Upper and Lower Namoi, Lower Gwydir, Lower Macquarie, Lower Lachlan and Lower Murrumbidgee alluvial aquifers) and a sixth (Lower Murray) is substantially completed. Implementation of these WSPs has been suspended until 1 July 2006 for CMAs, in collaboration with both the NSW and Commonwealth Governments, to consult with local communities. This will allow the plans to be finalised, determining how the water reductions will be achieved and where structural adjustment funding will be allocated. These plans will cover a further 10% of licensed water users.

**Group C** – 39 macro plans will be substantially completed in 2006 and progressively commenced from July 2007. Approximately 700 unregulated river sources, which largely follow sub-catchment boundaries, have been grouped into 27 WSP areas, largely based on river basins. Approximately 88 groundwater sources have been grouped into 12 WSP areas based on geological provenance (alluvium, coastal sand etc) and location in the State (north coast, south coast etc). The aim of the macro plans is to ensure that broad values of each WSP area are maintained so that the WSP rules for areas with similar values mixes (e.g. high ecological and low economic values) will aim to meet similar objectives even if the WSP areas are in different areas of the State. The 39 macro plans will account for a large portion of the State’s licences – around 45% - although most are small users. A detailed explanation of the macro planning process can be found at Attachment A.

**Group D** – 17 individual WSPs which require very specific water sharing rules. These cover the remaining 20% of licences and will be completed and commenced progressively from 2006 to 2008 for:

the eight remaining regulated rivers - Border Rivers and Googong (both subject to interstate agreements), Fish, Belubla, Peel, Paterson, Toonumbar and Bega;

the Snowy and Upper Murray Rivers which are subject to interstate agreements;

four complex unregulated river systems - Lowbidgee Flood Control District, Barwon-Darling, Hunter estuaries, and greater metropolitan Sydney (covering the Hawkesbury / Nepean / Coxs / Shoalhaven / Woronora / Illawarra region rivers); and

three complex aquifer systems (Great Artesian Basin, Border Rivers and Peel).

### Implementation Timetable

Steps/Deliverables	Start date	End date	Status/ Comments	Lead Agency
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Steps/Deliverables	Start date	End date	Status/ Comments	Lead Agency
Water access entitlements and the separate water use and works approvals to be defined and implemented immediately. Development of water access entitlements is in four groups.	June 2003	June 2007	The process essentially takes four years from start (license cleansing) to finish (indefeasible water title). On a statewide basis approximately 60% of all (group A, B, C and D) existing <i>Water Act</i> licences in NSW have been cleansed and their details verified (the first stage of the process). The information is then re-checked just prior to the commencement of a WSP to take account of licence transfers.	DNR
Group A (initial 31 WSPs): Licence data cleansing and verification, conversion to water access licence and approvals, and finalisation of ownership/tenancy and mortgage arrangements Majority of licence and approval holders (approximately 70%) formally notified of their conditions 90% of licences uploaded into the Water Access Licence (WAL) Register and 50% of certificates issued All converted water use and works approvals and their conditions listed on the DNR register Registration of security interests Indefeasibility of title	June 2003  February 2005  July 2004  July 2004  July 2004  July 2004	June 2006  March 2005  December 2005    June 2006  June 2007	DNR has instituted a fast-track process for issuing certificates for those who wish to undertake water licence transfers  Complete  In-house by DNR and through the use of contractors  Register available on the DNR website  Security interest holders have 2 years time from the date the licence is converted to register their interest Dependent on finalisation of licence ownership and security interests. The ownership of some licences may be contested through the courts	
Group B (5 major inland groundwater systems) licences and approvals developed in the above manner  Indefeasibility of title	June 2003 (cleansing process began)  June 2003	June 2007  June 2009	The WSP will commence from 1 July 2006 and the new licensing arrangements thereafter. The community will be consulted on how water reductions will be achieved and where structural adjustment funding will be allocated	

Steps/Deliverables	Start date	End date	Status/ Comments	Lead Agency
Group C (macro plans) licences developed in the above manner	June 2003	June 2009	Some will be converted and issued before June 2009 depending on the commencement date of the WSP	
Indefeasibility of title	June 2003	June 2011		
Group D (17 individual WSPs for specific water resources with special requirements) licences developed in the above manner	June 2003	June 2009	Some will be converted and issued before June 2009 depending on the commencement date of the WSP	
Indefeasibility of title	June 2003	June 2011		

### **Cooperation with other jurisdictions**

NSW is actively participating in the NWI project to ensure compatibility between States within the Murray-Darling Basin and works with Queensland to ensure compatible arrangement along the Border Rivers system. NSW is involved in the Murray Darling Basin Commission Interstate Water Trade Project Board, which oversees trade in the Murray and Lower Darling WSP areas.

### **Link to NWI outcomes**

This action helps achieve:

*NWI Objective 23 (i)*

Clear and nationally compatible characteristics for secure water access entitlements;

*NWI Outcomes 25 (i) & (vii)*

- i) Enhance the security and commercial certainty of water access entitlements by clearly specifying the statutory nature of these entitlements
- vii) Compatible water entitlements across jurisdictions to improve investment certainty, be competitively neutral and to minimise transaction costs on water trades (where relevant)

### **Link to relevant performance indicators**

NSW will provide links to the relevant NRMCC indicators and NRC targets when they are available.

## **NWI Element No 1: Water Access Entitlements and Planning Framework**

### **Action 3: Water to meet environmental and other public benefits – IGA Para 35 & 37**

#### **Actions**

Water to meet agreed *environmental and other public benefit outcomes* is to:

- be given statutory recognition and have at least the same degree of security as water access entitlements for *consumptive use* and be fully accounted for;
- be defined as the water management arrangements required to meet the outcomes sought, including water provided on a rules basis or held as a water access entitlement; and
- if held as a water access entitlement, may be made available to be traded (where physically possible) on the temporary market, when not required to meet the *environmental and other public benefit outcomes* sought and provided such trading is not in conflict with those outcomes.

New South Wales will provide for:

- secure ecological outcomes by describing the *environmental and other public benefit outcomes* for water systems and defining the appropriate water management arrangements to achieve those outcomes; and
- resource security outcomes by determining the shares in the *consumptive pool* and the rules to allocate water during the life of the plan.

**IGA Date** Immediate

#### **Context**

Water sharing under the *Water Management Act 2000* is required by section 5(3) to give first priority to the protection of the environment and its dependent ecosystems and second priority to protection of basic landholder rights. As such, water for environmental and other public benefits is accorded higher security than licensed use. Sharing or extraction of water under any other right or by licensed use must not prejudice these priorities except in extreme drought conditions. Section 8 of the WMA provides that WSPs must “contain provisions for the identification, establishment and maintenance of planned environmental water”, and also “must contain provisions relating to adaptive environmental water”. In essence, all water that is not specified as available for extraction is protected as environmental water, either by way of rules in WSPs or by being held as adaptive environmental water. For example, in the Gwydir River system some 56% of the long-term average annual flow is preserved and contributes to ecosystem health.

Planned environmental water is provided for by rules in WSPs (e.g. cease to pump levels in unregulated rivers, environmental allocations held in the storage in regulated rivers or reservation of a proportion of the sustainable yield in groundwater systems). The rules are fixed for the ten year life of the WSP and can only be amended by the Minister for Natural Resources with the concurrence of the Minister for the Environment. The Natural Resources Commission will review the plans against the natural resource management standard and targets after year five, and recommend whether they should be extended or re-made at the end of their ten year term.

Adaptive environmental water is water held under a water access entitlement that contains specific conditions requiring the water to be committed for specified environmental purposes either generally or at certain times or circumstances. Environmental water held under an adaptive environmental water access licence is available to be temporarily traded when not required for the specified environmental purpose. Amendments are to be made shortly to the WMA to clarify the administration and operation of licences with adaptive environmental water conditions arising from water savings projects under the Living Murray and other initiatives.

WSPs have been developed and commenced for 31 water sources (returning a volume of about 220 GL to the environment compared to 1993/94 MDBC Cap levels of development) and plans for 5 inland groundwater sources have been prepared and awaiting commencement. In the regulated rivers, the water sharing rules were based on data on water use, river flows, hydrologic modelling and previous implementation and assessment of various environmental flow rules, data held by other agencies and the expertise of the water management committees. For the unregulated rivers a stressed river assessment was made determining the hydrologic and environmental stress. For the groundwater systems studies were undertaken to assess the sustainable yield and to identify groundwater dependent ecosystems.

A further 17 water sources have been identified as requiring individual plans. All other water sources in New South Wales will be included in macro plans, each of which will include a number of water sources. The methodology for classifying water sources within a macro plan and the process for developing macro plans has been developed through an inter-agency working group. This involves identifying the environmental, cultural and public values of the water source using a check list and classifying each water source in terms of its instream (environmental) and extraction (socio-economic) values and risks using two matrices. One rates the water source's instream value against hydrologic stress and the other the instream risk against dependence on extraction. Water sources will be rated as low, medium or high for these four characteristics. Generic environmental and water trading rules have been developed for the different classifications. Where values / risks are low, fairly simple environmental rules and open water trading rules would apply, with more intensive management required for the higher risk or stressed water sources.

Regional panels comprising inter-agency and CMA representatives will establish the classifications and assess the applicability of the generic rules. Based on local knowledge, including consideration of socio-economic impacts, the Panels may recommend the continuation of current rules, adoption of the generic rules or a combination.

### Implementation Timetable

Steps/Deliverables	Start Date	End Date	Status/Comments	Lead Agency
Immediate definition, provision and management of environmental water and water for other public benefit outcomes. This process is included in water plans and will be staged according to the Group of plans				DNR
Group A (31 initial WSPs)		1 July 2004	Complete.	
Commencement of 27 river plans		1 July 2004	Complete.	
Commencement of 4 Coastal Groundwater Plans		1 July 2004	Complete.	
Group B Commencement of 5 Inland Groundwater Plans		1 July 2006	Consultation with the community over how reductions will be made and how structural adjustment funding will be allocated.	
Group C (macro plans covering unregulated and groundwater systems) Commencement of 29 macro plans for unregulated rivers	In stages – work on development of plans commenced January 2005	1 July 2008	Duration of the data cleansing and conversion process necessitates a staged delivery timetable. These plans group water sources into a valley plan that will identify stressed sources.	
Development and commencement of 14 macro Groundwater Plans, to include management rules to protect Groundwater Dependent Ecosystems	In stages – work on development of plans commenced January 2005	1 July 2008	The methodology for developing the macro plans will be completed by 1 July 2005.	

Steps/Deliverables	Start Date	End Date	Status/Comments	Lead Agency
Group D (individual WSPs) Development of 17 individual WSPs that will define rules for environmental water	In stages – work on development of plans commenced January 2005	1 July 2008	Areas included: 8 regulated rivers (Border Rivers, Googong, Fish, Belubla, Peel, Paterson, Toonumbar and Bega); 2 unregulated rivers subject to interstate agreements (Snowy Upper Murray); 4 complex unregulated river systems (Lowbidgee Flood Control District, Barwon-Darling, Hunter estuaries and greater metropolitan Sydney); and 3 complex aquifer systems (Great Artesian Basin, Border Rivers and Peel). Plans will be completed having regard to priority and complexity and the issues to be addressed (e.g. requirements of IGAs).	

### **Cooperation with other jurisdictions**

A number of WSPs will deal with cross border resources, such as the Border Rivers, Upper Murray, Snowy Rivers and Googong. Cross-jurisdictional consultation, including relevant Intergovernmental Agreements, will be undertaken in the development of these plans.

### **Link to NWI outcomes**

This action helps achieve:

*NWI outcomes 25 (ii) and (iv)*

- provide a statutory basis for *environmental and other public benefit outcomes* in surface and groundwater systems to protect water sources and their dependent ecosystems;
- provide for adaptive management of surface and groundwater systems in order to meet productive, environmental and other public benefit outcomes;

### **Link to relevant performance indicators**

NSW will provide links to relevant NRMCC indicators and NRC targets when they are available.

## **NWI Element No 1: Water Access Entitlements and Planning Framework**

### **Action 4: Water plans based on characteristics and components of Schedule E – IGA Para 36, 39 & 40**

#### **Actions**

Prepare water plans that include (as listed in Schedule E) health of the water source, risks to water availability, objectives, all uses and users (including indigenous water), environmental and other public health outcomes, reliability, circumstances under which water may be taken and conditions. Plans should include pathways to reduce over-allocation or use (where relevant), a review process that allows changes to be made in light of improved knowledge, be consistent with relevant natural resource management plans, identify level of connectivity between surface and groundwater systems and impacts on downstream users and the environment, and include consultation with stakeholders.

Monitor the performance of water plan objectives, outcomes and water management arrangements, factor in knowledge improvements provided for in the plans and provide regular public reports.

**IGA Date:** 2010

#### **Context**

WSPs in NSW have already been developed or will be developed according to the characteristics listed in Schedule E. All 36 gazetted plans do, and all future plans will, clearly describe the water source to which they pertain and the objectives for the water source that the plan aims to achieve. Plans set out the current condition of the relevant river or aquifer and delineate current uses and users of the water, as well as likely future use and risks to the resource and to extraction from the resource. This is based on historical data regarding water extraction, river flows, groundwater levels; hydrological and hydrogeological modelling; socio-economic profiles prepared for the catchments and environmental and agricultural information held by the agencies.

Plans indicate the reliability of entitlements under them and set out clear rules about when, how and how much water can be taken. They also clearly specify any provisions that may change as a result of further studies. For example in the groundwater plans, there is likely to be provision allowing review and amendment of the sustainable yield estimates.

DNR is required to include in its Annual Report details of the implementation of all WSPs. In addition, the NRC will review all WSPs and advise the Minister for Natural Resources on whether the provisions in these plans are materially affecting the achievement or non-achievement of targets in catchment action plans. In conducting its reviews, the NRC will call for and have regard to relevant public submissions. It will also examine the socioeconomic impacts of the current water-sharing plans and the impacts of any proposed changes to those plans. The NRC will report to the Minister for Natural Resources and may submit recommendations on whether a water-sharing plan and/or catchment action plan should be remade or extended.

As to the inclusion of interception activities in WSPs, floodplain harvesting rules are being developed and will be incorporated into WSPs (refer Element 1, Action 8). Interception by farm dams is specified through the Farm Dams policy and their impact is taken into account in developing the extraction limit for resource to which the plan relates and from which the plan rules largely derive.

For plans covering individual water sources, locally-based committees examine all the scientific and socio-economic evidence to devise the objectives most suited to their local water source and community, and the plan rules required to meet those objectives. For macro plans, a classification method has been derived through inter-agency collaboration and uses a nine-level risk matrix of high, medium and low levels of environmental risk and dependency on extraction. The classification will guide the level of water sharing rules to be adopted. Regional panels, including representatives of the Catchment Management Authorities, will then review the classifications and rules based on local knowledge and consideration of the socio-economic impacts of the rules.

#### **Implementation Timetable**

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Development of WSPs by 2007 for systems that are over-allocated, fully allocated or approaching full				DNR

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
allocation and development. Development of WSPs by 2009 for systems that are not yet approaching full allocation will occur according to the four groups of water plans.				
Development of WSPs for Group A		June 2004	Completed - amendments to plans were gazetted and plans commenced on 1 July 2004	
Development of WSPs for Group B		June 2006	Amendments to the plans may be required following negotiations with Commonwealth. Plans are expected to commence on 1 July 2006	
Development of WSPs for Group C Regional panels to submit recommendations on classification and WSP rules	May 2004	October 2005		
Public exhibition, finalisation and gazettal of plans	May 2006	December 2006	Staged process as individual plans are ready. The aim is to have <b>majority</b> of the macro plans on public exhibition by mid July 2006 for commencement by July 2007	
Development of WSPs for Group D Public exhibition, finalisation and gazettal of plans	December 2005	July 2008	Staged process as individual plans are ready. Some of these plans including those for metropolitan Sydney and Great Artesian Basin are expected to commence in July 2006	
Monitoring of and reporting on WSPs Undertaking of mid-term review for initial WSPs Reporting on annual implementation	2009	June 2014 Nov 2005	To be included in DNR Annual Report	
Application of the monitoring and reporting process to Groups B, C and D.	Progressive, depending on commencement of plans			

### Cooperation with other jurisdictions

A number of WSPs will deal with cross border resources, such as the Border Rivers, Upper Murray, Snowy Rivers and Googong. Cross-jurisdictional consultation, including relevant Intergovernmental Agreements, will be undertaken in the development of these plans.

### Link to NWI outcomes

This action helps achieve:

*NWI objectives 23 (i), (iii), (iv), (vi), (ix) and (x)*

Transparent, statutory-based water planning;

- iii) Statutory provision for environmental and other public benefit outcomes, and improved environmental management practices;
- iv) Complete the return of all currently over-allocated or overused systems to environmentally-sustainable levels of extraction;
- vi) Clarity around the assignment of risk arising from future changes in the availability of water for the consumptive pool;
- ix) Addressing future adjustment issues that may impact on water users and communities; and
- x) Recognition of the connectivity between surface and groundwater resources and connected systems managed as a single resource.

*NWI outcomes 25 (i) to (x)*

Enhance the security and commercial certainty of water access entitlements;

Provide a statutory basis for environmental and other public benefit outcomes

Productive, environmental and other public benefit considerations identified and considered in an open and transparent way;

Provide for adaptive management of surface and groundwater systems; Implement firm pathways and open processes for returning previously over-allocated and/or overdrawn surface and groundwater systems to environmentally-sustainable levels of extraction;

Clearly assign the risks arising from future changes to the consumptive pool;

Reflect regional differences in the variability of water supply and the state of knowledge underpinning regional allocation decisions;

Recognise indigenous needs in relation to water access and management;

Identify and acknowledge surface and groundwater systems of high conservation value, and manage these systems to protect and enhance those values.

**Link to relevant performance indicators**

NSW will provide links to NRMCC indicators and NRC targets when they are available.

## **NWI Element No 1: Water Access Entitlements and Planning Framework**

### **Action 5: Addressing over allocation as per NCC commitments – IGA Para 41 & 43-44**

#### **Actions**

Substantially complete by 2005 allocations to provide a better balance in water use for all river systems and groundwater resources that are over-allocated or stressed for NCC endorsed implementation programs.

For other over-allocated or overused systems, determine precise pathways for adjustment.

Make substantial progress by 2010 in adjusting all over-allocated and or overused systems in accordance with States' Implementation plans.

**IGA Date:** 2005, end 2010

#### **Context**

The NSW WSPs make a significant step towards addressing overuse, in the context of the community's capacity to adjust to reductions in water allocations over the ten year term of these first plans.

NSW's water planning framework is being undertaken in 4 groups. Group A -the initial 31 WSPs - covers the majority of the stressed river systems in NSW. Group B covers the majority of the over-allocated/overused groundwater systems. Combined these plans encompass over 80% of all water used in NSW.

**Group A** plans commenced in July 2004. The regulated river systems are being managed through extraction limits and environmental flow rules which will reduce environmental stress. These rules were implemented from the start of the plan, as they build on previous environmental flow rules. As noted above, the conversion of old volumetric licences to a system of perpetual unit share also avoids the possibility of entitlements being over-allocated, as the new water access licences no longer specify a licence volume.

**Group B** - the over-allocated/overused inland aquifer systems. Plans have been developed which identify the percentage reductions required to bring allocations within the sustainable extraction levels. The measures include supplementary water access licences which over the ten year period are phased out.

**Group C** - the 43 macro WSPs will cover most of the remaining river catchments and broad groundwater system types. On a State basis they do not represent major areas of over-allocation or overuse (stress). There may, however, be local zones of over-use within a plan area. The classification process identifying the water sources as high, medium or low risk should be completed by October 2005 (refer Element 1, Action 4). Rules will be tailored to the classification and will include processes for adjusting overuse if and where necessary. These plans will be progressively implemented from July 2007.

**Group D** - comprises 17 individual WSPs which require very specific water sharing arrangements. These plans will be progressively developed and implemented from 2006 to 2008. The most significant remaining stressed river in NSW is the Barwon-Darling River and a cap management strategy is to be introduced in July 2005 to reduce water extractions within this system prior to the completion of the WSP.

Floodplain harvesting (See Element 1 Action 8), which is an outstanding water extraction issue, is to be brought within existing water sharing arrangements. Volumetric allocations will be made, and these will be inserted into relevant WSPs so that all water extraction in NSW is through WSPs and the new rights systems.

Overuse will be addressed through establishing and managing long term extraction limits. Each water sharing plan establishes a long-term annual extraction limit. Long-term average annual total extractions will be managed within the respective limit, thereby protecting the proportion of river flows identified for fundamental ecosystem needs at the start of the Plan from unlimited increases in long-term water extraction.

A long-term extraction limit in:

- all inland regulated river water sources is equal to or less than the MDBC Cap level of long-term average annual extractions. In nearly all cases the extraction limit is less than the Cap;
- all inland unregulated river water sources is equal to the MDBC Cap level of long-term average annual extractions; and

- all coastal unregulated river water sources is equal to the sum of entitlements and basic rights requirements at the commencement of the respective WSP. It limits future extractions to no more than what could have been extracted under the entitlements existing at the start of the WSP.

In all regulated river water sources, if average annual total extractions exceed the respective long-term extraction limit by 3% or more, then water allocations for supplementary water access licences, and if required for regulated river general security access licences, will be reduced.

In all unregulated river water sources, if annual total extractions (i.e. all water users) over 3 consecutive years in the water source exceed the respective long-term extraction limit by 5%, then water allocations for unregulated river access licences will be reduced.

In both regulated and unregulated rivers, allocations will be reduced by an amount necessary to return subsequent total water extraction to the respective long-term extraction limit.

### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Substantial addressing of over-allocation as per NCC requirements by 2005 within: Initial 31 WSPs  5 inland alluvial aquifers		July 2004  July 2006	Completed. These plans cover the majority of the stressed river systems in NSW (i.e. the major regulated rivers). The plans address over-allocation and known overuse. Substantially complete - plans identify measures to address over-allocation and known overuse. These plans represent the major areas of groundwater over-allocation.	DNR
Determination of precise pathways for adjustment for 43 macro WSPs	March 2005	December 2005	The classification process and initial plan rules for the majority of these plans will be determined by December 2005, with plans finalised in 2006 for implementation from July 2007. The classification and rule setting process transparently identifies the transition from current rules to the proposed rules.	
Determination of precise pathways for adjustment for 17 individual WSPs: Barwon-Darling River  Sydney Metro plan  Other plans		July 2005  July 2006  July 2009	A cap was approved in July 2005, with the operational details to be developed by late 2005 Water sharing rules require finalisation (over 75% of extraction is by water authorities). Adjustment to sustainable yield of the system is the subject of the broader Metropolitan Water Plan and referenced to the WSP Plans will be progressively finalised and implemented from July 2007. July 2009 represents the desired end	

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
			date for the commencement of all plans in NSW noting that this is 6 months earlier than the due date in the NWI of December 2009	
Make substantial progress in adjusting all over-allocated and or overused systems by 2010.		July 2008	WSPs should commence for all of NSW by July 2009 at the latest. Most plans requiring adjustment will have commenced by 2007, so substantial progress in adjusting overused systems will be made by 2010	

### **Cooperation with other jurisdictions**

NSW has sought to work cooperatively with the Commonwealth on the structural adjustment issue for the groundwater plans.

A number of WSPs will deal with cross border resources, such as the Border Rivers, Upper Murray, Snowy Rivers and Googong. Cross-jurisdictional consultation, including relevant Intergovernmental Agreements, will be undertaken in the development of these plans.

### **Link to NWI outcomes**

This action helps achieve:

*NWI Objectives 23 (ii) & (iv)*

Transparent statutory-based water planning

Complete the return of all currently over-allocated or overused systems to environmentally-sustainable levels of extraction

*NWI outcomes: 25 (i) & (iii)*

Secure ecological outcomes by describing the environmental and other public benefit outcomes for water systems and defining appropriate water management arrangements.

Resource security outcomes by determining the shares in the consumptive pool and rules to allocate water during the life of the plan.

### **Link to relevant performance indicators**

NSW will incorporate the relevant NRMCC indicators and NRC targets when available.

## **NWI Element No 1: Water Access Entitlements and Planning Framework**

### **Action 6: Implementation of Risk Assignment Framework – IGA Para 26 (v), 46-50,**

#### **Actions**

Implement the following risk assignment framework for all changes in allocation not provided for in pathways to address overuse in water plans.

Reductions arising from natural events such as climate change, drought or bushfire would be borne by licence holders at all times.

Reductions arising from bona fide improvements in the knowledge about the capacity of water systems to sustain particular extraction levels would be borne by licence holders up to 2014.

After 2014, reductions arising from bona fide improvements in the knowledge about the capacity of water systems to sustain particular extraction levels would be borne -

by licence holders for the first 3% reduction in water access;

by the State/Territory Governments and the Commonwealth Government for reductions in water access of between 3% and 6% (one-third and two-third shares respectively);

by the State/Territory Governments and the Commonwealth Government for reductions in water access above 6% (shared equally).

Reductions arising from changes in government policy not previously provided for would be borne by governments.

Where there is voluntary agreement between relevant State or Territory Governments and key stakeholders, a different risk assignment model to the above may be implemented.

#### **IGA Date: Immediate**

#### **Context**

Effective from 1 July 2004, NSW has already introduced the context in which an effective risk framework occurs (refer paragraph 47 of the NWI). This includes:

a new share based water access entitlements framework

water plans developed through a transparent process which determine water allocation for the entitlements.

31 WSPs have already commenced. 5 major inland ground water plans will commence on 1 July 2006.

39 macro plans will progressively commence from July 2007

regular reporting of progress with implementing the WSPs

pathways for dealing with known over-allocation and/or overuse established through the WSPs.

The NWI risk assignment framework applies in two stages: the current stage; and the post-2014 stage. The first stage requires the NSW Government to bear the costs of changes in government policy not provided for by the plans, while changes arising from natural events or improvements in knowledge are borne by the licence holders. After 2014, the main change is that the costs of changes in access resulting from improvements in knowledge are then shared between licence holders, State Government and the Commonwealth Government.

The existing compensation arrangements as set out in Section 87 of the WMA for the duration of the first WSP for each water source are consistent with and in fact more generous to licence holders than the NWI risk assignment framework. These arrangements enable compensation to be claimed in cases where WSP arrangements are altered in a manner that is not provided for in the WSP, and which have the effect of reducing a licence holder's water allocations (this is regardless of whether the change is policy or knowledge driven). This system guarantees the rules under which access will be provided for 10 years.

NSW is planning to legislate during the second half of 2005 for the adoption of the NWI risk assignment provisions applying after 2014.

Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Risk assignment framework to be implemented immediately for all changes in allocation arising from change in government policy not specified in the WSP	July 2004	June 2014 for initial 31 WSPs (10 years after plan start date for other plans)	This aspect of the risk assignment framework is consistent with the compensation provisions of the WMA which are in effect for the existing 31 WSPs and will also apply to the initial term of all WSPs	DNR
Risk assignment framework provisions covering sharing of costs for changes arising from improvements in knowledge to apply after 2014. This requires the following legislative and agreement actions:				
<b>Stage 1 – (Amend WMA 2000)</b>	Sept 2005	Dec 2005	Adoption of the post 2014 provisions of the NWI framework requires amendments to the WMA. A Bill is planned to be introduced to Parliament in the Spring 2005 Session	
Consultation on draft amendment Bill	Sept 2005	Oct 2005		
Introduction of Bill in Parliament	Oct 2005			
Bill passed		Dec 2005		
<b>Stage 2 – Operational Framework</b>	Jan 2006	Dec 2006	For the framework to be implemented there needs to be an MOU between NSW and the Commonwealth on the operational and financial aspects and also a regulation	
Draft operational framework developed	Jan 2006	Mar 2006		
Consultation and development of a Memorandum of Understanding on the framework with the Commonwealth	Mar 2006	June 2006		
Operational framework finalised		July 2006		
Draft amendments to WMA Regulation to include risk assignment provisions		September 2006		
Consult on amendments		October 2006		
Preparation of costs and benefits schedule as per Subordinate Legislation Act Schedule 1 requirements		November 2006		

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Regulation amended		Dec 2006		
NWI Risk assignment commences	2014			

### **Cooperation with other jurisdictions**

NSW intends to develop a Memorandum of Understand with the Commonwealth Government on the operational framework prior to implementation. The draft operational arrangement will also be discussed with other States and Territories, as it may serve as a model for other States and Territories to follow.

### **Link to NWI outcomes**

This action helps achieve:

*NWI objective 23 (vi)*

Clarity around the assignment of risk arising from future changes in the availability of water for the consumptive pool

*NWI outcome 25 (vi)*

Clearly assign the risks arising from future changes to the consumptive pool.

### **Link to relevant performance indicators**

NSW will provide links to the relevant NRMCC indicators and NRC targets when they are available.

## **NWI Element No 1: Water Access Entitlements and Planning Framework**

### **Action 7: Water plans to address indigenous water issues – IGA Para 52-54**

#### **Actions**

The Parties will provide for indigenous access to water resources, in accordance with relevant Commonwealth, State and Territory legislation, through planning processes that ensure:

inclusion of indigenous representation in water planning wherever possible; and

*water plans* will incorporate indigenous social, spiritual and customary objectives and strategies for achieving these objectives wherever they can be developed.

Water planning processes will take account of the possible existence of native title rights to water in the catchment or aquifer area. The Parties note that plans may need to allocate water to native title holders following the recognition of native title rights in water under the Commonwealth Native Title Act 1993.

Water allocated to native title holders for traditional cultural purposes will be accounted for.

**IGA Date:** Immediate

#### **Context**

Indigenous interests have been recognised on a number of different levels as a result of the water reforms in NSW. Accordingly, the objectives of the WMA and each of the WSPs specifically include the protection of spiritual, social and customary values of Aboriginal communities.

A number of mechanisms are used to meet these objectives:

##### *Native Title*

Native Title Rights have been provided for under the Basic Landholder Rights provisions of the WMA, allowing a native title holder to take and use water, without the need for an access licence or approval, in the exercise of native title rights. Each of the WSPs recognise that extractions as part of a native title right may increase over the term of the WSP, in the event that native title is granted in NSW.

In addition, applications for consents under the WMA (in relation to a new grant of water, or an approval) are notified to native title claimants etc, in accordance with the *Native Title Act 1993*.

##### *Indigenous representation*

During the development of the WSPs, each WSP committee included two representatives from the local Aboriginal community, such as representatives from Local Land Councils, Elders Groups etc. It was the responsibility of the representatives to ensure that information provided at, and decisions arising from, the WSP committee meetings were referred back to their local community for comment.

To facilitate future consultation on natural resource management issues, the Catchment Management Authorities are establishing Aboriginal Reference Groups, which will act as the representatives for local Aboriginal communities. Land councils, Elders Groups, and Traditional Owners are represented on these groups. These Reference Groups will be used for consultation on future WSPs.

##### *Protection of cultural heritage*

All applications for new/amended water supply works and use approvals, and certain dealings, will be assessed to ensure that the grant of the application will not impact on Aboriginal cultural heritage. In addition, certain applications for approvals are advertised in an Indigenous newspaper circulating within the potentially affected Aboriginal community, allowing for objections to applications to be made.

##### *Indigenous access to water*

Each of the WSPs provides for access to water for cultural purposes by Indigenous communities and persons in the form of Aboriginal cultural access licences. Aboriginal cultural access licences will also apply to all future WSPs developed in NSW. The NSW Government has waived the application fee for Aboriginal cultural access licences. In addition, certain WSPs provide for Aboriginal commercial access licences (North Coast). Future coastal WSPs will provide for Aboriginal commercial access licences.

### Aboriginal Water Trust

The Aboriginal Water Trust (AWT), currently being established under the WMA, is a strict commercial program that supports Aboriginal people of NSW to participate in the State's water economy by accessing grants through the AWT to run commercially viable businesses where water is an essential component of the business's operations. Funding of \$5 million is being made available for the first two years of operation.

#### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Water plans to address indigenous water issues immediately				
Recognition of Native Title Rights	2000	Ongoing	Specified in WMA and WSPs	DNR
Inclusion of indigenous representation	1995	Ongoing		DNR / CMA
Establishment of Aboriginal Reference Groups	2004	Ongoing	3 Reference Groups established to date	CMAs
Consideration of cultural heritage in assessments	2004	Ongoing		DNR
Cultural access licences available	2004	Ongoing	Available in all WSPs	
Commercial access licences available	2004	Ongoing	In North Coast and future coastal WSPS	
Aboriginal Water Trust (AWT) Establish operating protocols	July 2005	2007	A performance evaluation of the AWT in 2007 will determine its continuity	
Establish AWT Advisory Board	December 2005	August 2005 Ongoing		
Commence investment in Aboriginal businesses to enable Aboriginal people to participate in the commercial water market	March 2006	2007		

#### Cooperation with other jurisdictions

Not applicable.

#### Link to NWI outcomes

This action helps achieve:

*NWI objectives 23 (ii) & (iii)*

Transparent, statutory based water planning; and

Statutory provisions for environmental and other public benefit outcomes, and improved environmental management practices.

*NWI outcomes 25 (iii) & (ix)*

Be characterised by planning processes in which there is adequate opportunity for productive, environmental and other public benefit considerations to be identified and considered in an open and transparent way; and

Recognise indigenous needs in relation to water access and management.

An indigenous community whose spiritual and cultural knowledge is protected and incorporated into natural resource management in NSW, and who have access to water for the cultural and commercial benefit of their communities.

**Link to relevant performance indicators**

NSW will provide links to the relevant NRMMC indicators and NRC targets when they are available.

## **NWI Element No 1: Water Access Entitlements and Planning Framework**

### **Action 8: Interception Activities IGA Para 55-57**

#### **Actions**

Assess the significance of major interception activities such as farm dams and bores; intercepting and storing of overland flows; and large-scale plantation forestry on catchments and aquifers.

Apply appropriate planning, management and / or regulatory measures where necessary to protect the integrity of the water access entitlements.

In water systems that are fully allocated, over-allocated, or approaching full allocation:-

- interception activities that are assessed as being significant should be recorded (for example, through a licensing system);

- any proposals for additional interception activities above an agreed threshold size will require a water access entitlement:

  - the threshold size will be determined for the entire water system covered by a water plan, having regard to regional circumstances and taking account of both the positive and negative impacts of water interception on regional (including cross-border) natural resource management outcomes (for example, the control of rising water tables by plantations); and

  - the threshold may not apply to activities for restricted purposes, such as contaminated water from intensive livestock operations;

- a robust compliance monitoring regime will be implemented; and

In water systems that are not yet fully allocated, or approaching full allocation:

- significant interception activities should be identified and estimates made of the amount of water likely to be intercepted by those activities over the life of the relevant water plan;

- an appropriate threshold level will be calculated (as per 57 (i)(b)) of water interception by the significant interception activities that is allowable without a water access entitlement across the entire water system covered by the plan:

- progress of the catchment or aquifer towards either full allocation or the threshold level of interception should be regularly monitored and publicly reported:

  - once the threshold level of interception is reached, or the system is approaching full allocation, all additional proposals for significant interception activities will require a water access entitlement unless for activities for restricted purposes, such as contaminated water from intensive livestock operations.

**IGA Date:** No later than 2011.

#### **Context**

Implementing NWI requirements in relation to interception activities is a high priority for NSW. NSW is taking steps to address and regulate where necessary two key types of interception: interception by farm dams, and floodplain harvesting.

Sections 53 and 54 of the WMA encompass the requirements of the NWI with respect to interception activities undertaken by farm dams. NSW has developed a Farm Dams Policy which specifies the threshold levels for basic harvestable rights above which all interception must be licensed. The DNR website ([www.farmdamscalculator.dipnr.nsw.gov.au](http://www.farmdamscalculator.dipnr.nsw.gov.au)) contains a Farm Dams calculator which helps calculate the maximum harvestable farm dam capacity for properties in the State.

Floodplain harvesting is covered neither by existing water access entitlements, nor by the 31 WSPs which commenced operation on 1 July 2004. NSW is developing a general policy for NSW based on the outcomes of a pilot project of regulating floodplain harvesting in the Gwydir Valley to meet the NWI requirements. The general policy will:

establish a process and timeline for audits of floodplain extraction works;

establish a process and timeline for delivery of floodplain harvesting outcomes within the Water Sharing Plan framework; and

develop rules for issuing floodplain harvesting licences under section 55A of the WMA within the MDB cap for inland river systems.

The collection of monitoring data and the process of consultation with key stakeholders has already begun, and it is anticipated that a draft floodplain harvesting policy will be developed by in December 2005.

Regulation of floodplain harvesting activities under the policy will be carried out through water access licences, since all water extraction (other than extraction associated with basic rights) must be licensed under the WMA. Access licences and works approvals will be issued for all approved works currently undertaking floodplain harvesting activities. Compliance issues will be managed consistent with the NWI.

Interception through farm forestry will first need to be identified and then addressed through the entitlements framework (steps included in the implementation framework below).

### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Assessment of the significance of major interception activities such as farm dams and bores; intercepting and storing of overland flows; and large-scale plantation forestry on catchments and aquifers	Audit methodology November 2004	October 2005	Currently an audit methodology is being developed to deal with the issue of determining the number, type and location of works capable of harvesting overland flow on the State's floodplains. This will inform the development of a National Knowledge Strategy on water interception by land use change activities.	DNR
Assessment of significance of large-scale plantation forestry on catchments and aquifers through:	2007	2011	This action will be carried out in cooperation with CSIRO and the MDBC. NSW looks forward to input from the Federal Department of Agriculture, Fisheries and Forestry and the NWI Working Group for national consistency on this action	
Developing a methodology to identify plantations and changes in plantations over time				
Applying the methodology to identify the changes				
Assessing the impact of changes on a catchment scale				
Depending on the scale of the impact, bringing plantations approval into the licensed water access framework				
Development and	November	December	Floodplain harvesting is the key	

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
implementation of Floodplain Harvesting Policy which deals with the interception and storage of overland flows within the State's floodplains	2004	2005	overland flow harvesting mechanism within NSW. Currently it is not adequately encompassed by the provisions of the WMA. The current Floodplain Harvesting Policy project will rectify this situation.	
Development of Water Plans consistent with the NWI for the interception and storage of overland flows within the State's floodplains	December 2005	July 2007	A key flow on from the development of a State-wide Floodplain Harvesting Policy will be the inclusion of floodplain harvesting provisions in existing and future WSPs. These plans will be consistent with the provisions of the 1994 COAG agreement and provisions of the NWI	
Development of an assessment and licensing platform to manage flood plain harvesting extraction category	December 2005	July 2007	Currently Floodplain Harvesting activities are not encapsulated within the licensing framework of the WMA which requires that a gazetted water sharing plan be in place prior to issuing of access licences. In the case of Floodplain Harvesting, Macro Plans will be developed for the State's floodplains. Once gazetted these plans will fulfil the requirements of the WMA and access licences for Floodplain Harvesting activities will issued in accordance with the provisions of the Macro Plans.	
Determine allocation status and threshold size of the systems in which interception and storage of overland flows occurs.		July 2006	Currently the level knowledge on the types and rates of extraction by works which intercept and store overland flows is very limited. This action links strongly to the Knowledge and Capacity Building Actions of the NWI (paras 98 to 101)	
Monitor progress of extractions within not yet fully allocated catchments	July 2006	July 2007	This provides benchmarking for compliance within the WSPs	
Undertake robust compliance monitoring within over-allocated systems		Ongoing	This provides benchmarking for compliance within the WSPs	

### Cooperation with other jurisdictions

By their very nature overland flows on floodplains are not constrained by State borders. To ensure a consistent approach is achieved, an operational relationship has been established with the Queensland Department of Natural Resources and Mines (DNRM) to deal with issues particular to the NSW/Qld Border Rivers system. The strengthening of the current relationship with DNRM will facilitate the development of a shared understanding of the issues and the development of practical solutions to overland flow management along the common trunk

stream within the respective State's legislative constraints. Similar cooperation with Victoria's Department of Sustainability and Environment (DSE) is envisaged for the management of overland flow harvesting from the floodplains associated with the Murray River.

### **Link to NWI outcomes**

This action helps achieve:

*NWI Objectives 23 (i) to (iv), (vi) to (ix)*

Clear and nationally-compatible characteristics for secure water access entitlements;

Transparent, statutory-based water planning;

Statutory provision for environmental and other public benefit outcomes, and improved environmental management practices;

Complete the return of all currently over-allocated or overused systems to environmentally-sustainable levels of extraction;

Clarity around the assignment of risk arising from future changes in availability of water for the consumptive pool;

Water accounting which is able to meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management;

Policy setting which facilitate water use efficiency and innovation in urban and rural areas;

Addressing future adjustment issues that may impact on water users and communities

*NWI Outcomes, in priority order, 25 (ix), (ii), (iii), (v) and (viii)*

Protect the integrity of water access entitlements from unregulated growth in interception through land-use change.

Provide a statutory basis for environmental and other public benefit outcomes in surface and groundwater systems to protect water sources and their dependent ecosystems;

Be characterised by planning processes in which there is adequate opportunity for productive, environmental and other public benefit considerations to be identified and considered in an open and transparent way;

Implement firm pathways and open processes for returning previously over-allocated and/or overdrawn surface and groundwater systems to environmentally-sustainable levels of extraction;

Reflect regional differences in the variability of water supply and the state of knowledge underpinning regional allocation decisions

### **Link to relevant performance indicators**

NSW will provide links to relevant NRMCMC indicators and NRC targets when they are available.

## **NWI Element No 2: Water Markets and Trading**

### **Action 1: Publicly accessible compatible trading registers IGA Para 59**

#### **Actions**

Introduction of pathways by 2004, and full implementation by 2006, of compatible, publicly-accessible and reliable water registers of all water access entitlements and trades (both permanent and temporary) on a whole of basin or catchment basis, that:

Contain records of all entitlements and trades including location

Achieve secure water access entitlements

Protect third party interests

Minimise transaction costs

Are publicly accessible and includes price of trade and identity of entitlement holder

Enable monitoring of trade and water use volumes.

**IGA Date:** end 2004 for pathways, end 2006 for implementation

#### **Context**

The Water Access Licence Register which records all the legal information about a water access licence including ownership, tenancy arrangements, encumbrances, share component and water dealings and provides the water title has been established by the Department of Lands and is searchable via the internet at a cost of \$8 per search. The majority of the licences in the existing water sharing plan areas have been converted and placed on the Water Access Licence Register. Clarification of ownership and mortgage arrangements are delaying the remaining licences.

DNR also provides a number of free on-line public registers which include:

- water access licences (excluding ownership) and their conditions (searchable via water source or individual licence number);
- water supply works and use approvals, including conditions (searchable via water source or individual approval number);
- water allocation assignments (temporary trades) including location, volume traded and price (searchable via water source or individual licence number; and
- water usage (searchable via water source and category of licence).

Information about transfers (permanent water trades) is currently only available on an individual licence basis through the WAL Register. DNR intends to establish a register of permanent trades so that this can be monitored on a water source basis. Data control, security and transfer arrangements, however, first need to be established and coordinated with the Department of Lands.

DNR is working with the major financial interests, other mortgagee and company interests (where known) to ensure that the information on third party interests in a water access licence are recorded on the WAL Register. Registration forms are available on the DNR website. DNR will also be advertising to alert other third party interests in the current converted licences (those in the 31 WSPs) of their need to register these interests by June 2006.

### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Adoption of publicly accessible compatible systems for registering: by end 2004 Water access entitlements		Dec 2004	WAL register established & administered by Department of Lands. DNR register also available which shows licence conditions but excludes information on licence owner.	DNR
Permanent trades - by individual licence		Dec 2004	Information available from WAL Register	
Permanent trades - by water source		June 2006	DNR to establish register of transfers by water source	
Temporary trades		Dec 2004	Register established & administered by DNR.	
Water use		Dec 2004	Register established & administered by DNR.	
Full implementation of register of all NSW licences: For all existing converted licences i.e. subject to a current WSP (Group A)	Dec 2004	June 2006	Security interests are being advised that they have until June 2006 to register their interest in a WAL and to have it recorded on the WAL register. Indefeasibility of title is intended to be guaranteed by August 2007	
Remaining licences	June 2006	June 2010	Registration will be a progressive process as WSPs prepared, licences converted, and security interests identified and given required time to have interests registered.	
National Water Commission Working Group to identify steps required to achieve compatible water register systems, giving regard to the requirements under IGA 60 and studies to be undertaken under IGA 61		July 2005	NSW recognises the need for the registers to be electronically linked and integrated. Upon the establishment of a nationally compatible framework, links to the NSW land titles register will be established.	
NRMMC NWI Working Group receives report from NWC on agreed steps to achieve consistency and considers necessity of further inter-jurisdictional collaboration		September 2005		
Steps required to achieve compatibility in water register systems incorporated into		September 2005		

jurisdictions' implementation plans				
NRMMC annual report to COAG in 2005-06 to include jurisdictions' progress towards implementing compatible to water register systems		October 2006		

**Cooperation with other jurisdictions**

Discussions were held with Queensland when developing the Water Access Licence Register. NSW also participates in the Inter Jurisdictional Working Group on Registers that has been established by the National Water Commission.

**Link to NWI outcomes**

This action helps achieve:

*NWI Objectives 23 (i)*

- i) Clear and nationally-compatible characteristics for secure water access entitlements

*NWI Outcomes 58 (i), (ii) and (v)*

- i) Facilitate the operation of efficient water markets and the opportunities for trading, within and between States and Territories, where water systems are physically shared or hydrologic connections and water supply considerations will permit water trading;
- ii) Minimise transaction costs on water trades, including through good information flows in the market and compatible entitlement, registry, regulatory and other arrangements across jurisdictions;
- v) Provide appropriate protection of third-party interests.

**Link to relevant performance indicators**

NSW will provide links to relevant performance indicators and NRC targets when they are available.

**NWI Element No 2: Water Markets and Trading**

**Action 2: Compatible institutional and regulatory arrangements to facilitate trade IGA Para 60 & 62**

**Actions**

States and Territories agree to establish by 2007 compatible institutional and regulatory arrangements that facilitate trade, including arrangements consistent with principles in Schedule G

Remove barriers to temporary trade

Review impact on trade of interim threshold

Full removal of barriers to trade

**IGA Date:** 60 end 2007, 60 (ii) immediate (except for southern MDB), 60 (iv) (a & b) 2009

**Context**

The 2004 amendments to the WMA and the 31 WSPs that commenced on 1 July 2004 establish trade arrangements in accordance with the principles of trade in Schedule G of the NWI. Permanent trading is also possible in those areas still governed by the *Water Act 1912*. In areas where usage is metered, such as the major inland aquifers, temporary trade is also permitted. In addition, the existing arrangements allow for trade in planned unregulated river systems. However, the WMA provides a greater range of water dealing and trading arrangements and all NSW water sources will come under the WMA arrangements once WSPs are implemented. Generally the limitations to trade are based on environmental or physical constraints. The water sharing plans that are currently being developed, for areas that are not covered by a plan, aim to remove non river health/hydrological barriers to trade.

Some private irrigation entities, which essentially hold one major water licence in which their shareholders are entitled to use a share of the available water, limit or do not allow permanent trade out of their areas on the grounds of maintaining their viability. Amendments to the WMA are being prepared to legislate the removal of barriers to trade in the Irrigation Corporation areas (Action 4). This would permit open trade up to at least the 4% interim threshold limit. The NSW is also investigating the removal of similar barriers by other irrigation entities such as Trusts, Districts and the former surface water authorities.

For trade outside the Murray-Darling Basin, there are no barriers to trade in WSPs except for those related to physical constraints or to protect the needs of the environment.

**Implementation Timetable**

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Trading arrangements consistent with principles in Schedule G of the NWI by end 2007		1 December 2004 for initial 31 WSPs	Trading arrangements consistent with principles in Schedule G are already in place in areas where 31 existing WSPs apply.  In the remaining areas of the State, historical trading arrangements operate. Trading arrangements as per Schedule G will, however, progressively be applied as the WSPs, macro plans and groundwater plans are completed and implemented.	
Remove barriers to temporary trade immediately		December 2004	Inter-state temporary trade is occurring between the connected Murrumbidgee, Murray and Lower Darling systems. Progressively removing the few remaining Murrumbidgee trade barriers.	

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Removal of barriers to temporary trade in the border rivers system		1 July 2006	Dependent on implementation of the proposed NSW / Queensland Intergovernmental Agreement.	
Removal of barriers to permanent trade by irrigation corporations	June 2004	July 2006	NSW is currently developing amendments to its legislation and expects to have the interim threshold in place by January 2006. Details listed in Action 4	
Full removal of barriers to trade by 2014 (other than Southern MDB)		2014	NSW is currently investigating removal of permanent trade barriers for other irrigation entities (Trusts, Irrigation Districts). NSW will progress towards full removal of barriers to trade before 2014	
The Commonwealth/State Water Trading Group receive outputs of the water trading studies under IGA 61		November 2005	NSW is actively participating in the NWI Water Trading Group, and will consider implementing the recommendations resulting from these studies, where appropriate	
The Commonwealth/State Water Trading Group, in consultation with the NWI Working Group, to consider recommendations from the studies and develop a work plan of actions to facilitate compatible institutional and regulatory arrangements that facilitate trade		March 2006	NSW, in cooperation with other jurisdictions, will facilitate the implementation of actions arising from the trading studies, where appropriate.	
NWI Working Group provides work plan to NRMCC		October 2006		
Institutional and regulatory arrangements in place in all jurisdictions		End 2007		
NRMCC annual report to COAG in 2007-08 on actions taken to implement paragraph 60 (i), (ii) & (iii)		October 2008		

### **Cooperation with other jurisdictions**

Discussions are being conducted with Queensland on trading in tagged entitlements on the Borders river system. However, Queensland needs to introduce legislative amendments to implement this.

NSW actively participates in the Murray Darling Basin Commission Interstate Water Trade Project Board, which oversees trade in the Murray and Lower Darling WSP areas.

### **Link to NWI outcomes**

This action helps achieve:

*NWI objective 23 (v)*

Progressive removal of barriers to trade in water and meeting other requirements to facilitate the broadening and deepening of the water market, with an open trading market to be in place.

*NWI outcome 58 (i)*

Facilitate the operation of efficient water markets and the opportunities for trading, within and between States and Territories, where water systems are physically shared or hydrologic connections and water supply considerations will permit water trading.

Since all water extraction has to be licensed under the WMA 2000, the water market will be able to trade in the full range of water entitlement, including floodplain harvesting. Access licences and works approvals will be issued for all approved works currently undertaking floodplain harvesting activities. Volumetric licences will be issued with precise access conditions such as commence to pump conditions or the provision of time and event meters will be included for all these new licences for the purpose of monitoring compliance.

**Link to relevant performance indicators**

NSW will provide links to the relevant NRMCC indicators and NRC targets when they are available.

## NWI Element No 2: Water Markets and Trading

### Action 3: Complete studies and consider implementation of recommendations IGA Para 61

#### Actions

- i) All parties agree to complete the following studies and to consider implementation of any recommendations:
- ii) Review of water products
- iii) New approach to sharing delivery capacity and extraction rates among users
- iv) Feasibility of establishing market mechanisms such as tradeable salinity and pollution credits to provide incentives for investment in water-use efficiency and farm management strategies and for dealing with environmental externalities

**IGA Date:** June 2005.

#### Context

A key element of the NWI is the development of robust and open water markets and trading. To support the implementation of the actions on trading, the parties agreed under the NWI to complete studies as per clauses 61 (i to iii) and 63 (iv). The Water Trading Working Group, coordinated by the Department of Prime Minister and Cabinet is currently preparing terms of reference for the trading studies to be conducted under NWI clauses.

NSW has already undertaken a number of intra-jurisdictional studies related to the suitability of market based mechanisms to deal with environmental externalities. Salinity credit trading has already been implemented in the Hunter River Salinity Trading Scheme.

Terms of Reference for the water trade studies have been agreed by the Working Group, with the planned completion of most studies by October 2005 for consideration by jurisdictions.

#### Implementation Timetable

Steps/ Deliverables	Proposed start date	End date	Status / Comments	Lead Agency
Review of water products	May 2005	October 2005	NSW will participate in this study. Terms of reference have been agreed by the Water Trading Working Group, coordinated by the Department of Prime Minister and Cabinet.	Commonwealth
Study of sharing delivery capacity and extraction rates among users	May 2005	October 2005	As above	Commonwealth
Study of the feasibility of establishing market mechanisms such as tradeable salinity and pollution credits to provide incentives for investment in water-use efficiency and farm management strategies and for dealing with environmental externalities	June 2005	A longer timeframe is suggested by the Working Group.	As above	Commonwealth

#### Cooperation with other jurisdictions

NSW actively participates in the inter-jurisdictional Water Trade Working Group coordinated by the Department of Prime Minister and Cabinet.

**Link to NWI outcomes**

This action helps achieve:

*NWI objectives 23 (v)*

Progressive removal of barriers to trade in water and meeting other requirements to facilitate the broadening and deepening of the water market, with an open trading market to be in place

*NWI outcomes 58 (i) and (iii)*

Facilitate the operation of efficient water markets and the opportunities for trading, within and between States and Territories, where water systems are physically shared or hydrologic connections and water supply considerations will permit water trading;

Enable the appropriate mix of water products to develop based on access entitlements which can be traded either in whole or in part, and either temporarily or permanently, or through lease arrangements or other trading options that may evolve over time

**Link to relevant performance indicators**

NSW will provide links to the relevant NRMMC indicators and NRC targets when they are available.

**NWI Element No 2: Water Markets and Trading**

**Action 4: Removing trade barriers in Southern MDB IGA Para 63**

**Actions**

Parties (Commonwealth, NSW, Victoria and SA) agree to:

Take necessary steps to enable the use of exchange rates and/or tagging for interstate trade;

Reduce barriers to trade in southern MDB and establish an interim limit on permanent trade out of water irrigation areas of 4 percent per annum

NSW make legislative changes to give effect to a Heads of Agreement between Government and Irrigation Corporations to remove barriers and permit increased trade up to the interim limit;

Review actions to assess whether relevant parties have removed barriers to achieve interim limit

Study into mechanisms necessary to enable interstate trade

Review outcome of actions by NSW, 63 (v)

NWC monitor impacts of interstate trade, 63 (vi)

Review the impact on trade under the interim threshold, 63 (vii).

**IGA Date:** 63 (i) to 63 (iv) June 2005, 63 (v) end 2007, 63 (vi) ongoing, 63 (vii) end 2009

**Context**

The WMA 2004 amendments, by providing for a robust water planning regime, secure perpetual access rights to water, a strong access rights register and the access licence dealing principles provide users with the confidence to engage in water trading.

The NSW Government is working closely with the Irrigation Corporations in the southern MDB to establish the 4% interim trade threshold and to implement mechanisms to mitigate any potential adverse consequences flowing from the removal of trading restrictions (e.g. the problem of stranded assets).

The NRMCC NWI Working Group will oversee implementation of this review. The mechanism for undertaking the review will be determined closer to the date, depending on what is most appropriate at the time.

**Implementation Timetable**

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Take necessary steps to enable the use of exchange rates and / or tagging for interstate trade by June 2005:		July 2004	NSW has taken legislative action to facilitate tagging.  Discussions with relevant jurisdictions are underway to establish and apply exchange rates (eg to account for changes in reliability between jurisdictions and in delivery losses) and to administer licences in other jurisdictions (eg monitoring and compliance for “tagged” water across jurisdictional boundaries).	DNR
			The MDBC project board has received technical advice on “exchange rates”. MDBC will continue to use “sensible” exchange rates and evaluate any third party impacts until studies on tagging are completed. It is likely that exchange	

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
			rates and tagging will be required to facilitate an effective market. The MDBC inter-state trade group has agreed to pursue work on a tagging model and is also considering the possibility of hybrid models involving tagged entitlements and exchange rates.	
Reduce barriers to trade in southern MDB and establish an interim limit on permanent trade out of water irrigation areas of 4 percent per annum by June 2005			Regular meetings and workshops are being held with Irrigation Corporations (ICs) to progress this action. The National Water Commission has also been involved in recent discussions with the ICs.  The ICs are in the process of identifying mechanisms to implement the 4% threshold limit and deal with stranded assets.	
Preparation of a draft Heads of Agreement (HoA) between the Government and ICs on trade reform In principle agreement with management of ICs regarding stranded asset concerns		June 2004  Ongoing	ICs have agreed to take the HoA to their members.  NSW has reached in principle agreement with ICs on using a suite of tagging, exit fees, access fees and/or long term contracts to address stranded assets.	
ICs develop preferred method for establishing interim threshold and addressing stranded assets		31 May 2005		
ICs identify necessary changes to their Memorandum of Articles and Association; Customer Contracts and Policies		31 May 2005		
NSW Government public statement on timetable for establishing the interim threshold		30 June 2005		
NWC provides in principle advice on acceptability of IC's proposed exit fees		30 June 2005		
ICs consult with their shareholders/members on the proposed changes	April 2005	September 2005		
ICs formally present their proposals to their members/shareholders for approval		November 2005		
Memorandum of Articles and Association; Customer		December 2005		

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Contracts and Policies altered to give effect to the interim threshold and establishment of exit fees.				
If necessary, NSW makes legislative changes to support the establishment of the 4% interim trade threshold and charging exit fees by June 2005		December 2005	Proposed for spring 2005 parliamentary session if necessary	DNR
Review actions to assess whether relevant parties have removed barriers to achieve interim limit by June 2005		30 June 2005	Review to be undertaken by NWI trading Group established by the Department of Prime Minister and Cabinet	Commonwealth
Study into mechanisms necessary to enable interstate trade by June 2005	June 2005	November 2005	Study to be undertaken by NWI Trading Group established by the Department of Prime Minister and Cabinet	Commonwealth
Review outcomes of actions by NSW regarding IC trade by end 2007			No action yet	NWC
NRMMC, in consultation with the NWC, to establish mechanism for review		September 2008		
NWC monitor impacts of interstate trade			No action to date. NSW will provide any relevant information sought by the NWC	NWC
Review the impact on trade under the interim threshold by end 2009		2009	No action yet. NSW will provide input to the review by NWC on the impact on trade	NWC

### Cooperation with other jurisdictions

NSW actively participates in the Murray Darling Basin Interstate Water Trade Project Board and the inter-jurisdictional Water Trade Working Group coordinated by the Department of Prime Minister and Cabinet.

### Link to NWI outcomes

This action helps achieve:

*NWI objective 23 (vii)*

Water accounting which is able to meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management.

*NWI outcomes 58 (i), (ii) & (iii)*

Facilitate the operation of efficient water markets and the opportunities for trading, within and between States and Territories, where water systems are physically shared or hydrologic connections and water supply considerations will permit water trading;

Minimise transaction costs on water trades, including through good information flows in the market and compatible entitlement, registry, regulatory and other arrangements across jurisdictions;

Enable the appropriate mix of water products to develop based on access entitlements which can be traded either in whole or in part, and either temporarily or permanently, or through lease arrangements or other trading options that may evolve over time;

**Link to relevant performance indicators**

NSW will provide links to the relevant NRMCC indicators and NRC targets when they are available.

**NWI Element No 3: Best Practice Water Pricing**

**Action 1: Complete implementing COAG pricing policies IGA Para 65**

**Actions**

Complete commitments under the 1994 COAG Water Reform Framework to bring into effect pricing policies for water storage and delivery in rural and urban systems, including through the use of:

Consumption based pricing

Full cost recovery for water services to ensure business viability and avoid monopoly rents, including recovery of environmental externalities, where feasible and practical

Consistency in pricing policies across sectors and jurisdictions where entitlements are able to be traded.

**IGA Date:** end 2004

**Context**

Consumption based pricing has been achieved on regulated rivers and metropolitan water suppliers. For non-metropolitan urban water suppliers consumption based pricing has been substantially achieved with over 95% of the non-metropolitan urban population subject to such pricing. For unregulated rivers and groundwater, it is being progressed where appropriate and in other cases achieved by a mix of tariff structures and water trading. DNR’s September 2005 pricing submission will provide detailed costing information reflecting the full costs of providing water resource management services. IPART is expected to set water resource management charges that achieve full cost recovery levels for those systems currently under-recovered in the price path period 2006/07 to 2009/10. The price path is expected to be known when IPART releases a determination in June 2006.

Full cost recovery has been achieved for the majority of regulated rivers and metropolitan water suppliers. For non-metropolitan urban water suppliers, full cost recovery has been substantially achieved with 99% of the non-metropolitan urban population providing such cost recovery (disclosure of the level of cost recovery by each non-metropolitan urban water utility is provided in the *2003-04 Water Supply and Sewerage Performance Monitoring Report*, a copy of which is sent to all utilities). A path to full cost recovery for unregulated rivers and groundwater is being developed. A medium term pricing submission to IPART in late 2005 will provide updated information on water resource management costs for these water sources as well as for regulated rivers.

Pricing policy is already consistent between all valleys in NSW. Consistency in pricing policies where entitlements are traded will be progressed in NSW. NSW will cooperate with any inter-jurisdictional studies aiming at achieving consistency between states.

In NSW, IPART determines bulk water prices in a transparent manner. Relevant legislation requires reports by IPART, and all submissions to IPART, to be made public – these can be accessed on the IPART website:

[www.ipart.nsw.gov.au](http://www.ipart.nsw.gov.au)

**Implementation Timetable**

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Complete commitments under the 1994 COAG Water Reform Framework to bring into effect pricing policies for water storage and delivery in rural and urban systems		End 2004	NSW is committed to full cost recovery, consumption based pricing and consistency in pricing policies.	DNR DEUS
Consumption based pricing for:				DEUS
Regulated rivers			Complete	
Metropolitan water suppliers			Complete	

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Non-metropolitan water supply			18 non-metropolitan urban water suppliers abolished their water allowance in June 2004. 15 of the existing 98 water suppliers still have a water allowance. DEUS is working with the remaining 15 suppliers to abolish their water allowance and move to best-practice pricing by June 2006. Over half of these suppliers are planning to abolish their water allowance by June 2005. (Refer also to Element 6, Action 1 for requirements under the <i>Best-Practice Management Guidelines</i> ).	
Unregulated rivers Groundwater	In progress In progress		For unregulated rivers and groundwater, it is being progressed where appropriate and in other cases achieved by a mix of tariff structures and water trading. The next submission to IPART is due in September 2005.	DNR
Full cost recovery	Ongoing		Achieved for most regulated rivers and metropolitan water suppliers. Achieved by 93 of the 98 non-metropolitan urban water suppliers. The remaining 5 suppliers are phasing in full cost recovery by June 2006. State Water bulk water charges are determined by IPART	
Establishment of lower bound pricing in regulated valleys			Substantially complete	
Consistent pricing policies by end 2006		In progress	Consistent policies are being applied across valleys within NSW. NSW will cooperate with any study into pricing consistency across State borders.	
NWC convenes a meeting with jurisdictions and regulators to develop a strategy to assess current approaches and facilitate consistency of pricing across jurisdictions		August 2005		
NRMMC NWI Working Group provides comments on strategy		October 2005		
Steps required to achieve consistency in pricing incorporated into jurisdictions' implementation plans		December 2005		

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
NRMMC NWI Working Group reports to NRMMC on jurisdictions' implementation of IGA 65 (iii)		April 2006		

### **Cooperation with other jurisdictions**

Recognising the requirement under IGA 77 (ii), the NWC, in consultation with the NRMMC NWI Working Group, will in the first instance consult with jurisdictions and independent pricing regulators to develop a strategy to facilitate consistency in pricing policies across jurisdictions. NSW will participate in this consultation.

### **Link to NWI outcomes**

This action helps achieve:

*NWI outcomes 64 (i), (ii), (iv) and (v)*

Promote economically efficient and sustainable use of: a) water resources; b) water infrastructure assets; and c) government resources devoted to the management of water;

Ensure sufficient revenue streams to allow efficient delivery of the required services;

Give effect to the principles of user-pays and achieve pricing transparency in respect of water storage and delivery in irrigation systems and cost recovery for water planning and management;

Avoid perverse or unintended pricing outcomes;

### **Link to relevant performance indicators**

NSW will provide links to NRMMC indicators and NRC targets when they are available

## NWI Element No 3: Best Practice Water Pricing

### Action 2: Metropolitan pricing IGA Para 66

#### Actions

Continued movement towards upper bound pricing

Development of pricing policies for recycled water and stormwater that are congruent with pricing policies for potable water, and stimulate efficient water use no matter what the source

Review and development of pricing policies for trade wastes that encourage the most cost effective methods of treating industrial wastes, whether at the source or at downstream plants

Development of national guidelines for customers' water accounts that provide information on their water use relative to equivalent households in the community.

**IGA Date:** (i) end 2008, (ii), (iii) and (iv) end 2006

#### Context

IPART continues to review and set prices with regard to full cost recovery commitments and principles. This has been achieved for metropolitan urban water service providers (recognising that incorporation of water planning costs and externalities are ongoing issues under the NWI). For non-utility licensed extractors in metropolitan areas (defined by the NWI as areas of more than 50,000 extractions), prices are set through bulk rural water determinations as part of pricing determinations for rural users.

These pricing policies are broadly in line with pricing policies for potable water, including full cost recovery and consumption based pricing. The cost elements subject to recovery may vary given the disparate services, for example, water quality is a major cost component of potable water supply but not bulk water. In addition, consumption based pricing is most effectively achieved for water resources management (WRM) services through water trading rather than WRM charges. On the other hand, for urban (generally potable) water, which has a significantly higher cost threshold, consumption based pricing is a more viable tool for demand management.

IPART has specifically been requested to investigate and report on using pricing structures to reduce demand for water in the Sydney basin. The final report of this investigation is available on the IPART website: [www.ipart.nsw.gov.au](http://www.ipart.nsw.gov.au)

The above actions are also being addressed in NSW through an inquiry by IPART into possible pricing principles and alternative arrangements, including private sector involvement, for the delivery of water and wastewater services in the greater Sydney metropolitan area.

#### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Continued movement towards upper bound pricing by end 2008		Dec 2005	Already achieved for all metropolitan utilities	
Development of pricing policies for recycled water and stormwater		Dec 2005		DNR
Review and development of pricing policies for trade wastes		Dec 2005		DNR
Development of national guidelines for water accounts			NSW will participate in the development of Guidelines. Sydney Water bills already show water usage and a comparison with comparable households.	DEUS

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
NRMMC NWI Working Group, in consultation with EPHC, to convene an expert group from metropolitan water providers to draft national guidelines for water accounts				
NRMMC NWI Working Group, in consultation with the EPHC, to prepare Terms of Reference and convene expert group		December 2005		
Draft national guidelines prepared		March 2006		
Draft national guidelines released by NRMMC for stakeholder comments		May 2006		
NRMMC NWI Working Group seeks approval for national guidelines from NRMMC		October 2006		

#### **Cooperation with other jurisdictions**

Not applicable.

#### **Link to NWI outcomes**

This action helps achieve:

*NWI objective 23 (viii)*

Policy settings which facilitate water use efficiency and innovation in urban and rural areas

*NWI outcomes 64 (i), (ii), (iv) and (v)*

Promote economically efficient and sustainable use of:

water resources;

water infrastructure assets; and

government resources devoted to the management of water;

Ensure sufficient revenue streams to allow efficient delivery of the required services

Give effect to the principles of user-pays and achieve pricing transparency in respect of water storage and delivery in irrigation systems and cost recovery for water planning and management;

Avoid perverse or unintended pricing outcomes;

#### **Link to relevant performance indicators**

NSW will provide links to relevant NRMMC indicators and NRC targets when they are available.

## **NWI Element No 3: Best Practice Water Pricing**

### **Action 3: Rural and Regional IGA Para 66**

#### **Actions**

Full cost recovery for all rural surface and groundwater based systems, recognising that there will be some small community services that will never be economically viable but need to be maintained to meet social and public health obligations:

achievement of *lower bound pricing* for all rural systems in line with existing NCP commitments;

continued movement towards *upper bound pricing* for all rural systems, where practicable; and

where full cost recovery is unlikely to be achieved in the long term and a Community Service Obligation (CSO) is deemed necessary, the size of the subsidy is to be reported publicly and, where practicable, jurisdictions to consider alternative management arrangements aimed at removing the need for an ongoing CSO.

**IGA Date:** ongoing

#### **Context**

Full cost recovery has been achieved for the majority of the regulated river systems. With respect to unregulated rivers and groundwater systems, water charges are based wholly on expenditure incurred for provision of water resources management (WRM) services.

Given minimal infrastructure in these systems, upper bound pricing, incorporating a cost of capital, has not been relevant for unregulated and groundwater systems. This is because unregulated and groundwater systems have few assets on which it is sensible to recover the cost of capital (i.e. return on physical assets). In theory, all water sources would target upper bound pricing, but unregulated and groundwater may be “notional upper bound” given their lack of capital.

In terms of CSOs, a distinction is made between the Government subsidy to state owned corporations and the Department of Natural Resources.

In relation to State Water, an operating subsidy is currently paid by Government to cover the shortfall between State Water’s revenue requirement (as assessed by IPART) and the actual level of revenue recovered through prices in accordance with IPART’s determinations. The arrangements for the payment of this subsidy are determined through the Statement of Corporate Intent process. The current Statement forecasts that operating subsidies will cease within five years, when it is expected that full cost recovery will be achieved. This is, however, subject to the determinations of IPART. The Statement of Corporate Intent is an annual agreement between the corporation and the shareholding Ministers which sets out the business plan for the corporation. Sections of the Statement which are not commercial in confidence are made public through tabling in Parliament. This public document includes details of the operating subsidy. The Statement of Corporate Intent constitutes a formal review process for any Government subsidies and CSOs paid to State Water.

In relation to the Department of Natural Resources, all these CSOs are reported transparently in submissions to IPART and in IPART’s determinations. IPART has allowed for a steady increase in WRM charges in recent determinations. However, in several valleys there is still a substantial shortfall from full cost recovery.

Payment by Government of the share of costs that are attributable to water users represent CSOs in two instances: (i) non-chargeable water uses (e.g. riparian rights and stock & domestic water uses); and (ii) chargeable water users in certain valleys. Category (i) can be expected to be subsidised on an ongoing basis consistent with Government policy, noting that the volume of water concerned is insignificant relative to irrigation and other usage. Category (ii) reflects an ongoing subsidy in those systems (generally coastal river valleys) with a very small number of users. Full cost recovery for these valleys would result in WRM charges rising almost exponentially due to the small number of water users relative to the valley cost base. In these instances, removal of an ongoing subsidy would be neither practical nor in the public interest at this time.

### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Full cost recovery for all rural surface and groundwater based systems		In progress	Full cost recovery has been achieved for the majority of the regulated river systems. The next submission to IPART is in September 2005	DNR – for WRM on regulated rivers, unregulated rivers & groundwater;
Achievement of lower bound pricing per NCC commitments		In progress	The next submission to IPART is September 2005 will meet the major lower bound pricing requirements. As noted under Action 1, non-metropolitan urban water suppliers have substantially achieved full cost recovery. These suppliers have also achieved lower bound pricing.	State Water - for water delivery on regulated rivers;  DEUS – for non-metropolitan urban water suppliers.
Continued movement towards upper bound pricing per NCC commitments - ongoing		In progress	Following release of the <i>Best-Practice Management of Water Supply and Sewerage Guidelines</i> in May 2004, non-metropolitan urban water suppliers who comply with best-practice criteria in the guidelines are now permitted to pay a dividend from the surplus of their water supply or sewerage businesses. Such suppliers would be moving towards upper bound pricing.	
Reporting of CSOs		Complete	All CSOs are reported transparently in pricing submissions to IPART & in IPART's determinations.	
Review of CSOs aimed at removing the need for an ongoing CSO		Ongoing	For subsidies paid to State Water, the annual Statement of Corporate Intent is the formal review process. It is expected that the operating subsidy to State Water will cease within five years, subject to IPART's determinations. In the existing instances of Government payment of a share of water user costs (i.e. non-chargeable uses and very small systems), Government has determined that it is neither practical nor in the public interest to remove these CSOs at this time.	

### Cooperation with other jurisdictions

Not applicable.

### Link to NWI outcomes

This action helps achieve:

*NWI outcomes 64 (i), (ii), (iv) and (v)*

- i) Promote economically efficient and sustainable use of:
  - water resources;
  - water infrastructure assets; and
  - government resources devoted to the management of water;
- ii) Ensure sufficient revenue streams to allow efficient delivery of the required services;
- iv) Give effect to the principles of user-pays and achieve pricing transparency in respect of water storage and delivery in irrigation systems and cost recovery for water planning and management;
- v) Avoid perverse or unintended pricing outcomes;

**Link to relevant performance indicators**

NSW will provide links to relevant NRMCC performance indicators and NRC targets when they are available.

### NWI Element No 3: Best Practice Water Pricing

#### Action 4: Cost recovery for planning and management IGA Para 67

##### Actions

Consistent approaches to pricing and attributing costs of water planning and management by 2006, involving:

- i) the identification of all costs associated with water planning and management, including the costs of underpinning water markets such as the provision of registers, accounting and measurement frameworks and performance monitoring and benchmarking;
- ii) the identification of the proportion of costs that can be attributed to water access entitlement holders consistent with the principles below:
  - a) charges exclude activities undertaken for the Government (such as policy development, and Ministerial or Parliamentary services); and
  - b) charges are linked as closely as possible to the costs of activities or products.

**IGA Date:** end 2006

##### Context

DNR is reviewing and refining its WRM activities for inclusion in its September 2005 submission to IPART. This will include activities related to administration of water consents, trading, registers and accounting/measurement frameworks, etc. When complete, the share of costs for each activity attributable to water users - costs to be recovered - will be reviewed. NSW already achieves consistent cost recovery methodology across regions. Consideration is also being given to a state-wide uniform (single) tariff structure. NSW will provide a report on cost recovery for water planning and management as required.

##### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Consistent approaches to pricing and attributing costs of water planning and management – ongoing		Ongoing	NSW will cooperate with inter-governmental processes that may be established to achieve this.	DNR
Redefine DNR's WRM activities		Jun 2005	In progress	
Review and develop user cost shares – cost recovery levels – for each WRM activity		Aug 2005	To be commenced	
Reporting of CSOs		Complete	All CSOs are reported transparently in pricing submissions to IPART & in IPART's determinations.	
Review NSW policies regarding the recovery of costs for planning and management			See Element 3, Action 4 for further details of NSW Government approach to CSOs	
The NWC, in consultation with the NRMWC NWI Working Group, will facilitate development of principles for inclusion in the costs of water planning and management in water prices				

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
NWC, in consultation with NRMCC NWI Working Group, prepare Terms of Reference to develop principles		December 2005		
Draft principles prepared		April 2006		
NRMCC NWI Working Group		June 2006		
NRMCC NWI Working Group seeks approval for national principles from NRMCC		October 2006		

### **Cooperation with other jurisdictions**

NSW will cooperate with other relevant jurisdictions on this action where required.

### **Link to NWI outcomes**

This action helps achieve:

*NWI outcomes 64 (i), (ii), (iii) & (iv)*

- i) Promote economically efficient and sustainable use of:
  - a) water resources;
  - b) water infrastructure assets; and
  - c) government resources devoted to the management of water;
- ii) Ensure sufficient revenue streams to allow efficient delivery of the required services;
- iii) Facilitate the efficient functioning of water markets, including inter-jurisdictional water markets, and in both rural and urban settings;
- iv) Give effect to the principles of user-pays and achieve pricing transparency in respect of water storage and delivery in irrigation systems and cost recovery for water planning and management;

### **Link to relevant performance indicators**

NSW will provide links to relevant NRMCC performance indicators and NRC targets when they are available

### NWI Element No 3: Best Practice Water Pricing

#### Action 5: Water Infrastructure IGA Para 69

##### Actions

- i) The Parties agree to ensure that proposals for investment in new or refurbished water infrastructure continue to be assessed as economically viable and ecologically sustainable prior to the investment occurring (noting paragraph 66 (v)).

**IGA Date:** Ongoing

##### Context

This is an ongoing practice to assess any investment proposal against a set of criteria to make sure that the proposed investment is economically viable. At the same time, for ecological sustainability of an investment, expected impacts on the environment/ecology needs to be assessed to make sure that the proposed investment does not degrade the environment/ ecology in any way.

##### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status /Comments	Lead Agency
Investment in new or refurbished water infrastructure to continue to be assessed as economically viable and ecologically sustainable before being approved	Ongoing	Ongoing	Projects on new and/or refurbished water infrastructure initiated by State Water will be assessed by DNR. Projects will also be checked through price setting by IPART.	State Water, DNR
	Ongoing	Ongoing	For non-metropolitan water supply and sewerage, new and/or refurbished infrastructure is being developed in accordance with the Best-Practice Management Guidelines (Element 6, Action 1 refers). In addition to economic viability and ecological sustainability, this involves full cost recovery for each utility's water supply or sewerage business.	DEUS

##### Cooperation with other jurisdictions

When investments in new or refurbished infrastructure projects are initiated by State Water, DNR will consult with jurisdictions to ensure assessment of economic viability and ecological sustainability of proposed investments that cross jurisdictional boundaries.

NSW will cooperate with other relevant jurisdictions on this action where required.

##### Link to NWI outcomes

This action helps achieve:

*NWI objective 23 (viii)*

- viii) Policy setting which facilitate water use efficiency and innovation in urban and rural areas

*NWI outcomes 64 (i) (b), (iii), (iv) & (v)*

- i) Promote economically efficient and sustainable use of:
  - b) water infrastructure assets;
- iii) Facilitate the efficient functioning of water markets, including inter-jurisdictional water markets, and in both rural and urban settings;

- iv) Give effect to the principles of user-pays and achieve pricing transparency in respect of water storage and delivery in irrigation systems and cost recovery for water planning and management;
- v) Avoid perverse or unintended pricing outcomes.

**Link to relevant performance indicators**

NSW will provide links to the relevant NRMMC indicators and NRC targets when they are available.

### NWI Element No 3: Best Practice Water Pricing

#### Action 6: Release of unallocated water - IGA Para 70-72

##### Actions

Release of unallocated water will be a matter for States and Territories to determine. Any release of unallocated water should be managed in the context of encouraging the sustainable and efficient use of scarce water resources.

If a release is justified, generally, it should occur only where alternative ways of meeting water demands, such as through water trading, making use of the unused parts of existing entitlements or by increasing water use efficiency, have been fully explored.

To the extent practicable, releases should occur through market-based mechanisms.

**IGA Date:** Ongoing

##### Context

WSPs identify where additional water licences can be made available without prejudicing the environment or existing water users. Of the 36 gazetted WSPs, the Kulnura Mangrove Mountain, Tomago Tomaree Stockton and Dorrigo Basalt groundwater WSPs have identified additional water available for release. The other plans have indicated that no unallocated water is available within the system. The mechanism for the release of this unallocated water is currently under development. Future management planning will also consider and identify sources where unallocated water is available for release. Under the WMA, the Minister for Natural Resources may grant new access licences, subject to the requirements of the Act and provisions of a water sharing plan. The right to apply for an access licence for a specified area is to be acquired by auction, tender or other market mechanisms.

NSW does not consider that IGA paragraphs 70-72 refer to anything other than water from natural water sources, and so policies for the release of unallocated water are not required to cover stormwater and recycled water.

##### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status /Comments	Lead Agency
Development of Policy for release of unallocated water	May 2005	Dec 2005		DNR
Implementation of policy for release	Jan 2006	Dec 2006		
Controlled allocation order made	As needed		Will be undertaken prior to any release of unallocated water	
Communication programme to inform the community of release	As needed		Will be undertaken prior to any release of unallocated water	

##### Cooperation with other jurisdictions

Not applicable.

##### Link to NWI outcomes

This action helps achieve:

*NWI objectives 23 (v), (vi) & (viii)*

- v) Progressive removal of barriers to trade in water and meeting other requirements to facilitate the broadening and deepening of the water market, with an open trading market to be in place;
- vi) Clarity around the assignment of risk arising from future changes in the availability of water for the *consumptive pool*;
- viii) Policy settings which facilitate water use efficiency and innovation in urban and rural areas;

*NWI outcomes 64 (iii) & 58 (ii)*

The States and Territories agree that their water market and trading arrangements will:

- iii) Facilitate the operation of efficient water markets and the opportunities for trading, within and between States and Territories, where water systems are physically shared or hydrologic connections and water supply considerations will permit water trading;
- ii) Minimise transaction costs on water trades, including through good information flows in the market and compatible entitlement, registry, regulatory and other arrangements across jurisdictions

**Link to relevant performance indicators**

NSW will provide links to relevant NRMCC performance indicators and NRC targets when they are available

### NWI Element No. 3: Best Practice Water Pricing

#### Action 7: Environmental externalities managed through a range of regulatory measures IGA Para 73

##### Actions

- i) Continue to manage environmental externalities through a range of regulatory measures (such as through setting extraction limits in water management plans and by specifying the conditions for the use of water in water use licences);
- ii) Continue to examine the feasibility of using market based mechanisms such as pricing to account for positive and negative environmental externalities associated with water use; and
- iii) Implement pricing that includes externalities where found to be feasible.

**IGA Date:** Ongoing

##### Context

In NSW, the WMA requires WSPs to establish an extraction cap and to allocate water to the environment as a priority. IPART includes expenditure to mitigate the impacts of known externalities in estimates of water resource management costs. IPART determines charges for urban and irrigation water to include operating and maintenance expenses, administrative costs, replacement-cost depreciation, the opportunity cost of capital, and costs entailed in managing the environment and natural resources. IPART uses an avoidance-cost approach to addressing externalities. That is, an inclusion in water charges of direct environmental costs that water suppliers incur. Under the avoidance-cost approach, a proxy or estimate for externalities that arise from using water is provided for factoring in to cost-recovery price determinations. The National Competition Council in 2003 found this approach to be consistent with COAG requirements.

##### Implementation Table

Steps/ Deliverables	Start date	End date	Status/ Comments	Lead Agency
Incorporate extraction caps for water plans and the priority of environmental water	1 July 2004		As part of WMA and Plans under the Act. Extraction caps will be included in WSPs under development for commencement in the future	DNR
Study of market based mechanisms to assist in managing environmental externalities, as required by IGA Para 61 (iii)		2006	Under the Commonwealth/State Water Trade Working Group	DNR
Development of IWCM strategies to include prices that take into account the cost of environmental flows and recycling schemes	Development of IWCMs began May 2004	June 2006		DEUS
Cost of expenditure to mitigate the impacts of known externalities included in the price of metropolitan and non-metropolitan sewage.		Ongoing		DEUS

##### Cooperation with other jurisdictions

A number of WSPs will deal with cross border resources, such as the Border Rivers, Upper Murray, Snowy Rivers and Googong. Cross-jurisdictional consultation, including relevant Intergovernmental Agreements, will be undertaken in the development of these plans.

**Link to NWI outcomes**

This action helps achieve:

*NWI objectives 23 (iii) & (iv)*

- iii) Statutory provision for environmental and other public benefit outcomes, and improved environmental management practices; and
- iv) Complete the return of all currently over-allocated or overused systems to environmentally-sustainable levels of extraction.

*NWI outcomes 64 (i)*

- i) Promote economically efficient and sustainable use of:
  - a) water resources

**Link to relevant performance indicators**

NSW will provide links to the relevant NRMCC indicators and NRC targets when they are available.

### NWI Element No 3: Best Practice Water Pricing

#### Action 8: Benchmarking efficient performance IGA Para 75 & 76

##### Actions

The States and Territories will be required to report independently, publicly, and on an annual basis, benchmarking of pricing and service quality for metropolitan, non-metropolitan and rural water delivery agencies. Such reports will be made on the basis of a nationally consistent framework to be developed by the Parties by 2005, taking account of existing information collection including:

the major metropolitan inter-agency performance and benchmarking system managed by the Water Services Association of Australia;

the non-major metropolitan inter-agency performance and benchmarking system managed by the Australian Water Association ; and

the irrigation industry performance monitoring and benchmarking system, currently being managed by the Australian National Committee on Irrigation and Drainage.

Costs of operating the above performance and benchmarking systems are to be met by jurisdictions through recovery of water management costs

**IGA Date:** Ongoing and 2005 for report framework.

##### Context

DNR's pricing policy is under close scrutiny by IPART. The NSW water delivery business, State Water, is required to meet its performance indicators in its service delivery to its customers. The input from DNR and State Water to IPART's pricing regimes will provide a basis for input to a nationally consistent framework.

##### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status /Comments	Lead Agency
Independent, public, annual reporting of performance benchmarking for all metropolitan, non-metropolitan and rural water delivery agencies – ongoing			DEUS will continue to publish the annual NSW Water Supply and Sewerage Performance Monitoring Report disclosing the performance of all urban water supply and sewerage utilities in NSW over the last 5 years. The 2003-04 and 2002-03 reports are available on DEUS website ( <a href="http://www.deus.nsw.gov.au/water">www.deus.nsw.gov.au/water</a> )	DEUS
Develop nationally consistent report framework by 2005	2005	2005	A nationally consistent report framework for rural water delivery benchmarking is yet to be developed. For bulk water, the September 2005 pricing submission to IPART will make provision to report, by valley and water source, water resource management expenditure on annual basis. NSW is participating in the interstate working group to develop a nationally consistent urban reporting framework	State Water
NWC, in consultation with NRMCC NWI Working Group, prepare Terms of Reference for consultancy		June 2005		DEUS

Steps/ Deliverables	Start date	End date	Status /Comments	Lead Agency
to develop a draft national framework				
NWC manage consultancy to deliver final report		September 2005		
NRMMC NWI Working Group provides comment on national framework		October 2005		
NRMMC NWI Working Group seeks approval for a national framework from NRMMC		April 2006		

### **Cooperation with other jurisdictions**

The NWC, in consultation with NRMMC NWI Working Group, will facilitate development of a national framework for benchmarking and pricing service quality for water delivery agencies, considering the benchmarking systems currently in use (e.g. Australian Water Association) and how these can be incorporated into the national framework.

### **Link to NWI outcomes**

This action helps achieve:

*NWI objectives 23 (viii)*

viii) Policy settings which facilitate water use efficiency and innovation in urban and rural areas

*NWI outcomes 64 (i) (a) & (iii)*

i) Promote economically efficient and sustainable use of:

a) water resources;

iii) Facilitate the efficient functioning of water markets, including inter-jurisdictional water markets, and in both rural and urban settings.

### **Link to relevant performance indicators**

NSW will provide links to the relevant NRMMC indicators and NRC targets when they are available.

### **NWI Element No 3: Best Practice Water Pricing**

#### **Action 9: Independent Regulator IGA Para 77**

##### **Actions**

The Parties agree to use independent bodies to:

- i) set or review prices, or price setting processes, for water storage and delivery by government water service providers, on a case-by-case basis, consistent with the principles in paragraphs 65 to 68 above; and
- ii) publicly review and report on pricing in government and private water service providers to ensure that the principles in paragraphs 65 to 68 are met.

**IGA Date:** Ongoing

##### **Context**

IPART, established in 1992 under the *Government Pricing Tribunal Act 1992* (amended in 1996 as the *Independent Pricing and Regulatory Tribunal Act 1992*), is an independent body that now oversees regulation in the water, gas, electricity and public transport industries in NSW.

##### **Implementation Timetable**

Steps/ Deliverables	Start date	End date	Status /Comments	Lead Agency
Independent pricing bodies to set and review prices or pricing processes for water storage and delivery and publicly report	1995	ongoing	NSW already complies – IPART carries out this function.	Sydney Water, Hunter Water, State Water, Local Governments and the SCA make submissions to IPART

##### **Cooperation with other jurisdictions**

Not applicable.

##### **Link to NWI outcomes**

This action helps achieve:

*NWI outcomes 64 (i) to (vi)*

- i) Promote economically efficient and sustainable use of:
  - a) water resources;
  - b) water infrastructure; and
  - c) government resources devoted to the management of water
- ii) Ensure sufficient revenue streams to allow efficient delivery of the required services;
- iii) Facilitate the efficient functioning of water markets, including inter-jurisdictional water markets, and in both rural and urban settings;
- iv) Give effect to the principles of user-pays and achieve pricing transparency in respect of water storage and delivery in irrigation systems and cost recovery for water planning and management

##### **Link to relevant performance indicators**

NSW will provide links to relevant NRMCC indicators and NRC targets when they are available.

**NWI Element No 3: Best Practice Water Pricing**

**Action 10: Subsidies IGA Para 66, 68 & 74**

**Actions**

Where full cost recovery is unlikely to be achieved in the long term and a Community Service Obligation (CSO) is deemed necessary, the size of the subsidy is to be reported publicly and, where practicable, jurisdictions to consider alternative management arrangements aimed at removing the need for an ongoing CSO.

The States and Territories agree to report publicly on cost recovery for water planning and management as part of annual reporting requirements, including:

- a) the total cost of water planning and management; and
- b) the proportion of the total cost of water planning and management attributed to *water access entitlement* holders and the basis upon which this proportion is determined.

The Parties agree that as far as possible, the roles of water resource management, standard setting and regulatory enforcement and service provision continue to be separated institutionally.

**IGA Date:** Ongoing

**Context**

Subsidies are already reported publicly in DNR’s pricing submissions to IPART and in IPART’s pricing determinations. With the full separation of water delivery (State Water) from WRM (DNR), it will now be possible to disclose separately the cost of water delivery and WRM services. A system to report on WRM costs, including annual reporting of WRM costs, is being developed in conjunction with DNR’s upcoming pricing submission to IPART.

The development of standards and targets has largely been separated from DNR with the formation of the Natural Resources Commission. WRM and regulatory enforcement operate as discreet functions within DNR as this is the most operationally efficient & cost effective arrangement. Water delivery services are undertaken by State Water as a separate business entity following its corporatisation in 2004.

**Implementation Timetable**

Steps/ Deliverables	Start date	End date	Status /Comments	Lead Agency
Subsidies to be reported publicly where full cost recovery for rural and regional water systems unlikely to be achieved			Complete (reported in IPART determinations)	DNR – for WRM on all water sources.  DEUS – for water delivery on regulated rivers.  IPART – for all services on all water sources.
Alternative management arrangements aimed at removing subsidy be considered	2006		This will be reviewed following DNR’s upcoming pricing submission to IPART.	
Annual public reports on cost recovery for water planning and management	2005	2006	A system to report on WRM costs is being developed in conjunction with DNR’s upcoming pricing submission to IPART. This will report on actions (ii) (a) & (b) above	
Roles of water resource management, standard setting and regulatory enforcement and service provision be separated institutionally	2006	2007	Complete. Water delivery services have been separated from WRM, standard setting and regulatory enforcement (licensing). In addition, development of standards and targets has largely been separated with the formation of the Natural Resources Commission. The ringfencing of	

Steps/ Deliverables	Start date	End date	Status /Comments	Lead Agency
			WRM within DNR's financial management system will be implemented subject to review.	

**Cooperation with other jurisdictions**

Not applicable

**Link to NWI outcomes**

This action helps achieve:

*NWI outcomes 64 (i), (iv) & (v)*

- i) Promote economically efficient and sustainable use of:
  - a) water resources;
  - b) water infrastructure assets; and
  - c) government resources devoted to the management of water;
- iv) Give effect to the principles of user-pays and achieve pricing transparency in respect of water storage and delivery in irrigation systems and cost recovery for water planning and management;
- v) Avoid perverse or unintended pricing outcomes;

**Link to relevant performance indicators**

NSW will provide links to relevant NRMCC indicators and NRC targets when they are available

## **NWI Element No 4: Integrated Management of Environmental Water**

### **Action 1: Institutional arrangements and water recovery principles IGA Para 79**

#### **Actions**

Effective and efficient management and institutional arrangements to ensure the achievement of the environmental outcomes

Where it is necessary to recover water to achieve environmental outcomes, to adopt the following principles for determining the most effective and efficient mix of water recovery measures:

- a) consideration of all available options for water recovery, including:
  - investment in more efficient water infrastructure;
  - purchase of water on the market, by tender or other market based mechanisms;
  - investment in more efficient water management practices, including measurement; or
  - investment in behavioural change to reduce urban water consumption;
- b) assessment of the socio-economic costs and benefits of the most prospective options, including on downstream users, and the implications for wider natural resource management outcomes (eg. impacts on water quality or salinity); and
- c) selection of measures primarily on the basis of cost-effectiveness, and with a view to managing socio-economic impacts.

**IGA Date** : Immediate and on-going

#### **Context**

In NSW, a number of Departments and organisations undertake different water recovery and management activities. These roles and responsibilities are provided in Attachment B.

In line with the NWI, and the COAG Water Agreement before it, NSW has formally recognised environmental water (both planned and adaptive) in its legislation and WSPs. Further work is being carried out on the institutional arrangements for community groups to hold access licences for adaptive environmental water. Pilot studies on the impact of planned environmental water on the health of groundwater dependent ecosystems are also being undertaken.

The security of both planned and adaptive water is assured by the WMA; planned water is protected by the fact that WSPs cannot be amended except by order from both the Minister for Natural Resources and the Minister for the Environment, while adaptive environmental water is held under licence. Licence conditions are approved by the above Ministers.

Water held under adaptive water access licences is tradeable on the temporary water market, in the same way that all other water access licences are tradeable. Adaptive water licences may be held by any individual or organisation, however water set aside in WSPs for adaptive use (such as for the environment) is managed by the relevant CMA under Environmental Water Trusts.

NSW applies as a matter of course the principles set out on paragraph 79(ii) in relation to the recovery of water. For example, the NSW Wetland Recovery Plan (a suite of projects to create water savings and more sustainable wetland management, with a first focus on the Macquarie Marshes and Gwydir wetlands) is a mix of planning, water efficiency, water recovery and water buy-back measures to achieve improved social, environmental and economic outcomes for iconic NSW wetlands.

### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Immediate effective and efficient management and institutional arrangements to ensure the achievement of the environmental outcomes		2000	WMA requires WSPs to contain specific environmental water provisions and incorporate a series of indicators and targets to measure the environmental performance of the plans.	DNR
Where it is necessary to recover water to achieve environmental outcomes, to adopt the principles for determining the most effective and efficient mix of water recovery measures		Ongoing	The NSW Wetland Recovery Plan will make use of planning, water efficiency, water recovery and water buy-back measures to achieve improved social, environmental and economic outcomes for iconic NSW wetlands.	

### Cooperation with other jurisdictions

A number of WSPs will deal with cross border resources, such as the Border Rivers, Upper Murray, Snowy Rivers and Googong. Cross-jurisdictional consultation, including relevant Intergovernmental Agreements, will be undertaken in the development of these plans.

### Link to NWI outcomes

This action helps achieve:

*NWI outcomes 25 (i), (iv), (x)*

Provide a statutory basis for environmental and other public benefit outcomes in surface and groundwater systems to protect water sources and their dependent ecosystems;

- iv) Provide for adaptive management of surface and groundwater systems in order to meet productive , environmental and other public benefit outcomes;
- x) Identify and acknowledge surface and groundwater systems of high conservation value, and manage these systems to protect and enhance those values;

### Link to relevant performance indicators

NSW will provide links to relevant NRMCC indicators and NRC targets when they are available

## NWI Element No 5: Water Resource Accounting

### Action 1: Benchmarking of Accounting Systems IGA Para 81

#### Actions

Benchmark jurisdictional water accounting systems on a national scale by June 2005, including:

- i) state based water entitlement registering systems;
- ii) water service provider water accounting systems;
- iii) water service provider water use/delivery efficiency; and
- iv) jurisdictional/system water and related data bases.

**IGA Date:** Mid 2005

#### Context

NSW has established a robust water accounting system for its regulated river water sources and some of its unregulated and groundwater sources. These systems are housed on the corporate databases. Individual licence data will be accessible via internet, Interactive Voice Recognition (IVR) and other electronic means by mid 2006 for individual licence holders. The remainder of the water sources will be included in the program as measuring of water extraction and data gathering systems are progressively installed. Registers of entitlements, extractions, transfers and water availability are accessible on the Internet.

State Water will be required to report on the efficiency of its delivery service.

The NRMCC NWI Working Group will benchmark jurisdictional water accounting systems, taking into account existing benchmark reports (IGA 81). The NRMCC NWI Working Group will then develop accounting system standards (IGA 82), drawing on the work of the jurisdictions, the Executive Steering Committee on Australian Water Resource Information, MDBC, the Bureau of Rural Sciences and linking in with the National Land and Water Resources Audit Water Theme, and the Australian Bureau of Statistics, and incorporating principles for environmental water accounting (IGA 84).

#### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
NRMCC NWI Working Group finalises project scope and timetable for benchmarking of accounting systems		June 2005	NSW is an active participant in the inter-jurisdictional NRMCC NWI Working Group	DNR
NWC hold accounting workshop		2005		
Stocktake and benchmark of accounting systems completed		October 2005		
NRMCC NWI Working Group develops project scope and timetable for developing accounting standards and process for delivery of standards		November 2005		
NRMCC NWI Working Group considers draft accounting system/template		June 2006		
NRMCC NWI Working Group seeks clearance of accounting system/template from NRMCC		October 2006		
Jurisdictions to implement accounting system/template	July 2006			
NRMCC annual report to COAG in 2006-07 to include jurisdictions' actions to implement accounting system		October 2007		

### **Cooperation with other jurisdictions**

NSW will cooperate with other relevant jurisdictions on this action where required.

### **Link to NWI outcomes**

This action helps achieve:

*NWI outcome 80*

To ensure that adequate measurement, monitoring and reporting systems are in place in all jurisdictions, to support public and investor confidence in the amount of water being traded, extracted for consumptive use, and recovered and managed for *environmental and other public benefit outcomes*.

Benchmarking will provide the basis for:

- modification of the existing system to realise improvements demonstrated by other jurisdictions,

- public confidence that the system being adopted within NSW meets acceptable accuracy and efficiency standards and that the information is compatible with that provided by other jurisdictions.

- adopting nationwide standards for accounting and reporting

The details of each jurisdictions systems will provide a transparent platform for user communities to compare states' water management performance.

### **Link to relevant performance indicators**

NSW will provide links to relevant NRMCM indicators and NRC targets when they are available.

## **NWI Element No 5: Water Resource Accounting**

### **Action 2: Consolidated Water Accounts IGA Para 82 and 83**

#### **Actions**

1. To develop and implement:
  - i) accounting system standards, particularly where jurisdictions share the resources of river systems and where water markets are operating;
  - ii) standardised reporting formats to enable ready comparison of water use, compliance against entitlements and trading information;
  - iii) water resource accounts that can be reconciled annually and aggregated to produce a national water balance, including:
    - a) a water balance covering all significant water use, for all managed water resource systems;
    - b) systems to integrate the accounting of groundwater and surface water use where close interaction between groundwater aquifers and streamflow exist; and
    - c) consideration of land use change, climate change and other externalities as elements of the water balance.
2. To identify situations of close interaction between groundwater aquifers and streamflow and implement systems to integrate the accounting of groundwater and surface water use.

#### **IGA Date:**

1. By 2006
2. To identify by end 2005 and implement by 2008

#### **Context**

Development of accounting system standards to cover regulated, unregulated and groundwater systems will be an outcome of the benchmarking required at Element 5 Action 1. Once the new Accounting System Standard is nationally endorsed, NSW will implement the standard for its regulated, unregulated and groundwater systems. In the meantime NSW uses the MDBC to provide compatibility and comparison measures for entitlement and extraction summary data as required for water sources within the Murray-Darling Basin. This is done via Murray-Darling Basin Cap reporting requirements in the whole basin context and River Murray Water (RMW) in the Murray River operational reporting context. The MDBC-type accounting system (which reports, on a catchment and sub-catchment basis, on such components as inflows and outflows, usage, storages, etc.), currently reports on the regulated system, and will be extended to cover unregulated and groundwater components.

A standard robust accounting system within NSW known as Water Ordering and Use (WOU) has been implemented for regulated river water sources and major Murray-Darling Basin aquifers. This system includes the inputting of water order and use data, data archiving within a secure corporate database environment, and a comprehensive information retrieval and reporting facility. Public registers are available on the DNR website at location [www.wma.dipnr.nsw.gov.au/wma/index.jsp](http://www.wma.dipnr.nsw.gov.au/wma/index.jsp) Data relating to water availability (Available Water Determinations), water trading (and transfer prices) and extractions for water sources are available on the DNR website. This system will be expanded to include unregulated water sources and other inland and coastal aquifers as equipment for monitoring water usage is installed and data becomes available.

The Water Information Exchange (WIX) is currently under development. It will ensure that individual licence usage information will be available via internet, interactive voice recognition systems by mid 2006.

State Water annually provides a water balance covering all significant water use, for all water resource systems it manages.

Integration or compatibility will occur following the commencement of the WSPs for the Ground Water sources identified as having close interaction, some of which will commence in 2007. Locations of significant interaction between groundwater and surface water sources were identified and mapped in July 2004.

As set in the WSPs, the water balance will be amended when there is sufficient information to include the measurable impacts of changes in water use, climate change and other externalities. This includes better data, more accurate models and improved understanding of water processes and science.

**Implementation Timetable**

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Develop and implement robust water extraction accounting by end 2006 Major regulated river sources Remaining surface and groundwater sources	Progressive	Late 2004 End 2006	Complete for regulated rivers  Will be completed when WSPs for the remaining surface and ground water sources are completed.	DNR is responsible for the development of robust water extraction accounting systems; State Water is responsible for their implementation
Identify situations where close interaction between surface and groundwater exist by end 2005		July 2004	Broad identification completed. However, the extent and rate of interactions are not yet defined	
Develop capability and evaluate the process and extent of interaction between surface and groundwater systems	Late 2005	Late 2006	Before extraction accounting actions resulting from the linking of extractions from both sources can occur, the knowledge of the process needs to be better understood. The hydrological circumstances of the time and volume connectivity need to be established to determine the impacts on the combined resource of extractions from both sources. This action links strongly to the knowledge and capacity building actions of the NWI paras 98 to 101.	
Implement systems to integrate the accounting of surface and ground water by end 2008	July 2006	July 2008	Accounting can be completed when the extent and connectivity of the interaction between surface and groundwater is determined and groundwater sources are subject to a WSP	DNR
Complete Water Information Exchange (WIX)	March 2005	Sept 2005	Currently under development. This system will allow the input of individual licence extraction data and access to this data by licence holders electronically.	
Consider land use change, climate change and other externalities as elements of the water balance			The level of knowledge on the impacts of changes to these elements on catchments and the hydrologic cycle is very limited. This action links strongly to the knowledge and capacity building actions of the NWI paras 98 to 101	

### **Cooperation with other jurisdictions**

Consultation and data sharing (including integration of water balances) between NSW and other jurisdictions occurs through the Murray Darling Basin Commission and the Border Rivers Commission for relevant river systems.

There will be greater co-operation and interaction in real-time extraction data with the introduction of source-tagged trading within the Murray and Border River systems.

### **Link to NWI outcomes**

This action helps achieve:

*NWI outcome 80*

To ensure that adequate measurement, monitoring and reporting systems are in place, to support public and investor confidence in the amount of water being traded, extracted for consumptive use, and recovered and managed for *environmental and other public benefit outcomes*.

### **Link to relevant performance indicators**

NSW will provide links to relevant NRMCC indicators and NRC targets when they are available.

## **NWI Element No 5: Water Resource Accounting**

### **Action 3: Environmental water accounting - IGA Para 84-85**

#### **Actions**

The Parties agree that principles for environmental water accounting will be developed and applied in the context of consolidated water accounts in paragraph 82.

The Parties further agree to develop by mid 2005 and apply by mid 2006:

- a) a compatible register of new and existing environmental water (consistent with paragraph 35) showing all relevant details of source, location, volume, security, use, environmental outcomes sought and type; and
- b) annual reporting arrangements to include reporting on the environmental water rules, whether or not they were activated in a particular year, the extent to which rules were implemented and the overall effectiveness of the use of resources in the context of the environmental and other public benefit outcomes sought and achieved.

**IGA Date:** Mid-2005, mid-2006

#### **Context**

The WMA provides for two types of environmental water, planned environmental water and adaptive environmental water. Planned environmental water is committed by management plans for fundamental ecosystem health, whilst adaptive environmental water is committed by the conditions of an access licence for specified environmental purposes.

Planned environmental water is specified in WSPs in two ways:

- i) water in excess of the long term extraction limit established by the plan
- ii) water that is managed by rules in the plan specifically targeting environmental objectives

Although not classed as environmental water rules, there are rules in some WSPs, that, although their prime objective is to limit extraction, were designed to also provide an environmental benefit. The details in these rules, such as limiting supplementary extractions during a flow event, were considered in the context of limiting extractions to the extraction limit and targeting an assessed environmental flow outcome. The water provided by these rules can also be reported within environmental water accounts, although there will be cases when a non-volumetric measure will be needed to assess environmental water allocation and compliance.

The Catchment Management Authorities Act 2003 enables the CMAs to establish Environmental Water Trust Funds should they desire to do so. The Environmental Water Trust Funds thus have to be established at the discretion of the CMAs. If the CMAs decide to establish the trust funds, then the draft Catchment Action Plans are to include provisions on the assets that will be subject to the funds, the actions to protect or improve those assets and the targets for measuring success of environmental water functions. DNR, in cooperation with the CMAs will develop the administrative arrangement for the Environmental Water Trust Funds.

Adaptive environmental water is water committed by the conditions of a water access licence for specified environmental purposes. There are a number of potential source of adaptive environmental water:

- the holder of a perpetual water access licence may commit all or part of that licence as adaptive environmental water;
- a WSP may have reserved water for environmental purposes (by way of an adaptive environmental water condition on a licence). In these instances, the relevant CMA had the responsibility for the management of these licences; and
- adaptive environmental water licences may be created following water savings initiated by DNR. For example, a licence holder transferring all or part of their water access licence to the Minister in return for public funding of on-farm water savings, such as piping of domestic and stock water.

DNR is currently developing a mechanism to provide for the allocation of adaptive environmental water. It is envisaged that an adaptive environmental condition on an access licence will require that a management plan be in place prior to the grant of that licence. The management plan will outline any environmental objectives and the

methods for achieving those objectives. It will also specify annual reporting requirements. This is essential to ensure that the water is committed to its intended primary environmental purpose.

It is proposed that adaptive environmental water access licences will be recorded in an adaptive environmental water register. The register will make publicly available the details of licences that have committed water to the environment via an adaptive environmental water condition (such as volumes, location, purposes etc.). In addition, the management plans, which outline any environmental objectives, will also be accessible via the register.

Temporary trade in adaptive environmental water will be allowed, in accordance with the management plan. Any trades will also be recorded in the adaptive environmental register.

All rules based and access licence environmental water is included in long-term behaviour simulations to assess:

the environmental outcomes of this water and

the impact of the management of that water on other water users.

The definition of the environmental water and specification of the environmental outcomes sought which are to be included in the register will require assessment by simulation models.

### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Determine categories of environmental water made available by WSP and determine accounting methodologies and reporting framework	June 2005	Sept 2005	Initially environmental water and its attributes specified in each WSP will be identified and categorised. Assessment methodologies for each category will be developed.	DNR
Develop by late 2005 and apply by 2007 adaptive environmental water policy	Late 2005	2007	In progress	DNR
Develop by mid-2007, and apply by late 2007, an environmental water register	Mid 2007	Late 2007		DNR
NRMMC NWI Working Group finalises project scope and Terms of Reference and process for delivery of guidelines		August 2005	NSW is actively participating in the Working Group and will consider implementing the recommendations resulting from these studies, where appropriate	
NRMMC NWI Working Group finalises draft national guidelines		February 2006		
NRMMC NWI Working Group seeks approval of national guidelines from NRMMC		April 2006		
Jurisdictions implement reporting arrangements in line with national guidelines from July 2006 and report annually (in association with reporting requirements under IGA 82 (ii))	July 2006			
NRMMC annual report to COAG for 2006-07 to include jurisdictions' actions to implement reporting arrangements		October 2007		

### **Cooperation with other jurisdictions**

The NRMMC NWI Working Group is to develop national guidelines for open reporting, including reporting arrangement for environmental water rules. The environmental water that is jointly managed with other jurisdictions on the Border Rivers and River Murray has been determined in conjunction with other jurisdictions.

In the case of the River Murray, the rules relating to jointly managed environmental water and other environmental water managed independently by NSW have been included in the WSP. Reporting on the management of this water will be co-ordinated with other jurisdictions by the MDBC. In the Border Rivers the WSP being developed will include the rules relating to interstate water sharing that has a beneficial environmental outcome.

### **Link to NWI outcomes**

This action helps achieve:

*NWI objective 23*

- iii) Statutory provision for environmental and other public benefit outcomes, and improved environmental management practices;
- vii) Water accounting which is able to meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management;

*NWI outcome 80*

The Parties agree that the outcome of water resource accounting is to ensure that adequate measurement, monitoring and reporting systems are in place in all jurisdictions, to support public and investor confidence in the amount of water being traded, extracted for consumptive use, and recovered and managed for environmental and other public benefit outcomes.

### **Link to relevant performance indicators**

NSW will provide links to the relevant NRMMC indicators and NRC targets when they are available.

## NWI Element No 5: Water Resource Accounting

### Action 4: Information Measures IGA Para 86

#### Actions

Improve the coordination of data collection and management systems to facilitate better sharing of this information.

Develop partnerships in data collection and storage.

Identify best practice in data management systems for broad adoption.

**IGA Date:** Ongoing

#### Context

A range of water information is publicly available through DNR's free on-line registers and information systems including information on water use, temporary transfers and storage and river flow data in NSW. To ensure the compatibility of these registers with other States, and to facilitate better sharing of information between jurisdictions, NSW is participating in a National Water Commission Working Group on register compatibility. An anticipated output from this working group will be a report to the NWC on possible shared characteristics for registers.

As a member of the Executive Steering Committee for Australian Water Resources Information (ESCAWRI), NSW is part of a national steering committee and working group for an Australian Water Resource Information system. This is coordinated by the Commonwealth Bureau of Rural Sciences and involves the development a national website for the provision of hydrometric data (such as river flow, salinity) and could be extended to other water data such as extraction, trades, environmental water etc. The aim is to have a working prototype of the hydrometric data base developed by July 2006.

NSW proposes that the membership and terms of reference of ESCAWRI to be modified to enable ESCAWRI to maintain a "watching brief" on NWI IGA paragraph 86, and to report to the NWI Working Group on progress. Action on this item should relate to work under IGA 82 and 84.

NSW will continue to improve data collection and management through its involvement and implementation of the Hydsys / Kisters hydrometric system and standards.

#### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Implement any nationally agreed measures to improve collection, storage and sharing of data on water traded, extracted and recovered and managed for environmental and other public benefit outcomes		Ongoing		DNR
NRMMC NWI Working Group requests ESCAWRI to take action under this item		March 2006		
NRMMC NWI Working Group, working with ESCAWRI, describes project scope and timetable		June 2006		
NRMMC NWI Working Group receives initial report		September 2006		
Ongoing implementation in		Ongoing		

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
jurisdictions and report annually through NRMCC report to COAG				
NWC to assess progress as part of the 2006-07 biennial assessment				
Maintain national standards and consistency through participation in Hydsys / Kisters Users Groups				

### **Cooperation with other jurisdictions**

Consultation and data sharing between NSW and other jurisdictions occurs through the Murray Darling Basin Commission and the Border Rivers Commission for relevant river systems, in addition to specific relationships with ESCAWRI.

### **Link to NWI outcomes**

This action helps achieve:

*NWI Objectives 23 (i) and (vi)*

- i) Clear and nationally-compatible characteristics for secure water access entitlements
- vi) Water accounting which is able to meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management.

*NWI Outcome 80*

To ensure that adequate measurement, monitoring and reporting systems are in place in all jurisdictions, to support public and investor confidence in the amount of water being traded, extracted for consumptive use, and recovered and managed for environmental and other public benefit outcomes.

### **Link to relevant performance indicators**

NSW will provide links to the relevant NRMCC indicators and NRC targets when they are available.

**NWI Element No 5: Water Resource Accounting**

**Action 5: Metering and measuring actions IGA Para 87 & 88**

Actions

Develop metering and measurement actions

Develop a national meter specification and associated standards and apply these

Implement metering and measurement actions

**IGA Date:** end 2006, end 2007

**Context**

NSW is developing metering standards and procedures (covering water flow meters, and other indirect methods of water-use monitoring) and will incorporate these under national standards when national standards are developed.

NSW water licences are issued on the basis that the licensee can be called upon to install and operate equipment to measure water usage. In the past such measurement has been implemented in the regulated systems to a large extent, but not in the unregulated and groundwater systems. NSW has a draft policy which will see some (but not all) of the licences being metered (while other licences will have less direct methods of measuring usage). By targeting high-usage water-users initially, NSW will be able to get accurate measurements of the majority of water used.

**Implementation Timetable**

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Develop national meter standards and associated standards implementing them by end 2006 and 2007 respectively			NSW will participate in the national process	DNR/DEUS
Develop NSW Water Extraction monitoring Policy	2004	June 2005	Policy has been developed by DNR and State Water. Consultation has been undertaken through WSP process	DNR/State Water
Develop NSW metering equipment and Installation standards		December 2005	Being developed by DNR and State Water	DNR/State Water
Allocate funds to implement NSW Monitoring Policy		December 2004	Complete - Funds have been allocated	DNR
Develop guidelines as to how NSW will implement the Monitoring policy		July 2005	Draft in place	DNR
Develop implementation Plans for DNR Regions		August 2005	Commenced	DNR
Implement the NSW Monitoring Policy	July 2005	June 2008	Majority of unregulated and groundwater usage to be monitored, but not every licence	DNR
Knowledge and capacity building – monitor and analyse performance of flowmeters and related equipment to accurately monitor water usage			May build upon work completed in “Know the Flow” (funded by National Program for Sustainable Irrigation) project	
NRMMC NWI Working Group develops project scope and timetable and		June 2005		

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
establishes metering working group to develop meter standards and specification to meet requirements of IGA 88				
NRMMC NWI Working Group finalises standards		December 2006		
NRMMC NWI Working Group seeks approval from NRMMC		April 2007		
Jurisdictions implement metering standards		December 2007	NSW will implement the nationally endorsed meter standards and specifications, and will link these to NSW requirements	
NRMMC annual report to COAG in 2007-08 to include jurisdictions' actions to implement metering standards		October 2008		

### **Cooperation with other jurisdictions**

DNR has been developing (in conjunction with State Water) a NSW standard for water meters. Some work has commenced on a national standard by the National Measurement Institute (Commonwealth Agency) for NMI M 10-1 (Meters Intended for the Metering of Irrigation Water).

A special working group, comprising water resource managers, in consultation with operators (e.g. State Water, SunWater etc) could be established to facilitate this action, with the engagement of the Australian National Committee on Irrigation and Drainage, National Metering Institute of Australia, and Standards Australia.

### **Link to NWI outcomes**

This action helps achieve:

*NWI objective 23 (vii)*

vii) Water accounting which is able to meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management;

*NWI outcome 80*

To ensure that adequate measurement and monitoring systems are in place in all jurisdictions, to support public and investor confidence in the amount of water being traded, extracted for consumptive use, and recovered and managed for environmental and other public benefit outcomes.

### **Link to relevant performance indicators**

NSW will provide links to the relevant NRMMC indicators and NRC targets when they are available.

## NWI Element No 5: Water Resource Accounting

### Action 6: National guidelines on water reporting IGA Para 89

#### Actions

The parties to the NWI agree to develop by mid 2005 and apply national guidelines by 2007 covering the application, scale, detail and frequency for open reporting addressing:

Metered water use and associated compliance and enforcement actions

Trade outcomes

Environmental water releases and management actions

Availability of water access entitlements against the rules for availability and use

**IGA Date:** mid 2005, end 2007

#### Context

No national guidelines are yet being developed. NSW will participate in the national process. Until national guidelines are developed, NSW will implement this action using its own guidelines.

NSW has information already available on [www.dipnr.nsw.gov.au](http://www.dipnr.nsw.gov.au) of water use for regulated systems, and as monitoring of unregulated and groundwater systems becomes more advanced, they will be incorporated into the same reporting system. Information of the amount and location of licensed water usage is already available although in different formats and locations. Other Information on water trades, environmental water releases and management actions, and water access entitlements will be developed in a similar format.

#### Implementation Timetable

Steps/Deliverables	Start date	End date	Status / Comments	Lead Agency
NRMMC NWI Working Group finalises project scope and Terms of Reference and process for delivery of guidelines		August 2005	NSW will participate in the national process	DNR
NRMMC NWI Working Group finalises draft national guidelines		February 2006		
NRMMC NWI Working Group seeks approval of national guidelines from NRMMC		April 2006		
Jurisdictions implement reporting arrangements in line with national guidelines from July 2006 and report annually (in association with reporting requirements under IGA 82 (ii))	July 2006			
NRMMC annual report to COAG for 2006-07 to include jurisdictions' actions to implement reporting arrangements		October 2007		
Apply national guidelines on water reporting by end 2007 in regard to: <ul style="list-style-type: none"><li>Metered water use</li></ul>		2007	Already available in NSW format for regulated river systems	

Steps/Deliverables	Start date	End date	Status / Comments	Lead Agency
<ul style="list-style-type: none"> <li>• Compliance with requirements and enforcement of guidelines</li> <li>• Environmental water releases and management actions</li> <li>• Availability of water access entitlement, against the rules for availability and use</li> </ul>		2007		
		2007		
		2007		

### **Cooperation with other jurisdictions**

NSW will cooperate with other relevant jurisdictions on this action where required.

### **Link to NWI outcomes**

This action helps achieve:

*NWI objective 23 (vii)*

vii) Water accounting which is able to meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management;

*NWI outcome 80*

To ensure that adequate reporting systems are in place, to support public and investor confidence in the amount of water being traded, extracted for consumptive use, and recovered and managed for environmental and other public benefit outcomes.

### **Link to relevant performance indicators**

NSW will provide links to relevant performance indicators and NRC targets when they are available.

## **NWI Element No 6: Urban Water Reform**

### **Action 1: Demand Management Measures IGA Para 91**

#### **Actions**

Legislation to implement the Water Efficiency Labelling Scheme (WELS) to be in place in all jurisdictions and regulator undertaking compliance activity by 2005, including mandatory labelling and minimum standards for agreed appliances;

Develop and implement a 'Smart Water Mark' for household gardens, including garden irrigation equipment, garden designs and plants;

Review the effectiveness of temporary water restrictions and associated public education strategies, and assess the scope for extending low level restrictions as standard practice; and

Prioritise and implement, where cost effective, management responses to water supply and discharge system losses including leakage, excess pressure, overflows and other maintenance needs.

**IGA Date:** End 2005, end 2006

#### **Context**

The introduction of the Building Sustainability Index (BASIX) into the development approval process aims to reduce drinking water use of new homes by up to 40% and the energy requirements by 25%. From 1 July 2004, development applications and complying development certificates for new single dwelling lodged in Sydney must be accompanied by a BASIX Certificate. From 1 October 2005, a BASIX Certificate must also be lodged for new multi-dwelling developments in Sydney and for all new housing in the remainder of NSW. From 1 July 2006, BASIX will also apply to alterations to residential developments throughout NSW.

Introduction of the National Water Efficient Labelling and Standards Scheme for appliance and fixtures into New South Wales is via complementary legislation which came into effect on 29 April. The Commonwealth is scheduled to implement the labelling scheme by July 2005. The Commonwealth, NSW and Victorian Governments are seeking to advance mandatory standards for the most cost effective appliances and fixtures.

The *Metropolitan Water Plan* has identified a broad range of demand management measures for the Sydney area which are currently being implemented. These include the preparation of water savings plans by government, local government and business to achieve an overall 20% reduction in water use by the top 200 water consumers by September 2007, the establishment of a water savings fund to provide financial assistance for major water users to build water savings projects and fund a public education program, the installation of water efficient devices in existing homes, leakage reduction and appropriate pricing.

The introduction of new operating licence conditions for Sydney Water Corporation will reduce leakage and losses. The new conditions also include a demand management target of a 35% reduction from 1991 levels by 2011 (equating to 329 litres per person per day). The new licence took effect from 1 July 2005.

*Best Practice Management Guidelines* have been prepared and published for NSW local water utilities (local government water and sewerage businesses) for: (i) strategic business planning and long-term financial planning; (ii) pricing, including best-practice residential and non-residential water supply pricing with full cost recovery, best practice residential and non-residential sewerage pricing with full cost recovery, commercial water supply and sewerage developer charges, trade waste policy, approval of all trade waste discharges and appropriate trade waste fees and charges; (iii) water conservation; (iv) drought management; (v) performance reporting; and (vi) integrated water cycle management. From June 2004, utilities which comply with the guidelines are permitted to pay a dividend from the surplus of their water supply or sewerage business to the council's general revenue.

A Metropolitan Recycled Water Strategy is being developed with a goal of achieving 80 gigalitres of recycled water by 2029. The first stage will commence in 2006.

There are a number of codes and guidelines that must be developed or updated to support the Building Sustainability Index implementation and the recycling strategy. These include the New South Wales *Code of Practice Plumbing and Drainage* and the *Recycled Water Guidelines for Multi-Unit Developments*. There is also a review of the guidelines for greywater diversion and treatment in single dwellings.

In addition, IPART has specifically been requested to investigate and report on using pricing structures for water in the Sydney basin.

A major communications and education campaign, Water for Life, has been launched, and will continue for at least three years, to promote changes in attitude and behaviour among urban water users.

**Implementation Timetable**

See table below.

**Cooperation with other jurisdictions**

WELS is a national initiative with strong representation from all states and territories. NSW has enacted supporting legislation.

**Link to NWI outcomes**

This action helps achieve:

*NWI outcomes 90 (i), (ii), (iii) and (v)*

- i) Provide healthy, safe and reliable water supplies;
- ii) Increase water use efficiency in domestic and commercial settings;
- iii) Encourage the re-use and recycling of wastewater where cost effective;
- v) Encourage innovation in water supply sourcing, treatment, storage and discharge;

**Link to relevant performance indicators**

NSW will provide links to relevant NRMCC performance indicators and NRC targets when they are available

**Implementation Plan**

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Introduction of WELS				DEUS
Proclaim complementary legislation	Dec 2004	29 April 2005	The <i>Water Efficiency Labelling and Standards (New South Wales) Act 2005</i> was proclaimed on 29 April 2005	
Implement labelling scheme nationally	July 2005	July 2006	National implementation is Commonwealth responsibility in consultation with participating jurisdictions	
Introduce mandatory standards for most cost effective measures	July 2006	July 2007	DEUS has commissioned a study to identify indoor WELS products that would be suitable for being subject to minimum efficiency and performance standards. Agreement must be obtained from the majority of jurisdictions participating in the WELS scheme.	
Integrate with Smart Water Mark for parks and garden water use	July 2005	July 2006	Commonwealth is funding study to examine the feasibility of extending WELS to other water-use products. Jurisdictions will have input to the scope of the study. Expansion of WELS to other water-use products must be approved by the majority of jurisdictions participating in the WELS scheme	

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Development and implementation of Smart Water Mark for garden activities by end 2006 Promote adoption of labelling system for outdoor water-use appliances – Smart Water Mark	May 2005	30 December 2006	Implement strategy to increase awareness and assist market penetration of labelled Smart Water Mark appliances in consultation with outdoor products industry and related stakeholders	Sydney Water  DEUS
Support Smart Water Mark through mandating use of appliances by water users wherever practical	July 2005	September 2005	Incorporate Smart Water Mark products and services into requirements for water saving action plans	
Guidelines for water efficient gardens and plant selection tool on SWC website	January 2005	December 2005	Over 300 plants already listed on SWC website. Around 1000 plants to be listed in time for spring 2005	Sydney Water
Review effectiveness of temporary water restrictions and associated public education strategies, and consider extending low level restrictions to standard practice by end 2006	April 2005	December 2008	The timing of the completion of this review is contingent on environmental circumstances and the end of the drought. Review of the Water For Life Plan advertising campaign contains survey information on the effectiveness of public education strategies to date, including behavioural changes. Water for Life will extend until 2008 – effectiveness will be reviewed regularly	Sydney Water
Prioritise and implement management responses to water supply and discharge system losses including leakage, excess pressure, overflows and other maintenance needs Amend Sydney Water operating licence to introduce leakage reduction clauses Increasing expenditure on mains renewal, leak detection and repair activity	March 2005  July 2005	July 2005  July 2010	SWC will inspect the equivalent of over 18,000 km of mains per year for four years  New clauses included in revised licence  Target of 25% reduction in leakage	Sydney Water
Establish and administer a water savings fund to provide financial assistance for water conservation measures Amend legislation	January 2005	July 2005	Received assent 18 May 2005	DEUS

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Establish fund and operating Project selection and implementation	May 2005	December 2005 July 2009		
Continue Waterwise on the Farm education campaigns for metropolitan agriculture		July 2007	Program activities currently being scheduled. Television advertising has commenced	DPI
Staged implementation of BASIX in the following developments: New residential developments in the metropolitan area New residential developments in regional NSW New multi-unit developments Renovations in existing buildings		July 2004  July 2005  October 2005 July 2006	Complete	DNR
Development of a 25 year plan for sustainable and secure water supply for Sydney Water Plan Prepare and publish the Metropolitan Water Plan Undertake detailed engineering and environmental studies on identified options  Implement major elements of the Plan	November 2004	November 2004 December 2006  December 2008	Plan published. First annual review will be in September 2005 Engineering, economic, finance and regulatory studies already completed for recycling. Other supply options are being evaluated	DNR
Best practice management by local water utilities Develop and publish Best-Practice Management of Water Supply and Sewerage Guidelines for demand management, drought management and integrated water cycle planning Compliance by local water utilities		May 2004    July 2007	Complete    LWU compliance with the Guidelines is shown in the 2003-04 NSW Water Supply and Sewerage Performance Monitoring Report. The highest reported water supply compliances are for pay-for-use pricing with full cost recovery (70%) and performance reporting (87%), while the lowest reported	DEUS

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
			compliances are for non-residential charges (35%) and water conservation (35%). The highest reported sewerage compliances are for residential charges (69%) and performance reporting (80%), while the lowest reported sewerage compliances are for non-residential charges (21%) and developer charges (40%).	
Annual performance reporting for local water utilities		Annual	Ongoing. Refer also Element 3, Action 7	DEUS
Reports under operating licence of major utilities			Ongoing	Reviews: IPART; Government response to reviews: DEUS
EPHC to establish a working group to consider the status of the Smart Approved Water Mark (SAWM) scheme and develop options for ongoing engagement to support effective implementation			NSW is actively participating in the EPHC and will undertake implementation in line with agreed schedules.	
EPHC to establish a working group and prepare Terms of Reference (one option would be to expand the role of the WELS Advisory Committee to also advise EPHC ministers on the SAWM scheme)				
Working group to undertake an assessment of the SAWM scheme to determine if there are areas where EPHC support is required	July 2005	December 2006		
EPHC to establish a policy framework to support the implementation of the SAWM scheme in all jurisdictions, including mechanisms for ongoing engagement, by December 2006		December 2006		

## **NWI Element 6: Urban Water Reform**

### **Action 2: Innovation and capacity building to create water sensitive Australian cities IGA Para 92**

#### **Actions**

- i) Develop national health and environmental guidelines for priority elements of *water sensitive urban designs* (initially recycled water and stormwater) by 2005;
- ii) Develop national guidelines for evaluating options for water sensitive urban developments, both in new urban sub-divisions and high rise buildings by 2006;
- iii) Evaluate existing 'icon water sensitive urban developments' to identify gaps in knowledge and lessons for future strategically located developments by 2005;
- iv) Review the institutional and regulatory models for achieving integrated urban water cycle planning and management, followed by preparation of best practice guidelines by 2006; and
- v) Review of incentives to stimulate innovation by 2006.

**IGA Date:** end 2005, end 2006

#### **Context**

Much of the innovation in NSW is covered in the demand management action in Element 6 Action 1 and the pricing actions.

In particular, BASIX, the Integrated Water Cycle Management Guidelines, and work on water sensitive urban design are at the cutting edge of NSW work on sustainable cities.

NSW is also pursuing an innovative approach to provision of water sensitive developments through its public/private partnership program. DNR is preparing a metropolitan strategy for water recycling, and DEUS is developing *Recycled Water Guidelines for Multi-Unit Developments*, which includes greywater use. Guidelines on greywater reuse in single dwellings are being revised.

The Metropolitan Strategy itself, of which the Metropolitan Water Plan is a component, is a unique approach to developing a more sustainable Sydney. The MWP combines all the elements of increasing supply, reducing demand, improving aquatic environments, and increasing recycling to support all of these.

The integration of the main natural resources agency with planning has been specifically done to ensure NRM issues such as water planning are linked more closely with planning reforms and local action (e.g. through linking IWCM concepts with model LEPs).

The preparation and implementation of IWCM is a requirement of the WMA if LWUs are to obtain additional water entitlement for growth. Under the *Local Government Act 1993*, utilities must comply with all Best Practice Management Guidelines if the utility wishes to pay a dividend from the water supply or sewerage business to the council's general revenue. Such compliance is also a pre-requisite for eligibility for financial assistance towards the capital cost of backlog water supply and sewerage infrastructure under the NSW Government's Country Town Water Supply and Sewerage Program (CTWSS).

The Government has requested IPART to undertake an independent review into water pricing (water, sewerage and recycled water), access conditions and governance matters to facilitate competition in the provision of services and to enable opportunities for private sector innovation.

In addition to this work within NSW, the NSW Government is an active participant in the inter-jurisdictional Joint Steering Committee for Water Sensitive Cities, established under the National Water Initiative Committee of the Natural Resources Management Ministerial Council. The Joint Steering Committee:

- co-ordinates actions under paragraph 92(ii) – (v) of the National Water Initiative in a Water Sensitive Cities Integrated Project; and
- ensures linkages to the Joint Steering Committee for Health and Environmental Guidelines under paragraph 92(i).

### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Development and application of national health and environmental guidelines for water sensitive urban designs (recycled water and stormwater)	October 2004	August 2005		NSW Health
Revise NSW single residential greywater guidelines		June 2005		DNR
Include new guidelines in Metro recycling strategy		July 2007		DEUS
Promote as part of IWCM implementation		July 2007		DNR
Promote through model LEPs				
Development of national health and environmental guidelines		End 2006	Development of guidelines under the NRMCC and EPHC has occurred in two phases: (i) sewage and greywater; and (ii) stormwater and water sensitive urban developments. The NRMCC and EPHC Joint Steering Committee for Health and Environmental Guidelines is progressing development of the guidelines	
IWCM planning as Best Practice requirement incorporating: <ul style="list-style-type: none"> <li>Stormwater and effluent reuse strategies as a potable replacement</li> <li>Improved resource sustainability and management</li> <li>Targeted demand management</li> <li>Improved stakeholder consultation</li> </ul>	June 2005	June 2007	Commencement of IWCM Plans to meet Best Practice	DEUS
IWCM workshops	March 2005	June 2005	On target to allow the majority of local water utilities to commence IWCM by June 2005	DEUS
Construction of IWCM web resource	November 2004	Ongoing	Support material to develop IWCM Strategies	
Development of simplified demand management software	March 2005	July 2005	Software tool to assess water use and demand management options	DEUS
Incorporation of state and national water use guidelines under IWCM	November 2005	Ongoing (subject to availability of final documents)	Incorporation of a range of initiatives and guidelines including: Watermark program; water savings plan guidelines for industry; greywater use guidelines; national reuse guidelines; and WELS	

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Guidelines for Water Savings Action Plans	February 2005	August 2005	Guidelines for local water utility and industry developed by DEUS	
Development of national guidelines for evaluating options for water sensitive urban developments in both new urban sub-divisions and high rise		November 2006	The Joint Steering Committee is progressing development of the guidelines	DEUS, DNR
Evaluation of existing water sensitive urban icon developments by end 2005		December 2005	Through the Stormwater Trust, DEC is developing guidelines for Managing Urban Stormwater, including for water sensitive urban design. These will be published by 2006. Metropolitan Recycled Water Strategy is prepared in the context of, and responding to, existing icon recycling projects (e.g. Rouse Hill and Sydney Olympic Park)	DEUS, DNR, DEC
National evaluation of water sensitive urban icon developments		November 2006	Overseen by the Joint Steering Committee for Water Sensitive Cities	DEUS
Preparation of Metropolitan Recycled Water Strategy	December 2004	End 2005	Strategy in advanced stages	DNR
Review of institutional and regulatory models for integrated urban water cycle planning and management and develop best practice guidelines		End 2006	The National Water Commission to establish a steering committee with industry, Australian Water Association, the NRMCC NWI Committee and EPHC, to guide this review and development of best practice guidelines.	DEUS
NWC, in consultation with the NRMCC NWI Committee, establishes steering committee. Steering Committee to develop guidelines and seek clearance from NRMCC	September 2005	November 2006	Complete	
Review of incentives to stimulate innovation by public and private sectors	May 2005	July 2005	Progressed state-by-state with National Water Commission coordination	DEUS
Implementation of BASIX in: New multi-unit developments		October 2005		DNR
Renovations in existing buildings		July 2006		
Preparation of Water Recycling Guidelines including greywater for multi-	February 2005	September 2005	Draft released to Government agencies for review and comment	DEUS

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
unit developments				
Local water utilities to develop and implement integrated water cycle management plans	July 2002	Oct 2004	Completed	
Develop integrated water cycle management guidelines	Oct 2004	July 2007	Ongoing	
Local water utilities to complete IWCM strategies				
IPART inquiry on pricing, access and governance issues	Feb 2005	Dec 2005		DNR
Development of recycled water projects arising out of the Metropolitan Water Plan.	January 2005	July 2008	Staged implementation from 2006	
Publication of overall findings of Joint Steering Committee oversight of paragraph 92 actions		December 2006		

### **Cooperation with other jurisdictions**

NSW is an active participant in the inter-jurisdictional Joint Steering Committee for Water Sensitive Cities, established under the National Water Initiative Committee of the Natural Resources Management Ministerial Council.

### **Link to NWI outcomes**

This action helps achieve:

*NWI outcomes 90 (i), (ii) and (v)*

- i) Provide healthy, safe and reliable water supplies
- ii) Increase water use efficiency in domestic and commercial settings
- v) Encourage innovation in water supply sourcing, treatment, storage and discharge

### **Link to relevant performance indicators**

NSW will provide links to relevant NRMCC performance indicators and NRC targets when they are available.

## NWI Element No 7: Community partnerships and adjustment

### Action 1: Timely consultation and information IGA Para 95 & 96

#### Actions

States and Territories agree to ensure open and timely consultation with all stakeholders on:

- i) pathways for returning overdrawn surface and groundwater systems to environmentally sustainable extraction levels
- ii) the periodic review of *water plans*; and
- iii) other significant decisions that may affect the security of *water access entitlements* or the sustainability of water use.

States and Territories agree to provide accurate and timely information to all relevant stakeholders regarding:

- i) progress with the implementation of *water plans*, including the achievement of objectives and likely future trends regarding the size of the consumptive pool; and
- ii) other issues relevant to the security of *water access entitlements* and the sustainability of water use, including the science underpinning the identification and implementation of *environmental and other public benefit outcomes*.

**IGA Date:** Ongoing, ongoing.

#### Context

In NSW the process and rules for returning overdrawn surface and groundwater systems to sustainable levels are specified and implemented through WSPs. The initial 31 WSPs were developed through local water management committees which represented the range of interests in the plan. The plans were placed on public display and public submissions considered in the finalisation of the plan. The public consultation on the plans was extensive occurring over the 2 years of plan development and gazettal.

The inland groundwater WSPs were deferred to allow the inclusion of history of use and the allocation of structural adjustment funding, given the very significant reductions required over the ten years of the plans to meet sustainable yields. These negotiations will be undertaken by CMAs and overseen by a Groundwater Adjustment Panel, which includes CMA and irrigator representatives.

As to the development of the 43 macro WSPs covering the rest of the State's water use, regional panels are being established to make initial recommendations on the classification and the water sharing rules for each plan. These panels will include representatives of the Catchment Management Authorities. The CMAs will facilitate consultation on the recommendations of the panel with key stakeholder groups which will inform the draft plans. The CMAs will also undertake public consultation on the draft plans during the public exhibition period. Public submissions will be considered by the regional panels in the final plans.

All WSPs are to be reviewed by the Natural Resources Commission between the fifth and ninth year to assess their achievement of the natural resource management standards and targets. The Natural Resources Commission is to call for and consider public submissions.

#### Implementation Timetable

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Consultation with stakeholders in relation to pathways for returning over-allocated systems to sustainable extraction levels and other significant decisions affecting the		June 2004	Completed - extensive consultation through the water management committee and public exhibition process.	DNR

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
security of water access entitlements within Group A				
<p>Consultation with stakeholders covered by water access entitlements of Group B (6 inland alluvial aquifers)</p> <p>Finalise entitlement reduction method through Groundwater Adjustment Committee (which includes CMA &amp; irrigator reps)</p> <p>Consult with CMAs on amendments to the plans</p> <p>Advise licence holders of amended share component and proposed structural adjustment assistance</p>		<p>June 2006</p> <p>June 2006</p> <p>June 2006</p>	Extensive consultation has already occurred through the water management committee and public exhibition process.	
<p>Consultation with stakeholders covered by entitlements of Group C (43 macro plans)</p> <p>Establish regional panels (with CMA reps) to recommend classification (which will consider socio-economic values and WSP rules)</p> <p>Consult with stakeholders on regional panel recommendations</p> <p>Provide supporting information and place draft plans as developed on public display for public comment (minimum period of 40 days)</p>	<p>Jan 2005</p> <p>August 2005</p>	<p>July 2005</p> <p>October 2005</p> <p>December 2005 (majority of plans)</p>	Consultation on the draft plans will be undertaken through the CMAs and public exhibition process.	DNR
Consultation with stakeholders covered by entitlements of Group D (17 individual plans)		December 2007		
Provide supporting information and place draft plans as developed on public display for public comment (minimum period of 40 days)		December 2007	This represents the end date for all plans - many will be completed by Dec 2005.	
Consultation with stakeholders in periodic review of water plans. (Natural Resources Commission to call for public submissions as part of the review process)	June 2009	June 2014	This relates to the review of the initial 31 plans. The remaining plans will also be subject to mid and final reviews.	

### **Cooperation with other jurisdictions**

A number of WSPs will deal with cross border resources, such as the Border Rivers, Upper Murray, Snowy Rivers and Googong. Cross-jurisdictional consultation, including relevant Intergovernmental Agreements, will be undertaken in the development of these plans.

#### **Link to NWI outcomes**

This action helps achieve:

*NWI objectives 23 (ii), (iv) and (ix)*

- ii) Transparent, statutory-based water planning;
- iv) Complete the return of all currently over-allocated or overused systems to *environmentally-sustainable levels of extraction*;
- ix) Addressing future adjustment issues that may impact on water users and communities; and

*NWI outcomes 93*

- i) Improving certainty and building confidence in reform processes;
- ii) Transparency in decision making; and
- iii) Ensuring sound information is available to all sectors at key decision points.

#### **Link to relevant performance indicators**

NSW will provide links to relevant NRMCMC indicators and NRC targets when they are available

## NWI Element No 7: Community partnerships and adjustment

### Action 2: Adjustment issues IGA Para 45 & 97

#### Actions

Parties agree to address significant adjustment issues affecting water users.

- i) States and Territories will consult with affected water users, communities and associated industry on possible appropriate responses to address these impacts, taking into account factors including:
  - a) possible trade-offs between higher reliability and lower absolute amounts of water;
  - b) the fact that water users have benefited from using the resource in the past;
  - c) the scale of the changes sought and the speed with which they are to be implemented (including consideration of previous changes in water availability); and
  - d) the risk assignment framework.
- ii) The Commonwealth Government commits itself to discussing with signatories to this Agreement assistance to affected regions on a case by case basis (including set up costs), noting that it reserves the right to initiate projects on its own behalf.

**IGA Date:** Ongoing

#### Context

Significant consultation occurred with the inland groundwater licence holders over adjustment measures as a result of reduced access to water. Adjustment measures in the plans varied but included phasing in of reduction entitlements, access to supplementary water, hotspot or local impact management restrictions and management through available water determinations. A package of financial assistance has been agreed and implementation details are now being negotiated with the Commonwealth Government.

Reduction in water access for licence holders in the regulated river plans was previously limited to a maximum of 10% through the WSP rules. A greater range of water trading or water dealing options are now available to licence holders in these systems to assist them in maximising the use of their water licences.

All irrigators who were affected by the rules in the WSPs had access to the Irrigated Agriculture Water Use Efficiency Scheme, funded by the NSW Government, which provided financial and technical assistance to improve their water use efficiency or to improve their supplies through construction of off-river storages. The Department of Primary Industries Water provides practical adjustment help to irrigators through training in best practice irrigation management techniques (as part of the WaterWise on the Farm program) and development assistance through low interest loans issued by the Rural Assistance Authority.

For the plans still to be developed, the classification method will use a matrix of high, medium and low levels of environmental risk and depending on extraction, the classification will guide the choice of water sharing rules. Limits will be imposed on the degree of change to water users' access.

CMAs will participate on the Regional Panels to develop the WSP rules and will facilitate public consultation on the WSPs.

#### Implementation Timetable

Steps / Deliverables	Start date	End date	Status / Comments	Lead Agency
Consultation on measures to address reductions in water availability with affected licence holders and communities covered by entitlements in each Group:				DNR
Group A – 31 initial WSPs		June 2004	Complete - achieved through water management committee process and public exhibition of WSPs.	

Steps / Deliverables	Start date	End date	Status / Comments	Lead Agency
Group B – 6 inland alluvial aquifers		June 2006	Will be completed through the Groundwater Adjustment Panel	
Group C – 43 macro plans		Dec 2005 (majority of plans)	Undertaken through the CMAs and public exhibition process	
Group D – 17 individual WSPs		Dec 2007	Undertaken through the CMAs and public exhibition process. This represents the end date for all plans - many will be completed by December 2005.	

### **Cooperation with other jurisdictions**

Consultation ongoing with the Commonwealth on structural adjustment assistance for the inland alluvial aquifers.

### **Link to NWI outcomes**

This action helps achieve:

*NWI Objectives 23 (ii), (vi), (viii) & (x)*

- ii) Transparent, statutory-based water planning;
- vi) Clarity around the assignment of risk arising from future changes in the availability of water for the *consumptive pool*;
- viii) Policy settings which facilitate water use efficiency and innovation in rural areas; and
- ix) Addressing future adjustment issues that may impact on water users and communities;

*NWI Outcomes 93*

- i) Improved certainty and confidence in reform processes;
- ii) Transparency in decision making; and
- iii) Ensuring sound information is available to all sectors at key decision points.

### **Link to relevant performance indicators**

NSW will provide links to relevant NRMCC indicators and NRC targets when they are available.

## NWI Element No 8: Knowledge and Capacity Building

### Action 1: Key Knowledge and Capacity Building priorities IGA Para 101

#### Actions

Identify the key Knowledge and Capacity Building priorities to support implementation of the National Water Initiative and where this work is being undertaken

Identify and implement proposals to more effectively coordinate the national water knowledge effort.

**IGA Date:** Ongoing

#### Context

The NSW Government is committed to a whole of government approach for developing knowledge and capacity building in support of the National Water Initiative. To achieve this commitment the NSW Government has developed a network which comprises NSW resource management agencies, such as the Department of Natural Resources (DNR), Department of Primary Industries (DPI), the Department of Energy, Utilities and Sustainability (DEUS), the Department of Environment and Conservation (DEC), and research corporations. The NSW Government is facilitating active engagement of this network for the development and implementation of a NSW Knowledge and Capacity Building Plan. An initial scoping of knowledge and capacity building requirements for NSW has been undertaken. The NSW Knowledge and Capacity Building Plan will contribute to the development of national roadmap for water research.

Research corporations involved in the process include: the Grains Research and Development Corporation, Rural Industries Research and Development Corporation, Cotton Research and Development Corporation, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Cooperative Research Centres (CRC), and NSW catchment management authorities.

The NSW Government is also undertaking a number of other activities that support a whole of government approach for knowledge and capacity building. Examples of these activities include:

The establishment of an independent Science & Information Board by DNR. This Board is preparing a Knowledge and Capacity Building Strategy for DNR that identifies the need for current, short and long term science, knowledge products, decision tools, data and capacity building to deliver DNR's core business. This strategy is now a project of high priority for DNR. The strategic investments identified in the strategy for the DNR business line of "Facilitate the sustainable use of Water" have given consideration to the NWI elements. The strategy is expected to be approved by the DNR Board of Management by the end of June 2005, at which time it will influence the business planning cycle of DNR.

The development of a partnership between DNR, DEC and the Sydney Catchment Authority and the new eWater CRC. This new CRC is currently developing a research program, and associated product lines, with input from NSW ensuring priorities are addressed that meet NWI needs.

The development of partnerships between DPI and the CRC for Irrigation Futures and the new Cotton, Catchments and Communities CRC. These CRCs are developing research strategies that look at water use across a range of scales. A common desired outcome is to achieve the necessary water use requirements whilst achieving beneficial environmental outcomes.

The development of a Wetland Recovery Plan (jointly prepared by DNR and DEC) under the National Water Initiative for the Macquarie Marshes and Gwydir Wetlands which will identify strategic science requirements to enable successful development and implementation of these plans.

#### Implementation Timetable

Steps / Deliverables	Start date	End date	Status / Comments	Lead Agency
Identify the key science priorities to support implementation of the National Water Initiative and identify where this work is	May 2005	December 2006	Ongoing activity	<b>DPI overall.</b> DNR for knowledge priorities relating to NWI Elements 1, 2, 3, 5 and 7. DEUS

Steps / Deliverables	Start date	End date	Status / Comments	Lead Agency
being undertaken. This process will include broad consultation with stakeholders and a gap analysis.				for Element 6. DNR, DEC and DPI Element 4. DPI for Element 8
Preparation of DNR's Knowledge & Capacity Building Strategy to identify key investment in knowledge (both short and long term) that address the sustainable management of water resources.	October 2004	July 2005		DNR
Implementation of DNR's Knowledge & Capacity Building Strategy will ensure that future business planning will consider the priorities identified in the strategy.	July 2005	June 2007		DNR
Implementation of any necessary measures to ensure the research effort is well coordinated and publicised, and any gaps are addressed.	July 2005	June 2007	Implementation of DNR's Knowledge and Capacity Building Strategy will result in the co-ordination of DNR's science and knowledge activities. This will be built into business plans.	DNR
Negotiation and implementation of knowledge and capacity building projects to underpin delivery of NWI implementation tasks.	November 2005		Ongoing	DPI, DNR, DEC, DEUS

### **Cooperation with other jurisdictions**

Limited discussion with other jurisdictions has occurred during the development of the Knowledge and Capacity Building Strategy.

### **Link to NWI outcomes**

The Knowledge and Capacity Building strategy will help in addressing the knowledge and capacity building needs in the areas identified in the NWI.

### **Link to relevant performance indicators**

NSW will provide links to the relevant NRMCM indicators and NRC targets when they are available.

**NWI Element: Implementation**

**Action 1: Review the 1992 Murray-Darling Basin Agreement for consistency with the NWI IGA Para 14**

**Actions**

- i) Review the 1992 Murray-Darling Basin Agreement, where necessary, to ensure that it is consistent with the NWI; and
- ii) A separate agreement to address the over-allocation of water and achievement of environmental objectives in the MDB (“the MDB Intergovernmental Agreement”) will operate between the Commonwealth Government and the Governments of New South Wales, Victoria, South Australia and the Australian Capital Territory. The MDB Intergovernmental Agreement will be consistent with the objectives, principles and actions identified in this Agreement.

**IGA Date:** Immediate

**Context**

On 25 June 2004, NSW became a signatory to the Intergovernmental Agreement on Addressing Water Over-allocation and Achieving Environmental Objectives in the Murray-Darling Basin. This agreement commits the Murray-Darling Basin Ministerial Council to identifying as soon as reasonably practicable consequential changes to the 1992 MDB Agreement required to implement the 2004 Agreement, which is consistent with the NWI.

**Implementation Timetable**

Steps/ Deliverables	Start date	End date	Status/ Comments	Lead Agency
Sign the Intergovernmental Agreement on Addressing Water Over-allocation and Achieving Environmental Objectives in the Murray-Darling Basin		25 June 2004	Complete. NSW is a signatory	
Initial review of 1992 Murray-Darling Basin Agreement				

**Cooperation with other jurisdictions**

NSW actively participates in the Murray-Darling Basin Ministerial Council

**Link to NWI outcomes**

This action helps achieve:

*NWI objectives 23 (i)*

- i) Nationally-compatible system of managing surface and groundwater resources.

**Link to relevant performance indicators**

Not applicable.

## **NWI Element: Interpretation**

### **Action 1: Common lexicon IGA Para 17**

#### **Actions**

Consider the adoption of the words and phrases in Schedule B(ii) (i.e. environmental and other public benefit outcomes, over-allocation, overused, reliability, water access entitlement, water allocation) in the State's water management framework.

**IGA Date:** Ongoing

#### **Context**

NSW in the development of the WMA and the 2004 amendments to the WMA placed considerable effort in developing and defining terms that reflected the provisions and intent of the Act. These are generally consistent with the schedule.

#### **Implementation Timetable**

Steps/ Deliverables	Start date	End date	Status / Comments	Lead Agency
Consider the adoption of the words and phrases in Schedule B(ii)		June 2006	This review will consider whether any further amendments to Act are needed to include NWI terminology	DNR

#### **Cooperation with other jurisdictions**

2004 Act amendments were undertaken to provide consistency with the NWI, signed by COAG.

#### **Link to NWI outcomes**

This action helps achieve:

*NWI objectives 23 (i)*

i) Clear and nationally-compatible characteristics for secure *water access entitlements*;

*NWI outcomes*

A common lexicon for water use and management.

#### **Link to relevant performance indicators**

NSW will provide links to NRMCC indicators and NRC targets when they are available.

## ACRONYMS

### ACRONYMS

AWT	Aboriginal Water Trust – funding organisation supporting the participation of Aboriginal peoples’ businesses in the water market
BASIX	Building and Sustainability Index – NSW planning standards for energy and water use limits for developments
COAG	Council of Australian Governments – meeting of the Prime Minister, State Premiers and Territory Chief Ministers
CMA	Catchment Management Authority – statutory body established under the <i>Catchment Management Authorities Act 2003</i>
CRC	Cooperative Research Centre – public / private research partnership
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CTWSS	Country Town Water Supply and Sewerage program
CSO	Community Service Obligation
DEC	Department of Environment and Conservation
DEUS	Department of Energy, Utilities and Sustainability
DNR	Department of Natural Resources
DPI	Department of Primary Industries
EPA	Environment Protection Authority – a statutory body now part of the Department of Environment and Conservation
ESCAWRI	Executive Steering Committee for Australian Water Resource Information
GL	Gigalitre – billion (1,000,000,000) litres
HoA	Heads of Agreement
IC	Irrigation Corporation – corporate entity holding collective water access entitlements; individual irrigators hold shares in the corporation
IGA	Intergovernmental Agreement
IPART	Independent Pricing and Regulatory Tribunal – statutory body established under the <i>Government Pricing Tribunal Act 1992</i>
IVR	Interactive Voice Recognition – method of accessing secure licence information in water access licence register
IWCM	Integrated Water Cycle Management
LEP	Local Environment Plan – environmental management plan developed by local governments

LMA	Intergovernmental Agreement on Addressing Water Overallocation and Achieving Environmental Objectives in the Murray-Darling Basin, known as the Living Murray Agreement
LWU	Local Water Utility – corporations providing water supply and delivery services in non-metropolitan areas
MDBC	Murray-Darling Basin Commission – statutory body coordinating inter-jurisdictional management of water resources of the Murray-Darling basin
MRW	Murray River Water – corporation providing water delivery services in the Murray
MWP	Metropolitan Water Plan – NSW Government plan to deal with Sydney’s water supply and demand issues
NCC	National Competition Council
NCP	National Competition Policy
NMI	National Measuring Institute – Commonwealth agency dealing with standard measures
NRC	Natural Resources Commission – statutory body established under the <i>Natural Resources Commission Act 2003</i>
NRM	Natural resource management
NRMMC	Natural Resource Management Ministerial Council
NWI	Intergovernmental Agreement on a National Water Initiative
NWC	National Water Commission
SAWM	Smart Approved Water Mark
SWC	Sydney Water Corporation
WAL	Water Access Licence – water access entitlement issued under the <i>Water Management Act 2000</i>
WELS	Water Efficiency Labelling and Standards
WIX	Water Information Exchange – internet information system for licence holders
WMA	<i>Water Management Act 2000</i>
WOU	Water Ordering and Use – water accounting system for regulated river sources and major Murray-Darling aquifers
WRM	Water Resources Management
WSAA	Water Service Association of Australia
WSP	Water Sharing Plan – statutory water management plan under the <i>Water Management Act 2000</i>

## GLOSSARY OF TERMS

Words and phrases in the NSW NWI Implementation Plan have the same meanings as those used in the National Water Initiative.

In addition, NSW will adopt the nationally-consistent definitions for some water trade terminology currently being developed by the Natural Resources Management Ministerial Council NWI Working Group.

Adaptive environmental water	Water committed for specified environmental purposes by the conditions of water access licences, either generally or at specified times or in specified circumstances.
Available water determination (AWD)	A periodic announcement made during an irrigation season which indicates the quantity of water that equates to unit share of water access. In relation to licences that have not yet been converted to the WMA, an AWD indicates the percentage of a water licence holder's volumetric licence that can be extracted.
Entitlement tagging	A water accounting approach that allows water access entitlements to retain their original characteristics when traded between jurisdictions and/or trading zones.
Environmental flows	Water made available for the environment under rules in Water Sharing Plans.
Extraction component	Part of the water access entitlement which specifies the sections of the water source from which water may be taken. It may also specify the times and rates at which water can be taken.
Extraction limit (for surface water)	The scientifically-determined long term average level of extraction for the sustainable maintenance of the water system.
Floodplain harvesting	The collection, extraction or impoundment for commercial purposes of water flowing across floodplains.
Integrated Water Cycle Management	Local water utilities planning approach incorporating demand management, water sensitive design, reuse and recycling.
Planned environmental water	Water committed to the environment by management plans for fundamental ecosystem health or other specified environmental purposes, either generally or at specified times or in specified circumstances, and that cannot be used for any other purpose.
Regulated river	River that is declared by the Minister for Natural Resources to be a regulated river. Rivers declared to be regulated are those on which licensed water users can order water from a dam and include those rivers with major storages which provide water

	mainly for irrigation. All other rivers are unregulated.
Risk assignment	The method of allocating liability for future reductions in the availability of water for consumptive use between licence holders and government.
Sustainable yield	The equivalent of extraction limit for a groundwater system.
Unregulated river	Any river that is not declared a regulated river by the Minister for Natural Resources.
Water access entitlement	Licence to access an allocated share of the volume of water available for extraction in a given water source.
Water allowance	Previously common pricing system in which town water suppliers allocated volumetric allowances. The majority of water suppliers have abolished water allowances in favour of consumption-based pricing.
Water Sharing Plan	Statutory management plan under the <i>Water Management Act 2000</i> .
Water supply work approval	Approval to build and operate water supply works (e.g. pumps) at specified locations.
Water system	System that is hydrologically connected and described at the level desired for management purposes (e.g. sub-catchment, catchment, basin or drainage division and/or groundwater management unit, sub-aquifer, aquifer, groundwater basin).
Water use approval	Approval to use water for a specific purpose on a specific piece of land.
Water year	The twelve months from 1 July to 30 June.