

Sydney Catchment Authority  
**Special Areas Strategic Plan of Management 2007**  
**(SASPoM)**

*Prepared for:*

Sydney Catchment Authority (SCA) and  
Department of Environment and Conservation (DEC)





# Foreword

The Special Areas are the protected catchments surrounding water storages and critical components in the supply of quality bulk water to Sydney. They also contain landscapes of great beauty with significant natural and cultural heritage values. Parts of the Special Areas are recognised for their World Heritage and wilderness values.

Catchment management involves protection of natural and cultural values, response to emerging threats and strategies to improve any existing problem areas. Management of the Special Areas requires a coordinated approach by the Sydney Catchment Authority (SCA) and the Department of Environment and Conservation (DEC), in communication with neighbours and stakeholders. This plan provides the strategic management framework for catchment management of the Special Areas by the SCA and DEC.

The Special Areas Strategic Plan of Management (SASPoM) replaces the 2001 Special Areas Strategic Plan of Management. The 2001 plan successfully guided the SCA and DEC for the first five years of joint management of the Special Areas and resulted in greater knowledge and understanding of how to best manage the areas for water quality and ecological integrity outcomes. As the 2001 plan came towards the end of its five year term, the agencies reviewed its effectiveness in light of progress achieved, new knowledge of the Special Areas and current natural resources management processes both within the agencies and in NSW. Peer review by Melbourne Water and eWater CRC provided a useful external perspective.

Together with its companion plan, the Wingecarribee Swamp and Special Area Plan of Management, the revised draft SASPoM was placed on a two month public exhibition period from August to October 2006. The input gained from the community and key stakeholders was considered in the finalisation of the plan. A public submissions summary report outlines the issues raised during the public exhibition period and how those issues were addressed in the final plan.

This SASPoM contains a vision for long term management of the Special Areas, goals for the protection of water quality and ecological integrity, management targets for key work program areas and actions which the SCA and DEC will implement to achieve the goals of the plan. Performance evaluation measures are specified at a range of time-scales, in order to track progress towards the goals and enable adjustment of annual catchment management programs to protect the Special Areas.

In accordance with the provisions of Section 49 of the *Sydney Water Catchment Management Act 1998*, this plan is hereby adopted.

The Hon. BOB DEBUS MP  
**Minister for the Environment**  
Date: 28.02.2007

# Contents

Foreword	i
<b>1 Introduction</b>	<b>1</b>
1.1 Special Areas	1
1.2 Background to the strategic plan	6
1.3 Scope of plan	6
<b>2 Context</b>	<b>8</b>
2.1 Legislative context	8
2.2 Planning context	9
2.3 SCA and DEC Management Context	10
<b>3 30 year vision</b>	<b>13</b>
<b>4 Goals</b>	<b>14</b>
Delivery of the vision and goals	14
Performance evaluation	14
<b>5 Management targets</b>	<b>16</b>
Water quality risk management	16
Ecosystem management	18
Regulation of human activity	21
Fire management	23
Asset construction and maintenance	26
Pest and weed management	28
Aboriginal and historic cultural heritage	30
Communications	32
Policy and planning	34
<b>5 Glossary</b>	<b>36</b>

# 1 Introduction

## 1.1 Special Areas

Special Areas are those lands that surround Sydney's drinking water storages. They are lands declared under the *Sydney Water Catchment Management Act 1998* (SWCM Act) for their value in protecting the quality of the raw water used to provide drinking water to Sydney, the Illawarra and the Blue Mountains and for their ecological integrity. The Special Areas are a critical barrier in a multi-barrier approach<sup>1</sup> to protecting water quality, which includes management of the hydrological catchments, storage management, delivery system management and the treatment of water in the water treatment plants. They act as a filtration system for water entering water storages by reducing nutrients, sediments and other substances that can affect water quality. The greater the ecological integrity of the Special Areas, the more effective their role as a barrier. In some instances, the Special Areas constitute all or nearly all the water storage's entire catchment area, for example the Metropolitan Special Area. In others, such as for Warragamba and Shoalhaven, the Special Area forms only a component of the hydrological catchment and so their role as a barrier is particularly critical.

Over the past 100 years, protective management and restricted access to Special Areas has resulted in high ecological values in the areas. Over 26 significant plant species, 30 threatened animal species and ten endemic fish species have been identified in the Special Areas. From a cultural perspective, more than ten Aboriginal communities have a connection or past ancestral connection to lands gazetted as Special Areas and over 1000 Aboriginal sites have been identified in the Special Areas. The areas also contain historic heritage values, which have been retained through the protection of the water storages and their catchments. More detailed information on the significance of the Special Areas is contained in the 'Special Areas Plan of Management - Reference Document 2006'.

The NSW Government has recognised that protection of water quality and maintenance of ecological integrity are complementary objectives of Special Area management. For this reason, the Sydney Catchment Authority (SCA) and National Parks and Wildlife Service (NPWS) are committed by legislation to combining their specialist skills to manage the Special Areas as joint sponsors. The NPWS is part of the Department of Environment and Conservation (DEC).

This Special Areas Strategic Plan of Management (SASPoM) is one of the key documents to guide the joint sponsors in protecting and managing Special Areas. The requirements of this plan do not apply to owners of private land in Special Areas, however, they may be interested in reading the plan to gain information on SCA and DEC management of the areas and determine where coordination may benefit their management of their lands. Other users of Special Areas such as utilities providers or people with an historic connection to the areas may use the SASPoM to identify where the joint sponsors may undertake actions in relation to their interest.

The SCA has the responsibility of protecting the water supply catchments in order to provide a reliable supply of safe, clean, bulk raw water. DEC is the primary conservation agency for NSW and also is the landowner and manager of a large proportion of the land within Special Areas. Joint sponsorship of the Special Areas requires an integrated management approach, based on mutual understanding of values and objectives. Joint sponsorship has arisen through identification of Special Area lands for transfer to DEC for management as reserves gazetted under the *National Parks and Wildlife Act 1974 (NPW Act)*. The identification of lands for transfer takes place under Section 45 of the SWCM Act and also supports the NSW government commitment to creating an unbroken chain of reserves from the Victorian border to the Hunter Valley.

Special Areas, current at December 2006, include Warragamba, Metropolitan, Blackheath, Katoomba and Woodford, Woronora, Wingecarribee, Shoalhaven, Fitzroy Falls, O'Hares Creek, Richmond, Windsor, Penrith and Devine's Weir Special Areas. (See Figure 1 page 5). Prospect Controlled Area is proposed to be declared as a Special Area and gazetted as a Nature Reserve under the NPW Act in early 2007 and will be managed in accordance with this SASPoM when that proposal is complete.

Special Areas include both government owned and managed lands and private tenure lands. At present 65 percent of Special Area lands consists of reserves under the NPW Act, 18 percent is SCA freehold land (which includes water storages), 13 percent is privately owned land and less than three percent is other tenure, including other Crown Land. Of the reserves, 28 percent

<sup>1</sup> WQRMF Section 5.1.1 – The Multi-barrier Approach

is declared as wilderness under the *Wilderness Act 1987*. Table 1 presents a breakdown of the Special Areas tenure as at December 2006. Boundaries for Special Areas may change from time to time.

In terms of land use, Special Areas include native bushland, wetlands, river systems, bulk water storages, active and historic farmland and water supply facilities. They are intersected by roads and other utility corridors and contain derelict and active mines. Urban growth in south-western Sydney is contributing to increased urban land use in the water supply catchments, and increased potential for adverse impacts on water quality and natural values. This is particularly relevant in areas that directly adjoin Special Area boundaries. Severe drought from 2000 to 2007 has seriously reduced the volume of water in the water storages and affected ecological processes across the Special Areas. The possibility that national and global climatic changes will become more pronounced and may affect water storages and ecological processes requires monitoring and consideration of potential impacts.

The Metropolitan Water Plan, which seeks to provide for Sydney's water needs over the coming 25 years, may include changes to water supply activities in Special Areas. The SCA and DEC will provide advice to the NSW Government as required on the implications of the Metropolitan Water Plan to minimise any potential impacts.

Management of the Special Areas needs to respond to the characteristics of the areas and to the pressures placed on them. The Special Areas Reference Document, which supports this plan, contains more detailed information on the location, values, threats and characteristics of each Special Area. These are major factors that the SCA and DEC must consider in working to achieve the dual goals of quality bulk raw water and the protection of natural and cultural heritage, in the context of the demand for quality bulk water for the growing population of the Sydney Metropolitan Area.

Table 1. Land tenure in Special Areas

Special Area / tenure	Area (hectares)	% of Special Area
<b>Warragamba Special Area (established 1942)</b>		
NPWS reserves (Nattai State Conservation Area, Burratorang State Conservation Area, Thirlmere Lakes National Park (NP), Nattai NP, Wollondilly River Nature Reserve, Blue Mountains NP, Yerranderie State Conservation Area, Kanangra Boyd NP)	209,634.70	80.50
SCA freehold (includes storages)	8153.13	3.10
Private	36631.74	14.10
Other – includes Crown land 1738 ha (0.7%)	5975.78	2.30
<b>Sub-total :</b>	<b>260,395.35</b>	<b>100.00</b>
<b>Metropolitan Special Area (1880)</b>		
NPWS reserves (Dharawal State Conservation Area, Illawarra State Conservation Area, Stage 1 of proposed Nepean State Conservation Area)	25,231.41	28.08
SCA freehold	51,821.73	57.62
Private	10475.20	11.70
Other – includes Crown land 54.7 ha (0.1%)	2341.21	2.60
<b>Sub-total</b>	<b>89,869.55</b>	<b>100.00</b>
<b>Woronora Special Area (1941)</b>		
NPWS reserves (nil)	0.00	0.00
SCA freehold	7341.94	96.20
Private	185.54	2.40
Other – includes Crown land 6.41 ha (0.1%)	86.32	1.10
<b>Sub-total :</b>	<b>7,613.80</b>	<b>100.00</b>
<b>O'Hares Creek Special Area (1927)</b>		
NPWS reserves (Dharawal State Conservation Area, Dharawal Nature Reserve)	6293.57	85.10
SCA freehold	86.95	1.10
Private	95.80	1.30
Other – includes Crown land 76.5 ha (1.0%)	922.64	12.50
<b>Sub-total :</b>	<b>7,398.96</b>	<b>100.00</b>
<b>Blue Mountains Special Areas (Blackheath, Katoomba, Woodford) (1991)</b>		
NPWS reserves (Blue Mountains NP)	1427.82	66.20
SCA freehold	23.94	1.10
Private	440.37	20.40
Other – includes Crown land 66.24 ha (3.1%)	265.75	12.30
<b>Sub-total :</b>	<b>2,157.88</b>	<b>100.00</b>
<b>Shoalhaven Special Area (1970)</b>		
NPWS reserves (Morton NP)	125.78	8.60
SCA freehold	712.56	41.30
Private	0.00	0.00
Other (all Crown land, managed by SCA)	735.71	50.10
<b>Sub-total :</b>	<b>1,467.09</b>	<b>100.00</b>

Special Area / tenure	Area (hectares)	% of Special Area
<b>Fitzroy Falls Special Area (1973)</b>		
NPWS reserves (nil)	0	0
SCA freehold	627.82	92.8
Private	45.08	6.7
Other - includes Crown land	3.66	0.5
<b>Sub-total :</b>	<b>676.56</b>	<b>100.00</b>
<b>Wingecarribee Special Area (1973)</b>		
NPWS reserves (nil)	0	0
SCA freehold	722.8	96.6
Other - includes Crown land	25.7	3.4
<b>Sub-total</b>	<b>748.5</b>	<b>100.00</b>
<b>Prospect Special Area (proposed for 2007)</b>		
NPWS reserves (Prospect Nature Reserve)	325.3	36.14
SCA freehold	574.8	63.86
Other - includes Crown land	0	0
<b>Sub-total :</b>	<b>900.1</b>	<b>100.00</b>
<b>Other Special Areas</b>		
Devine's Weir Special Area (1924) – includes Crown and private land	9	100
Penrith Special Area (1929) – part of Nepean River	0.2	100
Windsor Special Area (1933) – part of Hawkesbury River	0.4	100
Richmond Special Area (1933) – part of Hawkesbury River	0.2	100
<b>Sub-total :</b>	<b>9.8</b>	
<b>TOTAL (ALL SPECIAL AREAS)</b>	<b>371,415.25</b>	<b>100.00</b>

Total Special Area by land tenure	Area (hectares)	% of Special Area
NPWS reserves	243,038.58	65.45
SCA freehold (includes storages)	70,065.67	18.87
Private	47,873.73	12.89
Other	10,366.37	2.79
<b>TOTAL (ALL TENURES)</b>	<b>371,405.65</b>	<b>100</b>

Explanatory notes:

- 'SCA freehold' also includes water storages
- 'Private' includes freehold and leases
- 'Other' includes Crown lands and no data areas. SCA is responsible for managing most vacant Crown land in Special Areas
- Mining leases in Special Areas generally exist over Crown land. O'Hares Creek includes 50.65 ha of mining leases, while Metropolitan includes 1.3 ha.

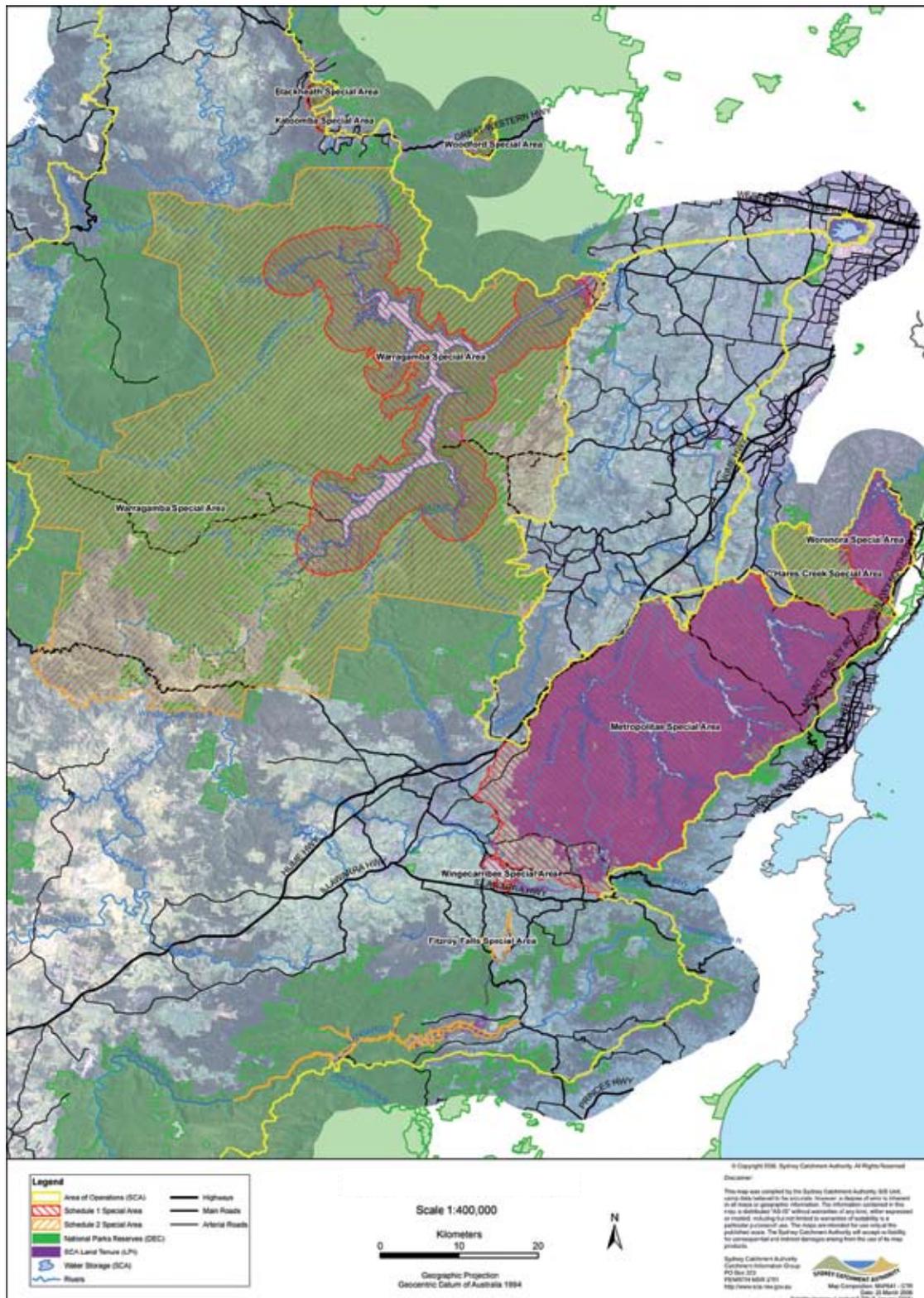


Figure 1. Location of Special Areas

## 1.2 Background to the strategic plan

The NSW Government established the Sydney Catchment Authority in 1999 to manage and protect the water supply catchments in order to ensure the provision of safe, clean bulk raw water for Sydney, the Blue Mountains and the Illawarra. Sections 49 and 50 of the SWCM Act require the joint sponsors to prepare and give effect to a plan of management for each Special Area. This Special Areas Strategic Plan of Management 2006 (SASPoM) fulfils that obligation.

The SASPoM provides long term goals and targets plus a suite of management actions which are used by the joint sponsors in developing annual work programs within Special Areas.

The previous SASPoM was adopted in May 2001. It played an important role in coordinating whole of catchment management for the newly formed SCA and setting Special Area management priorities for the SCA and DEC. Key outcomes of that plan were:

- establishment of a Joint Management Agreement between the SCA and DEC
- joint fire management planning
- strategies for integrated pest and weed species management
- terrestrial flora and fauna surveys over a large percentage of the Special Areas.

Under the conditions of the SCA's Operating Licence the SASPoM is to be reviewed every five years with DEC. As part of the preparation of this plan, a review was undertaken through a combination of internal consultation with operational and policy staff; peer review by the eWater Cooperative Research Centre and Melbourne Water; consultation with the Natural Resources Commission, the Hawkesbury-Nepean and Southern Rivers Catchment Management Authorities, and public exhibition.

Some aspects of the previous SASPoM are now core SCA activities, and are no longer required in this SASPoM. These include:

- whole of hydrological catchment management approach and compliance – now implemented through the SCA's Healthy Catchments Program

- public education and awareness – now undertaken through the SCA and DEC's corporate education and communication programs
- research which is not specifically focused on Special Areas land management or operations
- public scrutiny – undertaken through annual reporting and auditing processes for each joint sponsor. Peer review is undertaken as part of standard best practice for appropriate program areas and review of this plan includes public exhibition and consultation.

The SCA and DEC both have programs that extend beyond Special Area boundaries. The purpose of this plan is to focus on collaborative land management in the Special Areas.

## 1.3 Scope of plan

This plan will commence on 1 July 2007 and has a term of 10 years. As required by the SCA's Operating Licence, this plan will be reviewed at least every five years. Subject to the five year review, changes may be recommended.

Minor amendments may be made to the plan from time to time to accommodate changes to agency and policy names, in order to maintain the currency of the document. These amendments will be made at periodic intervals when the document is reprinted and will not constitute a review for the purposes of the Operating Licence.

This plan applies to all Special Areas and will apply to any new or amended Special Areas. The majority of actions and targets identified in the plan guide the SCA and DEC in their management of public lands in Special Areas. The actions and targets take account of the division of SCA and DEC responsibilities, according to land tenure and activity, as outlined in the Joint Management Agreement, endorsed by both agencies.

Effective catchment management requires a coordinated approach with catchment neighbours. Some actions in this plan require the SCA and DEC to communicate with or engage other organisations or stakeholder groups. However, this plan does not contain any commitments for stakeholders other than the joint sponsors. Other Special Areas land managers or parties involved in Special Area management may be interested in reading the SASPoM to understand how the SCA and DEC manage for water quality and ecological outcomes, or to identify where the SCA and DEC have committed to

undertaking programs in which they have an interest. Advice or guidance may also be sought on the topics within the plan to guide non-government land managers.

The SASPoM seeks to ensure that land management practices throughout all Special Areas, including private lands and leases, are undertaken in a manner which will contribute to the protection of water quality and ecological integrity. However, this plan only specifies actions required to be undertaken by the joint sponsors. Activities on private land in Special Areas are regulated under the *Environmental Planning and Assessment Act 1979* and the *Protection of the Environment Operations Act 1997* (POEO Act). The SCA also supports water quality protection programs on private land in Special Areas through its Healthy Catchments Program and implementation of concurrence powers under the State Environmental Planning Policy 58 and regulatory activities under the POEO Act.

Water storages within Special Areas are owned and managed by the SCA under the bulk water supply agreement requirements and programs. These requirements and programs relate to water quality and quantity in storages and water transfer systems and are not governed by this plan.

The Wingecarribee Swamp and Special Area contain unique natural and cultural values, and have specific management requirements due to the collapse of the swamp in 1998. The broad principles and targets in the SASPoM apply to Wingecarribee at a strategic level, however, a separate plan of management, the *Wingecarribee Swamp and Special Area Plan of Management*, guides specific land management operations there. Wingecarribee Special Area is owned and managed by the SCA and is not included in the Joint Management Agreement and Service Contract between the SCA and DEC (see Section 2.3, SCA and DEC Management Context).

The Special Areas Reference Document, which supports this SASPoM, is the key information resource for the Special Areas and will be updated as new information becomes available or the status of Special Areas change.

## 2 Context

### 2.1 Legislative context

The *Sydney Water Catchment Management Act 1998* (SWCM Act), which established the Sydney Catchment Authority, provides for the Governor, on recommendation from the Minister, to declare an area of land to be a Special Area, for either or both of the following purposes:

- (a) protecting the quality of stored waters, whether intended for use for drinking or other purposes
- (b) maintaining the ecological integrity of an area of land to be declared to be a special area in a manner that is consistent with the Authority's objectives.

In the hydrological catchments the SCA regulates land use activities that may impact on water quality through the Sydney Water Catchment Management (Environmental Protection) Regulation 2001. This Regulation gives the Authority the same powers as DEC (Environment Protection Authority) or a regulatory authority, under certain provisions of the *Protection of the Environment Operations Act 1997* to protect the environment.

The Sydney Water Catchment Management (General) Regulation 2000 regulates conduct in Special Areas to protect water supply and to control pollution and disease. It categorises Special Area lands as:

- Schedule 1 - No Entry
- Schedule 2 - Restricted Access.

Most restrictions on access and land use do not apply to privately held land and public roads within the Special Areas.

Reserves gazetted under the NPW Act in Special Areas include national parks, state conservation areas and nature reserves, with 28 percent also declared as wilderness areas under the *Wilderness Act 1987*. Objectives of the NPW Act include the conservation of natural and cultural values in the landscape – objectives that are predominantly compatible with the SWCM Act requirement to protect water quality and ecological integrity.

The NPW Act requires that a plan of management be prepared for every reserve. A plan of management is a legal document that outlines how the area will be managed. Once the Minister has adopted a plan of management, any operation undertaken within the reserve must be in accordance with that plan. The NPW Act specifies the matters to be addressed in plans of management, together with specific management principles for each type of reserve. Reserve-specific plans of management have been developed for all reserves in Special Areas and take into consideration the objectives for Special Areas under the SWCM Act.

Land within Special Areas holds significance for Aboriginal people including Dharawal, Gundungurra, Illawarra and Wodi Wodi country. Aboriginal interest in an area may be linked to historic connection and also to natural heritage values. Parts of the Special Areas maybe subject to native title claims under the *Native Title Act 1993* (NT Act). The NT Act recognises and protects native title. Such title is recognised by common law and concerns the rights and interests, in land and waters, of Aboriginal and Torres Strait Islander people. The NT Act allows for the negotiation of Indigenous Land Use Agreements (ILUA).

A significant portion of the reserves which fall under Special Areas (including the Blue Mountains National Park and the Nattai National Park) are the subject of native title applications by the Gundungurra People. The NSW Government has responded by offering to negotiate a non-native title ILUA with the claimants. Through a schedule to the proposed land use agreement, the SCA and DEC have supported a proposal to establish a consultative committee, with majority Gundungurra representation. The proposal is seen as a mechanism for effective input by Gundungurra people to the management of lands within the area covered by the claim. The proposed non-native title ILUA was under negotiation at the time of the preparation of this plan.

The management of the Special Areas must also meet other relevant NSW legislation, including specific environmental laws and regulations. The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) protects matters of National Environmental Significance (NES). NES potentially relevant to Special Areas include World Heritage properties, National heritage places, threatened species

and ecological communities and Ramsar-listed wetlands. Further detail on current legislative requirements are outlined in the Reference Document which supports this plan.

## 2.2 Planning context

The Special Areas exist in a network of local, regional, State and international planning mechanisms. Some Special Areas form part of the Greater Blue Mountains World Heritage area, listed under UNESCO's *World Heritage Convention 1972* for its outstanding natural values.

Planning for reserves is through reserve-specific plans of management, which take into account the SASPoM, the Greater Blue Mountains World Heritage Area Strategy and the NSW Biodiversity Strategy. When NPW Act Plans of Management are being prepared for reserves within Special Areas or water supply catchments, Section 74 of the NPW Act requires SCA representations to be considered by the Minister.

Private lands within Special Areas are subject to local and regional environmental plans (LEPs and REPs) under the *Environmental Planning and Assessment Act 1979*, administered by Local Government and the Department of Planning. State Environmental Planning Policy *Sydney Metropolitan Water Supply 2004* also directly relates to the management of catchments and water supply services. This plan does not affect the requirements of LEPs, REPs and SEPPs for private landholders.

The Drinking Water Catchments Regional Environmental Plan No 1 (REP) came into force on 1 January 2007. Section 53 of the SWCM Act establishes the requirement for the REP and the particular issues it must address. The REP contains provisions relating to the assessment and approval of development and activities assessed under Parts 4 and 5 of the EP&A Act – and therefore these provisions must be applied to these proposals located within the Special Areas. It also requires that any development or activity proposed to be carried out on land to which the REP applies should incorporate any current recommended practices and performance standards endorsed or published by the Sydney Catchment Authority, that relate to the protection of water quality.

The REP also requires the SCA to develop rectification action plans and strategic land and water capability assessments. The rectification action plans aim to rectify the impact of existing development and activities that do not have a neutral or beneficial effect on water quality

within the Drinking Water Catchments including the Special Areas.

The Metropolitan Water Plan (the Metro Water Plan) is a strategy that has been developed to ensure that the people of the greater Sydney area have enough water to supply the growing population of Sydney over the next 25 years. The Metro Water Plan provides ways to better supply, save and recycle water and identifies initiatives that will help deliver cost-effective solutions for the regions' future water needs. This plan also includes water supply works in Special Areas. *SEPP Sydney Metropolitan Water Supply 2004* exempts specific works under the Metro Water Plan from Part 4 of the EP&A Act and from the *Heritage Act 1977*. All works proposed under the Metro Water Plan will be assessed for their environmental impacts (as well as for their benefits in terms of water supply and water quality) and implemented in an environmentally sustainable manner.

The NSW Natural Resources Commission (NRC) was established by the *Natural Resources Commission Act 2003* with a broad function of providing Government with independent advice on a range of natural resource management issues. The NRC developed the NSW Standard for Quality Natural Resource Management, as well as a set of targets which define the NSW priorities for natural resource management. These were adopted by the NSW Government in February 2006.

The *Catchment Management Authorities Act 2003* established catchment management authorities (CMAs) across NSW. CMAs develop and implement 10 year catchment action plans (CAPs) in their areas of operation. The CAPs are written to comply with the NSW natural resource standard and targets, and provide the mechanism for CMAs to provide financial assistance and incentives to land holders in their management of natural resources. The Special Areas are within the boundaries of the Hawkesbury-Nepean, Southern Rivers and the Sydney Metropolitan Catchment Management Authorities. Relationships between the SCA and CMAs are guided by Memoranda of Understanding. The CMAs and the joint sponsors of this plan are committed to working cooperatively to promote protection of drinking water catchments and their biodiversity values through both strategic planning and on-ground activities.

While the SCA is not a catchment management authority under the CMA Act, the standard and targets recommended by the NRC for CMAs reflect the NSW government position for the management of natural resources. Therefore in developing the SASPoM, the SCA

and DEC considered the state-wide natural resource management standard and targets. The SASPoM actions can be considered to contribute to achievement of the following NSW natural resource management targets:

1. by 2015 there is an increase in native vegetation extent and an improvement in native vegetation condition
2. by 2015 there is an increase in the number of sustainable populations of a range of native fauna species
3. by 2015 there is an increase in the recovery of threatened species, populations and ecological communities
4. by 2015 there is a reduction in the impact of invasive species
5. by 2015 there is an improvement in the condition of riverine ecosystems
8. by 2015 there is an improvement in the condition of important wetlands, and the extent of those wetlands is maintained
11. by 2015 there is an increase in the area of land that is managed within its capability.

The majority of land within Special Areas is recognised as having a high baseline of ecological integrity due to long term protection as water supply catchment and more recent protection as gazetted reserves. In interpreting the NRC targets, DEC and SCA consider that maintenance of the current high baseline may be an appropriate target, with improvement where required.

## 2.3 SCA and DEC management context

Catchment protection programs undertaken by the SCA are guided by the Healthy Catchments Program (HCP) which was introduced in 2003. The HCP brings together seven strategies to improve catchment health across Sydney's drinking water catchments. Of the seven HCP Strategies, the Lands Management Strategy deals with the Special Areas and other lands owned or managed by the SCA. The SASPoM is a key delivery mechanism for the Land Management Strategy.

Other strategies under the HCP relate to the hydrological catchment both within and outside Special Areas, including strategies for the management of sewage, riparian areas, stormwater, rural lands, and catchment

information. The Compliance Strategy also operates throughout the catchment and regulates human access to Special Areas. Each strategy has programs and projects to identify, understand and rectify impacts on water quality and catchment health, and which are prioritised in accordance with hazard events identified in the SCA's Water Quality Risk Management Framework (WQRMF). The SASPoM provides mechanisms to address significant external impacts on Special Areas.

The WQRMF identifies activities across the catchment that adversely impact on water quality. Within Special Areas risks to water quality inform management actions and are incorporated into management responses under functional areas such as access, fire, and asset maintenance. The SASPoM addresses hazard events from the WQRMF that require a land management response<sup>2</sup>.

In 2005 the SCA and DEC endorsed a Joint Management Agreement (JMA) and a Service Contract for the Provision of Special Areas Land Management and CRAFT<sup>3</sup> Services which commenced on 1 July 2005. These two documents define the roles and responsibilities of the joint sponsors in managing the Special Areas. The JMA provides the roadmap for the SCA and DEC's joint implementation of the SASPoM. The JMA serves as the basis for the cooperative relationship between the SCA and DEC as they fulfil their respective statutory responsibilities to protect water quality and the environment within the Special Areas. The Service Contract replaces a previous Grant Agreement between the agencies.

Under the JMA the SCA is responsible for the management of SCA freehold land, which includes the water storages within the Special Areas. The SCA is also responsible for controlling human activity across all Special Areas, rehabilitation of the effects of mining, and for water related research. DEC is responsible for managing lands reserved under the NPW Act in Special Areas, is contracted to undertake initial response to fire across all Special Areas and researches national park values. The SCA remains accountable for the maintenance and protection of water quality in the Special Areas and access control using the SWCM Act and regulations. DEC is also responsible for regulatory and other actions on its land under the *Rural Fires Act 1997*, *Wilderness Act 1987*, *Threatened Species Conservation Act 1995* and the *National Parks and Wildlife Regulation 2002*.

The Service Contract provides for the delivery by DEC of certain land management programs across Special Areas. Works programs under the contract are guided by

<sup>2</sup> WQRMF Table 1.3 – Priority Hazard Events and Controls and Table 1.4 – Program of Risk Controls

<sup>3</sup> Catchment Remote Area Firefighting Team

Annual Program Plans which incorporate the SCA's priority land management actions for water quality. The programs are then implemented by DEC in a manner consistent with the overriding objectives, strategies and actions in this plan and DEC plans of management.

The SCA works under an Operating Licence granted under Section 25 of the SWCM Act. The licence authorises the SCA to provide, construct, operate, manage and maintain systems or services for the bulk storage of water. The Independent Pricing and Regulatory Tribunal (IPART) conducts an annual audit of the Operating Licence and reports to the Minister on the SCA's compliance with the licence.

The SCA's Water Management Licence defines the SCA's water access rights and obligations, as well as regulates and manages the water management works. The licensed works include all dams and weirs for Sydney's drinking water supply system.

The licence regulates other issues including:

- the inter-dam transfer of water
- water use efficiency measures
- provision of basic environmental flow and other water releases
- monitoring and reporting mechanisms.

Recent outcomes achieved through the licence include clarification of monitoring and reporting for the licence, and improved protocols for data transfers thereby assisting with the release of environmental flows for all major dams in the Hawkesbury-Nepean River Catchment.

A flow diagram summarising the legislative, planning and management context is provided in Figure 2.

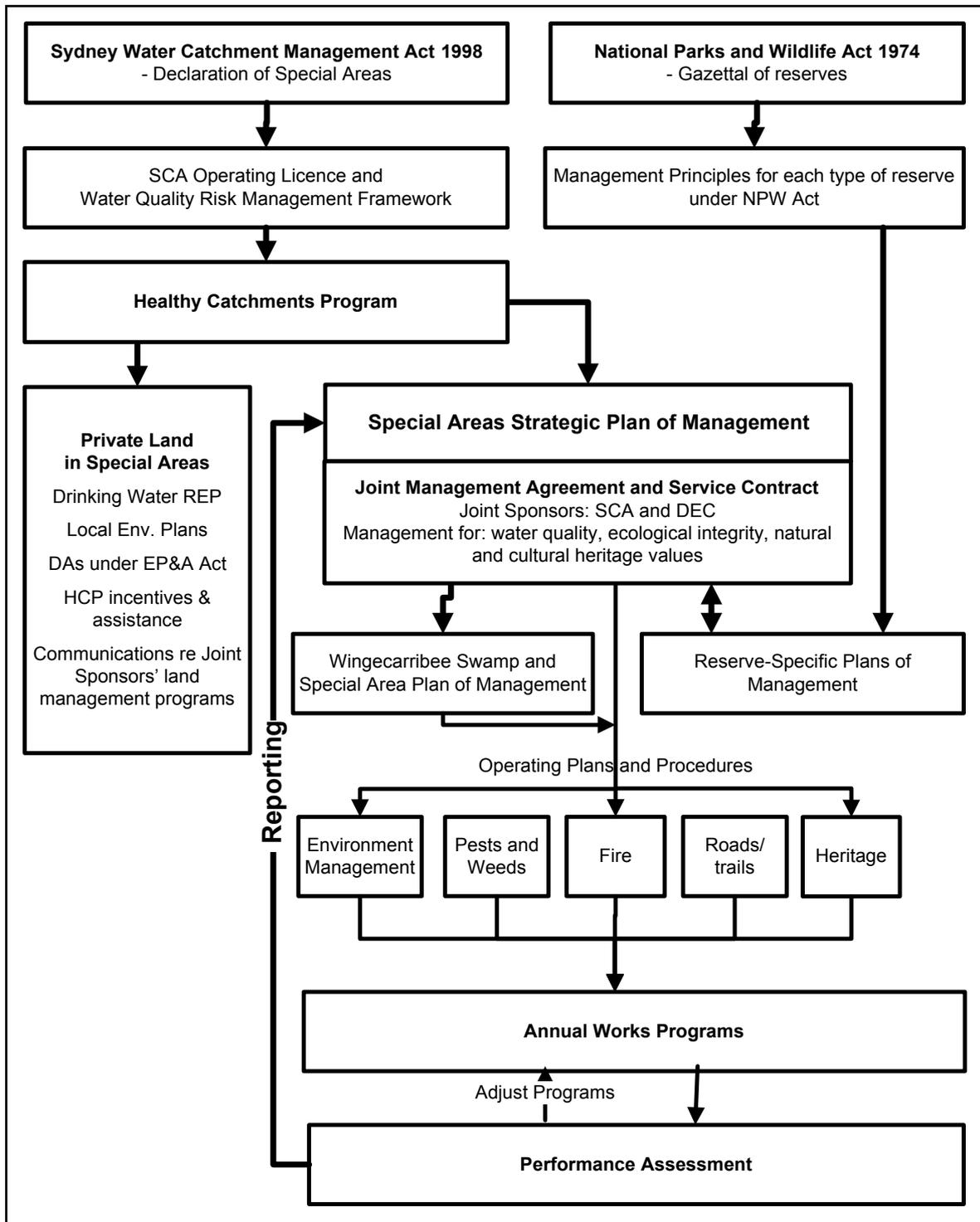


Figure 2. SASPoM context

## 3 30 year vision

The 30 year vision for the management of the Special Areas:

*“The Special Areas are successfully managed to provide high quality raw water in reservoirs, by protecting the ecological integrity and natural and cultural values of the areas.”*

# 4 Goals

In achieving this vision, there are two complementary management goals for the Special Areas:

**Goal 1** - protect and optimise water quality entering storages

**Goal 2** - conserve ecosystem integrity, natural and cultural values.

These dual goals recognise the primary consideration of protecting water quality within the Special Areas and acknowledge that the Special Areas are also to be managed for the protection and conservation of natural and cultural heritage values. The vision and goals reflect that protection of water quality is enhanced by protection of natural values.

## Delivery of the vision and goals

Progress towards these dual goals will be achieved by setting management targets. These targets include specific and auditable actions for DEC and SCA.

The targets and actions relate to the following topic areas:

1. water quality risk management
2. ecosystem management
3. regulation of human activities
4. fire management
5. asset construction and maintenance
6. pest and weed management
7. Aboriginal and historic heritage
8. communications
9. policy and planning.

The targets are aimed at providing both current context and guidance on the principles which each target topic is designed to move towards. The actions will be incorporated into annual work programs for the SCA and DEC. Specific detail of how some actions are to be

applied is guided by topic-specific operational plans and procedures, such as the operational plans for pests and weeds, fire management or cultural heritage.

## Performance evaluation

Success in achieving the targets will be assessed through the performance evaluation measures outlined at the end of each topic area. Progress on the specific actions will be reported at defined intervals, depending on the requirements of the topic.

The SCA functions under an Operating Licence granted under Section 25 of the SWCM Act, which contains performance indicators with set reporting timeframes. SCA is audited annually on these indicators. Where relevant, Operating Licence indicators have been incorporated into this plan.

The McClellan Inquiry called for a robust approach to establishing the condition of the drinking water catchments requiring biennial catchment audits. In the 2005 Audit of the Sydney Water Drinking Water Catchment (DEC), it was noted that there was significant scope to integrate the audit processes with both the natural resource management auditing framework currently being established by the Natural Resource Commission (NRC) and the existing NSW State of the Environment and State of the Parks Reporting processes. It was also suggested that the frequency of reporting should be extended so that changes in catchment state can be considered in the context of longer timeframes. These recommendations have also been considered in the development of indicators for this plan.

Two broad types of performance indicators are utilised in this plan:

1. Effort based indicators - has a particular action/ task been completed within the specified timeframe?
2. Condition based indicators - has the condition of a resource improved or declined over the reporting period?

Regular assessment of the results against these indicators can be used to feed into annual priorities and work program directions, to ensure that actions are adaptive and maintain progress towards the management targets.

An important consideration in assessing the achievement of the vision, goals and targets, is that Special Areas do not cover all of the hydrological catchment. Some influences on water quality will be beyond the control of actions within this plan. The plan aims to guide Special Areas management to maximise water quality and ecological outcomes that are possible through land management. Influences external to Special Areas may also be identified, which will require other mechanisms to control.

# 5 Management targets

## Water quality risk management

**Management target 1 - Management of Special Areas protects and maintains water quality at or above 2004 standards and continually addresses priority water quality risks.**

**Context:** Special Areas have been established for the protection of water quality. While the importance of protecting water quality is implicitly incorporated throughout the SASPoM, the actions below provide some specific guidance for managing the risks posed to water quality. Assessment of water quality improvement must be viewed as a long term trend, as individual years may show variance based on annual incidents such as fire, drought, etc. Where Special Areas do not cover the entire hydrological catchment of a water storage, external factors which are not addressed by this plan may influence water quality outcomes.

Actions	Completion	Lead agency
1.1. The SCA will investigate sites or hazard events in Special Areas identified in the WQRMF, the Catchment Audit and other sources and record the sites in a database. The SCA will also establish a mechanism for DEC input into the database	Annual	SCA
1.2. The SCA, in consultation with DEC, will develop strategies to address priority water quality risks identified in action 1.1, to be implemented by the SCA and/or DEC. These strategies will form the basis for priority actions in SCA and DEC annual program plans	Annual	SCA
1.3. The SCA will maintain a water quality monitoring program including physicochemical water quality and macroinvertebrate assemblage monitoring to measure and compare water quality in the storages, Special Areas and outer catchment to: <ul style="list-style-type: none"> <li>a) assess the function of Special Areas as a barrier for protection of water quality</li> <li>b) form the basis of strategies to improve the function of Special Areas as a barrier</li> </ul>	Year 1	SCA
1.4. The SCA will develop or review Bulk Raw Water Incident Response Plans for foreseeable incidents identified in the WQRMF (eg spillage, ash inputs, sewage contamination)	Year 2 Year 4	SCA
1.5. The SCA, in consultation with DEC, will develop a framework to guide activities in or in the vicinity of water storages in Special Areas, to ensure that these take place with consideration of water quality protection and maintenance of ecological integrity. This should take into consideration changing water levels within storages	Year 2	SCA
1.6. The SCA will collate available studies gain improved understanding of the links between land use, land condition, water quality and yield	Year 2	SCA

## Performance evaluation

Performance indicators	Actions	Reporting timeframe	Indicator origin (indicator type)
Water quality parameters against ADWG, ARMCANZ, ANZECC Guidelines for Freshwater and Marine Water Quality 2000	1.3	Annual	Operating Licence Indicator 1 Bulk Water Supply Agreement (Condition)
Trend of water quality and biological and ecological parameters (to be determined)	1.3	Every 4 years Baseline by 2011	Operating Licence Indicator 1 - macro invertebrates (Condition)
Number and type of water quality risk sites identified; percentage with rehabilitation plan developed; and percentage rehabilitated	1.1 1.2	Every 2 years	SASPoM (Effort)
Completion of tasks	1.4 1.5 1.6	Year 2 and 4 Year 2 Year 2	SASPoM (Effort)

## Ecosystem management

### Management target 2 - Maintain current high level of ecological integrity and have programs in place to address priority threats.

**Context:** Ecological integrity (see glossary) is recognised as a valuable contributor to the protection of water quality. The SASPOM 2001 recognised the lack of data on flora and fauna values in Special Areas, which led to the preparation of Special Areas Native Vegetation Mapping (2003) and Draft Terrestrial Vertebrate Fauna of the Greater Southern Sydney Region (2006). These reports will be used as the baseline of current standards for future assessment and monitoring of trends in ecological integrity in Special Areas. Assessment of trends in ecological integrity should be considered in light of natural variances, such as fire and short term climatic variation.

Actions	Completion	Lead agency
2.1. DEC and the SCA will protect ecological integrity within the Special Areas by developing a framework to apply the following principles in all work plans: <ul style="list-style-type: none"> <li>a) minimise disturbance of vegetation cover</li> <li>b) protect high conservation values as defined by the Special Areas Native Vegetation Mapping (2003) and Draft Terrestrial Vertebrate Fauna of the Greater Southern Sydney Region (2006)</li> <li>c) incorporate mitigation measures to avoid adverse environmental impacts</li> <li>d) restore disturbed sites in accordance with best practice<sup>4</sup></li> <li>e) identify and protect flora and fauna species which have cultural significance</li> <li>f) consider natural values at a landscape scale</li> <li>g) minimise edge effects</li> </ul>	Year 1	DEC
2.2. DEC and the SCA will assess the key recommendations made in the Special Areas Native Vegetation Mapping (2003) and Draft Terrestrial Vertebrate Fauna of the Greater Southern Sydney Region (2006) and other relevant studies, to develop and implement agreed management responses for each Special Area	Year 2 - assess  Annual - implement	SCA  Each on own land
2.3. DEC in consultation with the Blue Mountains World Heritage Institute, and the SCA where appropriate, will undertake actions to protect world heritage values in accordance with the Greater Blue Mountains World Heritage Area Strategic Plan	Annual	DEC
2.4. The DEC, in consultation with the SCA, will prioritise actions for Special Areas from Priority Action Statements (PAS) for threatened species and ecological communities as listed under the <i>Threatened Species Conservation Act 1995</i> , and develop strategies for their implementation	Annual	DEC

Actions	Completion	Lead agency
2.5. The SCA and DEC will continue their respective research programs for natural values in the Special Areas for the purpose of informing management operations and activities	Annual	Both
2.6. The SCA and DEC will establish a baseline survey program for aquatic species and aquatic ecological processes in waterways and storages, to contribute to understanding of the Special Areas' role as a 'barrier', identify links between aquatic ecological integrity and water quality, and as indicators of water quality in the Special Areas  This research will be undertaken in consultation with relevant research organisations such as eWater Cooperative Research Centre and NSW Fisheries. Findings will be analysed for their implications for land and water storage management strategies	Year 2	SCA
2.7. The SCA will identify and prioritise for protection vegetation communities playing a critical role in protecting water quality either by its location (eg riparian vegetation) or its nature (eg upland swamps, wetlands). SCA and DEC to implement appropriate protection on their own land	Year 3 - identify and prioritise  Annual - implement	SCA  Each on own land
2.8. The SCA and DEC, in collaboration with other organisations as appropriate, will continue a program of surveys and monitoring of flora and fauna to assess trends across Special Areas including: <ul style="list-style-type: none"> <li>a) the distribution, condition and composition of the flora and fauna and ecological processes</li> <li>b) the development of ecological performance assessment measures</li> <li>c) spatial and temporal databases of ecological information for all Special Areas</li> </ul> Findings will be considered for incorporation into DEC and SCA annual work programs in Special Areas	Annual  Year 3  Annual	DEC  DEC  Both
2.9. DEC and the SCA in consultation with relevant research organisations will examine the impacts of climate change on native vegetation associations and fauna habitats in Special Areas, the implications for water quality and quantity, and will develop appropriate management responses	Year 5	DEC

## Performance evaluation

Performance indicators	Actions	Reporting timeframe	Indicator origin (indicator type)
Extent (ha or abundance) and condition of threatened species and ecological communities	2.4	Every 4 years	Operating Licence - indicator 2 (Condition)
Extent, type and condition of vegetation cover (ha and percentage of total) in the catchment area (Special Area)	2.8 2.9	Every 4 years	Service Contract c)ii (Condition)
Percentage of critical vegetation communities identified, and percentage protected	2.7	Every 2 years	SASPoM (Effort)
Completion of tasks	2.1 2.2 2.3 2.4 2.5 2.6 2.8 2.9	Year 1 Year 2 and annual Annual Annual Annual Year 2 Annual and year 3 Year 5	SASPoM (Effort)

Performance indicators for this management target will be reviewed during the life of this plan and may be amended by agreement between DEC and SCA.

## Regulation of human activity

**Management target 3 - Access to the Special Areas is controlled to protect water quality and ecological integrity.**

**Context:** The following actions relate to access to Special Areas, both authorised and unauthorised in accordance with the SWCM (General) Regulations 2000 and the SCA's Human Access Management Program which is a component of the Healthy Catchment Program.

Actions	Completion	Lead agency
3.1 The SCA and DEC will continually identify illegal access points to Special Areas and minimise unauthorised access by reviewing and upgrading signage, maintaining gates, fences, barriers and active surveillance. Priority will be given to management responses for unauthorised access points that present risks to water quality within Special Areas	Quarterly	SCA
3.2 SCA and DEC will maintain a register of authorised and unauthorised access to Special Areas	Annual	SCA
3.3 The SCA will develop an authorised third party access protocol in consultation with DEC for approved operations with the Special Areas which includes details of appropriate training and induction	Year 1	SCA
3.4 The SCA in consultation with DEC will develop a recreational visitor management plan for all Schedule 2 lands and for existing authorised access points in Schedule 1 lands, with a focus on continually managing and reducing impacts on water quality, ecological integrity and cultural heritage	Year 3	SCA
3.5 The SCA and DEC will formalise the access arrangements with utility providers and mining operators, including updating licence and maintenance agreements	Year 5	SCA
3.6 The SCA, in consultation with DEC, will review and if necessary amend protocols with regard to authorising organisations and individuals with appropriate occupational health and safety standards, inductions and compliance with codes of practice, for work in Special Areas	Year 5	SCA

## Performance evaluation

Performance indicators	Actions	Reporting timeframe	Indicator origin (indicator type)
Number of penalty infringement notices, warning letters, prosecutions, clean-up notices and prevention notices issued under the act or regulations	3.1 3.2	Annual	SASPoM (Effort)
Identification of and response to illegal entry points	3.1	Annual	SASPoM (Effort)
Surveillance effort – hours per Special Area	3.1	Ongoing	Service Contract A2.2.23 (d) (Effort)
Completion of tasks	3.3 3.4 3.5 3.6	Year 1 Year 3 Year 5 Year 5	SASPoM (Effort)

## Fire management

### Management target 4 - Fire management within Special Areas maximises protection of water quality and ecosystem integrity.

**Context:** The primary obligation for land owners is to manage fire to protect life and property. DEC's role in fire management in the Special Areas is twofold: as a land manager for gazetted reserves, and as a fire authority under the meaning of the Rural Fires Act 1997. Fire plays an important part in the ecology and hydrology of the Sydney region, however too-frequent bushfire threatens drinking water storages and the ecological integrity of bush areas. Implementation of fire management activities is strongly influenced by weather conditions.

Actions	Completion	Lead agency
4.1. DEC and the SCA will continue to implement current reserve and Special Area fire management plans and strategies pending finalisation of the joint fire management policy (4.2) and the Special Areas Fire Management Operations Plan (4.3)	Annual	Both
4.2. The SCA and DEC will develop a joint fire management policy in line with legislative requirements which: <ul style="list-style-type: none"> <li>a) protects life and property</li> <li>b) protects water quality and ecological integrity as complementary priorities</li> <li>c) protects historic and Aboriginal heritage</li> <li>d) incorporates a cooperative approach with neighbouring landholders</li> <li>e) includes rapid response strategies</li> <li>f) provides strategic access for fire operations</li> <li>g) integrates DEC and SCA fire management policies</li> </ul>	Year 2	DEC

Actions	Completion	Lead agency
<p>4.3. DEC and the SCA will review the Fire Operations Plan for Warragamba, with reference to the proposed Joint Fire Management Policy and other studies, and expand the plan to incorporate all Special Areas. Consideration will be given to:</p> <ul style="list-style-type: none"> <li>a) management and response regimes to protect water quality</li> <li>b) development of plans for rehabilitation after fire</li> <li>c) practical fire boundaries which may need to extend beyond the Special Area and align to natural or existing features ie rivers and fire trails</li> <li>d) neighbouring DEC Fire Management Plans</li> <li>e) rationalisation of existing strategic fire access roads in consultation with the Rural Fire Service and Bushfire Committees so that roads no longer required are closed and the corridors rehabilitated</li> <li>f) monitoring responses to fire in the Special Areas by key indicator flora and fauna species and/or communities</li> </ul>	<p>Year 3 - review then Annual - implement</p>	<p>DEC</p>
<p>4.4. When updating existing Fire Management Plans within Special Areas, the SCA and DEC will review these plans to incorporate the Fire Management Policy (above) and results of post fire monitoring and research, including the Post Fire Study of the Fauna of the Woronora Plateau (2004) and Monitoring Change in Upland Swamps in Sydney's Water Catchments: the Roles of Fire and Rain (2006)</p>	<p>As required</p>	<p>Both</p>
<p>4.5. DEC and the SCA will continue to support and/or attend Bushfire Management Committees</p>	<p>As required</p>	<p>Both</p>
<p>4.6. The SCA and DEC will continue to monitor impacts of fire on water quality and ecological integrity, including:</p> <ul style="list-style-type: none"> <li>a) appropriate post-fire monitoring</li> <li>b) development of models to predict water quality impacts for fire events</li> <li>c) ecological responses to fire</li> <li>d) inclusion of information into spatial and temporal databases.</li> </ul> <p>Key recommendations should be incorporated into management responses</p>	<p>Annual</p>	<p>Both</p>

## Performance evaluation

Performance indicators	Actions	Reporting timeframe	Indicator origin (indicator type)
Number, extent and effectiveness of prescribed burns consistent with fire management policy and plans	4.1 4.2 4.3	Annual Annual after development	SASPoM (Effort)
Extent (ha and %) of vegetation communities within recommended fire frequency	4.1	Annual	SASPoM (Condition)
Number, extent and damage by wildfires using CRAFT program performance indicators	4.1 4.4	Annual	Service Contract g)i (Effort)
Extent and condition of fire management infrastructure (eg tracks, trails, towers etc)	4.2	Annual	Service Contract g) vii (Condition)
Completion of tasks	4.4	Annual	SASPoM (Effort)

## Asset construction and maintenance

**Management target 5 - Measures are in place to ensure that catchment impacts from asset construction and maintenance within the Special Areas are minimised.**

**Context:** The SCA and DEC maintain a number of assets in order to undertake essential functions. In addition, the Special Areas also contain third party built assets such as mining and telecommunications infrastructure. Management is required to ensure that the impacts of these assets and other licences and leases within the Special Areas on water quality, ecological integrity and cultural values are minimised.

Actions	Completion	Lead agency
5.1. In planning operations in Special Areas, the SCA and DEC will review the timing and extent of works proposed under the Annual Program Plan and works proposed by third parties to identify efficiencies and reduce risk of cumulative impacts within subcatchments	Annual	Both
5.2. The SCA and DEC, in collaboration with other agencies as required, will commission and collate monitoring information for mining in Special Areas, to better understand the impacts and promote the protection of Special Areas values to government decision makers	Annual	SCA
5.3. The SCA and DEC will develop and implement an agreed cyclic Road and Trails Maintenance Program to ensure roads and trails do not contribute to water pollution. This program will allow flexibility to address periodic damage caused by fire and flood, etc	Year 2 then annual	Develop - SCA Implement - DEC
5.4. DEC and SCA will investigate the impact of longwall mining in Special Areas on water quantity, water quality, ecological integrity and cultural heritage, and will analyse results to promote protection of Special Areas	Year 2 then annual	Both
5.5. DEC and the SCA will require all existing and proposed asset construction and maintenance operations (including access requirements) by the joint sponsors and third parties to meet best practice to protect water quality, ecological integrity and cultural heritage, and will selectively audit compliance (see also action 9.7)	Year 3	Both
5.6. The SCA will investigate the impacts of priority derelict mines within the Special Areas and develop appropriate responses and rehabilitation strategies with relevant organisations	Year 3	SCA
5.7. DEC and the SCA will develop and implement Soil Erosion Prevention Guidelines for natural areas, to be applied to all asset construction and maintenance within Special Areas. These guidelines will aim to minimise soil disturbance, include soil erosion mitigation techniques, control measures and management protocols and also address priority events identified in the WQRMF	Year 4	DEC

## Performance evaluation

Performance indicators	Actions	Reporting timeframe	Indicator origin (indicator type)
Extent and type of soil erosion (ha by type of erosion) in the Special Areas	5.7	Year 4	Operating Licence Indicator 2 (Condition)
Length of roads/ trails/ tracks assessed for erosion hazard and Length of roads/ trails/ tracks maintained and repaired	5.3	Annual	Service Contract b)i and b)ii (Effort)
Number of operations audited and compliant with EIA and water quality protection	5.1	Annual	SASPoM (Effort)
Completion of tasks	5.2 5.3 5.4 5.5 5.6 5.7	Year 4 Annual Year 2 Year 3 Year 3 Year 4	SASPoM (Effort)

## Pest and weed management

**Management target 6 - Measures are in place to control impacts of priority pest and weed species on water quality and ecological integrity.**

**Context:** Pests and weeds have been identified as critical threats to ecological integrity and the conservation values of Special Areas and in some instances pose a risk to water quality.

Actions	Completion	Lead agency
6.1. DEC and the SCA will implement existing pest and weed management plans including the Warragamba Pest and Weed Management Plan 2005-2009 and the draft SCA Vertebrate Pest Management Plan, until finalisation of 6.2	Annual	DEC
6.2. DEC and the SCA will develop and implement Operational Pest and Weed Management Plans to cover all Special Areas, using the Warragamba Pest and Weed Management Plan 2005-2009 as a model. These new plans will cover a five year period and in addition, consider the following: <ul style="list-style-type: none"> <li>a) existing Operational Pest and Weed Management Plans</li> <li>b) current and potential weed and pest distributions and threats (including aquatic species)</li> <li>c) adopt a "threat to values" approach to identifying and prioritising infestations to be targeted for active management</li> <li>d) prioritise weeds identified in the <i>Noxious Weeds Act 1993</i>, Weeds of National Significance and animals listed in Animal Control Orders under the <i>Rural Lands Protection Act 1998</i></li> <li>e) a consistent management approach across Special Areas and DEC managed lands within or adjacent to Special Areas</li> <li>f) bush regeneration, site rehabilitation and re-establishment of vigorous native vegetation communities as an efficient and sustainable long term weed control technique</li> <li>g) co-operative approaches to pest and weed management on adjoining lands for those species which threaten assets within the catchments and public assets on adjacent tenures</li> <li>h) integrated pest management principles (both interspecies and intraspecies relationships)</li> <li>i) provision to include new identified pest and weed incursions</li> <li>j) an appropriate geographic scale</li> </ul>	Year 3	DEC

## Performance evaluation

Performance indicators	Actions	Reporting timeframe	Indicator origin (indicator type)
Extent (ha or abundance) of pest species for each Special Area	6.1 6.2	Every 4 years	Operating Licence - Indicator 2 (Condition)
Impact, including risk (likelihood and consequence) of weed and pest species in each Special Area	6.1 6.2	Every 4 years	Service Contract f)ii and e)ii (Condition)
Completion of tasks	6.1 6.2	Annual Annual - after year 3	SASPoM (Effort)

## Aboriginal and historic cultural heritage

**Management target 7 - The cultural values of the Special Areas are recognised and conserved appropriately.**

**Context:** The cultural values within the Special Areas are significant for Aboriginal and Non-Indigenous communities. Parts of Special Areas have been protected as water supply catchments for over 100 years and are relatively undisturbed. This has led to rich and well-preserved examples of Aboriginal heritage which is rare in the Sydney Region. Aboriginal cultural values also include natural values such as flora, fauna and landforms.

Actions	Completion	Lead agency
7.1. The SCA and DEC will maintain and update as appropriate respective historic heritage databases including Section 170 registers under the <i>Heritage Act 1977</i> to identify heritage items listed in Special Areas	Year 1	Both
7.2. DEC will record and register Aboriginal sites and places within the Special Areas in the Aboriginal Heritage Information Management System subject to relevant consultation and approvals	Annual	DEC
7.3. DEC, in consultation with the SCA and Aboriginal Communities, will develop and implement an Aboriginal Heritage Strategy for the protection and conservation of Aboriginal cultural values in Special Areas	Year 2	DEC
7.4. DEC and the SCA will investigate options for involving Aboriginal people in decision making process for cultural heritage management within Special Areas	Year 2	DEC
7.5. DEC will develop a Historic Heritage Strategy in consultation with relevant stakeholders including the SCA and the Heritage Council of NSW for the protection and conservation of significant heritage sites. The Strategy will prioritise the sites according to levels of significance using the Criteria for Listing on the State Heritage Register and the Heritage Office's Assessing Heritage Significance guidelines (2001)	Year 2	DEC
7.6. The SCA, in consultation with DEC, will establish a Managed Access Program for communities with significant connection to places within Special Areas, in compliance with the SWCM (General) Regulation 2000	Year 3	SCA

## Performance evaluation

Performance indicators	Actions	Reporting timeframe	Indicator origin (indicator type)
Number of heritage sites identified, protected and/or conserved under the Aboriginal Heritage Strategy	7.2 7.3	Annual Year 2	Service Contract j)ii (Condition)
Number of heritage sites identified, protected and/or conserved under the Historic Heritage Strategy	7.1 7.5	Year 1 Year 2	Service Contract j)ii j)iii (Condition)
Completion of tasks	7.3 7.4 7.5 7.6	Year 2 Year 2 Year 2 Year 3	SASPoM (Effort)

## Communications

### Management target 8 - Water quality risks and ecological integrity issues in Special Areas are actively promoted to internal and external stakeholders.

**Context:** Internal and inter-agency communications will be critical in achieving the targets of this plan. Communication with other government agencies, authorities, private land owners in Special Areas and local government is required to resolve issues beyond the joint agencies' responsibilities. Targeted communications to build support and recognition of the role of the Special Areas will assist in the area functioning as a barrier.

Actions	Completion	Lead agency
8.1. The SCA and DEC will develop and implement an inter- and intra- agency communications strategy to identify priorities for understanding and management of the Special Areas	Annual	SCA (inter) Both (intra)
8.2. The SCA and DEC will jointly report on the implementation of this plan, including achievement of actions, performance measures and a review of the effectiveness of the plan in accordance with the Operating Licence	Annual	SCA
8.3. The SCA and DEC will continue to adhere to the Charter of Public Disclosure and accountability for the implementation of this plan	As required	SCA
8.4. The SCA and DEC will: <ul style="list-style-type: none"> <li>a) identify and communicate land management issues potentially impacting on water quality, natural and cultural values of Special Areas that require other agencies to resolve</li> <li>b) promote the requirements of the SASPoM in all submissions made to public authorities on proposals that may impact Special Areas</li> </ul>	As required	Both
8.5. The SCA and DEC will maintain and share access to databases with updated information on Special Areas	Annual	Both
8.6. The SCA and DEC will communicate with local councils and managers of private land in and adjacent to Special Areas, to: <ul style="list-style-type: none"> <li>a) promote best practice land management to avoid adverse impacts on water quality and ecological integrity</li> <li>b) coordinate land management activities which benefit from a joint approach</li> <li>c) share information on catchment threats and response strategies relevant to specific stakeholders</li> </ul>	Annual	Both

### Performance evaluation

Performance indicators	Actions	Reporting timeframe	Indicator origin (indicator type)
Number of communication activities conducted	8.4 8.6	Annual	Operating Licence (Effort)
Completion of tasks	8.1 8.2 8.3 8.5	Annual	SASPoM (Effort)

## Policy and planning

### Management target 9 - Strategies are in place to ensure that activities and land use within Special Areas do not degrade water quality and ecological integrity.

**Context:** Government is moving towards an integrated policy for private and protected lands within Sydney's drinking water catchments. Neutral or beneficial effect on water quality is the accepted standard. In Special Areas, SCA concurrence is required for leases, licences, easements and rights of way issued by DEC under the NPW Act.

Actions	Completion	Lead agency
9.1. The SCA, in consultation with DEC, will from time to time, consider the need to recommend rationalising Special Area boundaries	As required	SCA
9.2. DEC and the SCA will develop and implement their respective processes for Part 5 environmental impact assessment and communication between the two agencies	Annual	DEC
9.3. The SCA and DEC will only approve activities, grant or renew leases, licences and other interests in their respective lands (or Crown Lands) within Special Areas where it can be demonstrated that the proposed land use will minimise risks to human health, protect the quality and quantity of water in rivers, streams, storages and groundwater and will prevent degradation of the environment. Particular consideration will be given to threats identified in the WQRMF and to Key Threatening Processes	As required	Both
9.4. Where existing developments within the Special Areas have significant water quality or quantity impacts which cannot be effectively managed, the SCA will seek appropriate corrective action	As required	SCA
9.5. The SCA and DEC will coordinate inholdings strategies for the improved management and / or acquisition of properties within Special Areas that present threats to water quality or ecological integrity	Year 1	Both
9.6. DEC and the SCA will review the network of Crown roads (both formed and unformed) in the Special Areas and formalise the closure of Crown roads which are not required	Year 2	Both on own land
9.7. The SCA and DEC will audit a selection of activities by the joint sponsors, contractors and third parties, for compliance with licence and environmental impact assessment conditions and water quality protection measures	Annual	SCA
9.8. DEC will assess reserve plans of Management to ensure consistency with the goals and strategies for Special Areas as outlined in this plan	Year 3	DEC

### Performance evaluation

Performance indicators	Actions	Reporting timeframe	Indicator origin (indicator type)
Number, type and conditions of new licences and leases	9.3	Annual	SASPoM (Effort)
Percentage of compliance with SCA or external environmental audits	9.7	Annual	Service Contract k)iii (Condition)
Completion of tasks	9.1 9.2 9.4 9.5 9.6 9.8	As required Annual As required Year 1 Year 2 Year 3	SASPoM (Effort)

# Glossary

<b>ADWG</b>	<p><b>Australian Drinking Water Guidelines (2004)</b></p> <p>The ADWG have been developed by the National Health and Medical Research Council (NHMRC) in collaboration with the Natural Resource Management Ministerial Council (NRMMC). The ADWG incorporates the “Framework for the Management of Drinking Water Quality” and provides the Australian community and the water supply industry with guidance on what constitutes good quality drinking water</p>
<b>ANZECC</b>	<b>Australian and New Zealand Environment and Conservation Council</b>
<b>ARMCANZ</b>	<b>Agricultural and Resource Management Council of Australia and New Zealand</b>
<b>Biodiversity</b>	The variability among living organisms from all sources (including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part) and includes diversity within and between species and the diversity of ecosystems
<b>CMA</b>	<p><b>Catchment Management Authority</b></p> <p>CMAs coordinate natural resource management. They are responsible for involving regional communities in management of the NRM issues facing their region, and are the primary means for the delivery of funding from the NSW and Commonwealth Governments to help land managers improve and restore the natural resources of the State. The Special Areas are located in Sydney Metro, Hawkesbury-Nepean and Southern Rivers CMAs</p>
<b>Conservation</b>	<p>Conservation means all the processes and actions of looking after a place so as to retain its natural and cultural significance and always includes protection, maintenance and monitoring</p> <p>Conservation may, according to circumstance, also include regeneration, restoration, enhancement, reinstatement, preservation or modification, or a combination of more than one of these</p> <p>Conservation includes conserving natural processes of change (as opposed to artificially accelerated changes). Source: Australian Natural Heritage Charter, 2nd Edition, 2002, Commonwealth of Australia, ISBN 0 642 26420 1</p>
<b>CRAFT</b>	Catchment Remote Area Firefighting Team
<b>Cultural significance</b>	<p>Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, natural values, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups</p> <p>The term cultural significance is synonymous with heritage significance and cultural heritage value. Source: Burra Charter (The Australia ICOMOS Charter for Places of Public Significance) ICOMOS - International Council on Monuments and Sites. NSW National Trust website</p>

<b>Degradation</b>	Any significant decline in the quality of natural resources or natural integrity of a place or the viability of an ecosystem, caused directly or indirectly by human activities
<b>Ecological integrity</b>	Ecological integrity refers to the stability and protection of ecosystems and ecosystem functions/processes, the biotic and abiotic components, the terrestrial and aquatic components, the flora and fauna components and can include the Aboriginal cultural interest in natural values
<b>Ecosystem</b>	A dynamic complex of organisms and their non-living environment, interacting as a functional unit
<b>eWater CRC</b>	<b>eWater Cooperative Research Centre (combination of CRCCH and CRCFE)</b>
<b>GBMWA</b>	<b>Greater Blue Mountains World Heritage Area</b>
<b>Habitat</b>	The structural environments where an organism lives for all or part of its life, including environments once occupied (continuously, periodically or occasionally) by an organism or group of organisms, and into which organisms of that kind have the potential to be reinstated
<b>HCP</b>	<b>Healthy Catchments Program</b>  A SCA 'whole of catchment' implementation framework for a wide range of land management strategies aimed at protecting water quality and catchment health in Sydney's hydrological catchments
<b>ILUA</b>	<b>Indigenous Land Use Agreement</b>  An ILUA is a voluntary agreement between a native title group and others about the use and management of land and waters
<b>Inholdings</b>	Lands in Special Areas which are not owned or managed by DEC or the SCA, whether or not these lands adjoin or are surrounded by SCA or DEC land
<b>Indigenous species</b>	A species that occurs at a place within its historically known natural range and that forms part of the natural biodiversity of a place
<b>Introduced species</b>	A translocated or alien species occurring at a place outside its known natural range as a result of intentional or accidental dispersal
<b>IPART</b>	<b>Independent Pricing and Regulatory Tribunal of New South Wales</b>  IPART is the independent economic regulator for NSW, and oversees regulation in the water, gas, electricity and transport industries
<b>JMA</b>	<b>Joint Management Agreement</b>  Joint Management Agreement for The Drinking Water Catchments Special Areas between Sydney Catchment Authority and Department of Environment and Conservation. The JMA serves as the basis for building cooperative relationships between the SCA and DEC in fulfilling their respective statutory responsibilities to protect water quality and the environment within the Special Areas

<b>Monitoring</b>	Ongoing review, evaluation and assessment to detect changes in the natural integrity of a place, with reference to a baseline condition
<b>Natural values</b>	<ul style="list-style-type: none"> <li>- natural features consisting of physical and biological formations or groups of such formations</li> <li>- geological and physiographical formations and precisely delineated areas that constitute the habitat of indigenous species of animals and plants</li> <li>- natural sites or precisely-delineated natural areas from the point of view of science, conservation or natural beauty</li> </ul>
<b>Operating Licence</b>	Operating Licence for the Sydney Catchment Authority under the <i>Sydney Water Catchment Management Act 1998</i>
<b>Place</b>	A geographically defined site or area with associated natural features of biodiversity, geodiversity and ecological processes
<b>Protection</b>	Taking care of a place by managing impacts to ensure that natural and cultural significance is retained
<b>Regeneration</b>	The natural recovery of natural integrity following disturbance or degradation
<b>Restoration</b>	Returning existing habitats to a known past state or to an approximation of the natural condition by repairing degradation, by removing introduced species or by reinstatement
<b>Service Contract</b>	2005 Service Contract for the provision of Special Areas land management and CRAFT services
<b>WQRMF</b>	SCA's Water Quality Risk Management Framework





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