KINCHEGA NATIONAL PARK

PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

December 1999

This plan of management was adopted by the Minister for the Environment on 1st December 1999.

Acknowledgments: This plan was prepared by staff of the Field Services Division of the Service in close consultation with staff of Broken Hill District, Western Region, Environmental Survey and Research Branch and the Cultural Heritage Division of Head Office. The assistance of the Broken Hill Advisory Committee and all those who made submissions to the exhibited draft plan is gratefully acknowledged.

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FOREWORD

Kinchega National Park is located 113 km south-east of Broken Hill adjacent to the town of Menindee. It covers 44 182 hectares extending southwards from Menindee for 62 kilometres along the Darling River.

The park is one of four large national parks in the west Darling country of NSW promoted as important tourist destinations by the National Parks and Wildlife Service. The others are Mutawintji, Sturt and Mungo, and each offers the visitor dramatically different landscapes typical of inland Australia.

Kinchega is the only large conservation area in NSW on the Darling River and includes the only substantial representation within the national park system of river red gums and shrublands of the rare plant *Acacia carneorum* as well as significant examples of bluebush shrubland. The lake system supports important bird rookeries while the land supports the four large species of macropod and other fauna typical of inland NSW.

Sites of the former Aboriginal occupation are abundant in the park and important historical relics of the pastoral industry, including the old Kinchega woolshed and the ruins of the homestead, remain on the park.

Kinchega National Park is also important because it is easily accessible from Broken Hill by sealed road and is therefore a popular local recreation area. Recreational use of Kinchega National Park is concentrated around Lakes Menindee and Cawndilla, two of the largest lakes of the Menindee Lakes Storage Scheme, and along the Darling River.

This plan of management establishes the scheme of operations for Kinchega National Park. In accordance with the provisions of Section 75 of the National Parks and Wildlife Act 1974 this plan of management is hereby adopted.

Bob Debus
Minister for the Environment

CONTENTS

1. INTRODUCTION

The National Parks and Wildlife Act, 1974 requires that a plan of management be prepared for each national park, nature reserve and historic site. A plan of management is a legal document which outlines how the area will be managed

The procedure for the adoption of a plan of management is specified in the Act and involves five stages:

* The Director-General gives notice that a plan of management has been prepared.

* The plan is placed on public exhibition for at least one month and any person may make representations about the plan.

* The plan and copies of all representations are referred to the National Parks and Wildlife Advisory Council for consideration.

* The Director-General submits the plan of management together with any comments and suggestions of the Council to the Minister.

* The Minister may adopt the plan with or without amendments after considering the comments of the Advisory Council or may refer the plan back to the Director-General and Council for further consideration before adoption.

Kinchega National Park was previously subject to a plan of management which was adopted in 1972. A new plan of management for the park was placed on public exhibition for 3 months in 1996 and attracted 8 submissions which raised 11 issues. All comments received were referred to the National Parks and Wildlife Advisory Council for its consideration and advice. The comments and advice of the Advisory Council were in turn considered by the Minister before adopting this plan of management. When this new plan of management was adopted, the Minister cancelled the 1972 plan.

This plan of management refers to lands reserved under the National Parks and Wildlife Act, 1974. Certain other lands managed as part of the national park are held as a permissive occupancy from the Department of Land and Water Conservation and are conditional on the Department maintaining a number of works, rights of access, and the flooding and draining of Lakes Menindee and Cawndilla. The permissive occupancy is also subject to the National Parks and Wildlife Act and Regulations. The map in this plan of management shows the permissive occupancy within the external boundaries of the park.

Further information on Kinchega National Park and on this plan of management can be obtained from the park office near the woolshed in Kinchega National Park or the Broken Hill District Office, 183 Argent Street, Broken Hill (08) 8088 5933.

2. MANAGEMENT CONTEXT

2.1 NATIONAL PARKS IN NEW SOUTH WALES

The national park concept was introduced into Australia through the establishment of Royal National Park in 1879.

For the purposes of preparing plans of management, the NSW National Parks and Wildlife Service has adopted the International Union for the Conservation of Nature and Natural Resources (IUCN) Guidelines for Protected Areas which defines a national park as a:

> "natural area of land/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area, and (c) provide a foundation for the spiritual, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible" (IUCN, 1994).

National parks are a part of the regional pattern of land use. The management of a national park aims at minimising disturbance to natural and cultural resources. Other land uses (e.g. agriculture, forestry and mining) are distinguished by an acceptance or encouragement of environmental modification. National parks, therefore, provide for only a limited part of the range of land uses in any region.

2.2 KINCHEGA NATIONAL PARK

2.2.1 Location and Regional Context

Kinchega National Park is located 113 km south-east of Broken Hill adjacent to the town of Menindee. It covers 44,182 hectares extending southwards from Menindee for approximately 62 kilometres along the Darling River. Lake Menindee and Lake Cawndilla, two of the largest lakes of the Menindee Lakes Storage Scheme, lie within the park (refer map, page 2).

The park was established as a result of co-operation between the mining companies operating in Broken Hill and the State Government. In 1965 moves were made to secure Western Lands Leases within the Kars and Kinchega Stations, which for almost a century had been associated with the Hughes family for reservation as a park. Kinchega National Park was formally established by the National Parks and Wildlife Act on 1st October 1967.

Kinchega National Park is one of four large national parks in the west Darling country of NSW. The others are Mutawintji, Sturt and Mungo and together they are promoted as important tourist destinations; each offering dramatically different landscapes typical of inland Australia. Kinchega National Park is also important

because it is the closest to the city of Broken Hill and is accessible from Broken Hill by sealed road and is therefore a popular local recreation area.

2.2.2 Importance of Kinchega National Park

Kinchega National Park is the only national park in NSW on the Darling River. There are a number of small nature reserves on the Darling and on other inland rivers but Kinchega National Park is the only reserve that samples a number of land units typical of western NSW including a large area of floodplain, overflow lakes and channels, lunettes, sand plains and dunes. As such it is a significant example of semi-arid landscapes and their associated plants and animals. This park is dramatically different from the other major parks in the region; Sturt and Mutawintji National Parks include large areas of stony downs and Mutawintji also consists in part of arid ranges. Mungo National Park is a fossil lake system; long since dry. Each of these four areas is important in its own right but considered together and in association with other protected lands in western New South Wales, they are part of a highly significant nature conservation system.

The area of Kinchega National Park had been grazed for over one hundred years prior to its reservation as a national park in 1967. During that period native animals and their habitats suffered serious decline for a number of reasons. In addition, eleven species of introduced animals have reached the region. This process of environmental modification is still proceeding apace in the lands around Kinchega where clearing and ploughing for cultivation has begun to the south and north-east of the park.

The park is a viable example of the natural landscapes and associated plant and animal communities typical of the lower Darling River in NSW. The park is also a significant conservation reserve for two plant species listed as vulnerable under the Threatened Species Conservation Act and protected only in Kinchega National Park: *Acacia carneorum* occurs on the sand dunes in the south-west of the park as a shrubland and *Solanum karsense* occurs in association with ephemeral overflow lakes and swamps and has reserve protection only within the park. The long term survival of both these plants depends on appropriate management within the park, particularly the allocation of an appropriate water regime to maintain the *S. karsense* communities.

The wetlands of the Menindee Lakes Scheme provide habitat for a range of waterfowl. Over thirty species groups of waterfowl have been recorded on Lakes Menindee and Cawndilla, including vulnerable species such as the freckled duck and migratory waders protected under international agreements. These agreements are:

- The Agreement between the Government of Australia and the Government of Japan for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment (JAMBA);

- The Agreement between the Peoples Republic of China and the Government of Australia for the Protection of Migratory Birds and their Environment (CAMBA); and

- The Convention on Wetlands of International Importance Especially as Waterfowl Habitat (the Ramsar Convention) which was adopted in 1971 and signed by Australia in 1974. Countries which are parties to this convention undertake to implement policies that guarantee the wise and sustainable use of wetlands.

There are a large number of Aboriginal sites in the park and adjacent areas including burials, open sites, carved trees, stone caches and ceremonial sites. One site in neighbouring Tandou is as old as those studied in the Mungo National Park area i.e. 20-40 000 years old. Although none of this age have yet been discovered in Kinchega National Park, a site 15 000 years old has been located in the park. Most sites in the park are probably less than 5 000 years old and mainly represent the last 1 000 years of occupation.

This array of sites indicates the changing pattern of Aboriginal occupation over the past tens of thousand of years and reveals increasing concentrations of Aboriginal people along the Darling River as the Willandra Lakes system to the south-east dried up following the end of the last ice age in south-eastern Australia. The Kinchega area was probably a preferred site because of the combination of the Darling River and its overflow lakes and channels. These sites are of great significance to the local Aboriginal community.

Kinchega National Park has also been the site of a number of palaeontological discoveries. The lunettes associated with Lakes Menindee and Cawndilla have revealed a number of extinct animal remains, including:

Procoptodon goliah or giant kangaroo, the largest extinct kangaroo;

Diprotodon optalum, a large wombat-like animal;

Thylacinus cyenocephalus or marsupial tiger or wolf;

Thylacaleo carnifex or marsupial lion;

Sarcophilus laniarius, a giant devil;

Dasycercus cristicarda or mulgara, a modern animal no longer present in the park; and

Larsiorhinus latifrons , the hairy nosed wombat, also now missing from the park.

These Pleistocene and locally extinct animals are of considerable palaeontological importance.

European settlement of the Darling River commenced in the late 1840s and resulted in the taking up of huge pastoral holdings in the second half of the nineteenth century. One of the earliest of these was Kinchega Station. The site of the old Kinchega homestead was closer to the river than the later one, reflecting the importance of the river for transport and communications in the years before railways and roads. Many historic structures and relics of these early days are still to be found on the park.

Kinchega National Park holds a special place in the national park system of western NSW. It is the oldest national park in the west Darling country, is readily accessible from Broken Hill and is a popular destination for tourists in the west Darling country. Therefore, it has a primary role of promoting, amongst its visitors, an awareness of the landscapes, plant and animal communities and cultural resources of the whole of western New South Wales.

In summary, Kinchega National Park is an important conservation area because of its:

Regional conservation value. It is the only large reserve in western NSW which is located on the Darling River and which samples viable areas of the landforms and plant and animal communities associated with a major inland river. Kinchega National Park contains the only significant conservation area for two vulnerable plant species.

The Menindee Lakes Scheme supports regionally important waterfowl rookeries, while ephemeral lakes and swamps within the park are locally important for many waterbird species.

Local conservation value. It is potentially a large area of regenerating native plant and animal communities surrounded by lands which are being developed for intensive land uses, or lands where adequate regeneration of native vegetation is being inhibited by introduced grazing species.

Palaeontological value. The remains of a number of large but now extinct late Pleistocene marsupials have been discovered on the park. These are important not only for the light they throw on past conditions at Kinchega but can also be used for comparative studies with other palaeontological sites in the west Darling area; for example in the Willandra Lakes Region.

Regional archaeological value. The archaeological sites of Kinchega National Park provide opportunities for comparison with other important west Darling archaeological locations such as the Willandra Lakes.

Local Aboriginal value. Kinchega National Park contains large numbers of Aboriginal sites of many different kinds. In particular, burials are common and are of special interest to the local Aboriginal community.

Local historic value. The park contains structures and relics of early pastoral history.

Regional environmental education value. As a popular national park in the west Darling area it offers opportunities for promoting, amongst visitors to the park, an increased awareness and understanding of the importance of conservation of the natural and cultural resources of the west Darling area.

Regional tourism value. Kinchega National Park is a popular destination for tourists to Broken Hill, and travellers using the road between Ivanhoe and Broken Hill. It also offers opportunities for promoting other national parks and tourist destinations in the region.

Local tourism value. As a large area of public land with both river and lake water frontages which is readily accessible to the population of Broken Hill and its surrounding small settlements and rural communities, the park is a popular destination for the local community.

3. OBJECTIVES OF MANAGEMENT

The following general objectives relate to the management of national parks in NSW:

* The protection and preservation of the scenic and natural features.

* The conservation of wildlife.

* The maintenance of natural processes as far as possible.

* The protection of Aboriginal sites and historic resources.

* The provision of appropriate use, understanding and enjoyment of the park.

In respect of Kinchega National Park, the following specific objectives also apply:

* Management of Kinchega National Park as part of a system of conservation areas in far western NSW.

* Protection and where necessary restoration of the park as a sample of the Darling River land system of south-western NSW and its associated plant and animal communities.

* Provision of increased benefits to native plant and animal communities, and particularly those which are recognised as threatened, by the appropriate management of the waters flowing through the park.

* Respect for the culture and interests of the Aboriginal community.

* The protection and interpretation of palaeontological sites.

* Development of a program aimed at promoting regeneration of populations of long-lived plant species on the park.

* Provision of recreation facilities along the river and lake foreshores.

* Encouragement of a wider range of recreational and educational activities in the park by the further development of the walking track system to promote a better understanding of the natural and cultural features of the west Darling and Kinchega National Park in particular.

* Development of programs which promote an awareness by visitors of the landscapes, plant and animal communities and cultural resources of the whole west Darling country of New South Wales.

* Promotion of an awareness of the environmental significance and diversity of Kinchega National Park.

* Interpretation of previous Aboriginal occupation of the area.

* Interpretation of the park's historic resources as part of the pastoral history of western NSW, with the emphasis on the role of the river in the settlement of the west Darling country.

* The encouragement of scientific and educational enquiry into the natural and cultural resources of the park.

4. POLICIES AND FRAMEWORK FOR MANAGEMENT

This section contains the policies and framework for the management of Kinchega National Park together with relevant background information. Policies are summarised under the following headings:

* Nature Conservation;
* Cultural Heritage; and
* Use of the Area.

The policies established in this plan of management will provide the framework for management consistent with anticipated resources available to the Service and anticipated community trends over the next five to ten years.

The actions identified are those to which priority will be given in the foreseeable future. Other management actions may be developed over the life span of this plan of management consistent with the policies set out in the plan.

4.1 NATURE CONSERVATION

4.1.1 Landforms, Soils and Vegetation

Kinchega National Park is the only national park in NSW on the Darling River. It is a typical landscape of the west Darling country and comprises the river and associated overflow lakes, small basins and drainage channels superimposed on extensive areas of red sand plain.

The principal features of the park are the large natural saucer-shaped overflow depressions of Lake Menindee and Lake Cawndilla. These overflow lakes are subject to artificial and often substantial rises and falls in water levels induced by the Menindee Lakes Storage Scheme. About half of the bed of Lake Menindee and all of the bed of Lake Cawndilla are held as a permissive occupancy by the National Parks and Wildlife Service from the Department of Land and Water Conservation and are managed as part of the national park. The Department of Land and Water Conservation, which is responsible for the Menindee Lakes Scheme retains the right to flood and to drain Lakes Menindee and Cawndilla as part of its operations. In addition the Department has the option to borrow soil from the vicinity of the lakes for foreshore restoration and repair works in the event of damage. As a result of the operation of the scheme, Lakes Menindee and Cawndilla are generally the last to fill and the first to empty during storage of water by the Department. They are therefore drier than other lakes in the scheme.

Solanum karsense, listed as vulnerable under the Threatened Species Conservation Act, is restricted to small ephemeral lakes (e.g. Emu Lake) and swamps in the park. This plant requires periodic inundation and subsequent dry periods. The same applies for the numerous invertebrate fauna that occur on these areas and the waterbirds that feed on these invertebrates. The water level in these areas is generally regulated by the Department of Land and Water Conservation as part of

the Menindee Lakes Scheme. Water levels in ephemeral lakes, such as Emu Lake, are also dependent upon floodwaters moving down the Darling River.

The dominant plant species on the foreshores of the overflow lakes are blue rod (*Stemodia florulenta*) and sandhill canegrass (*Zygochloa paradoxa*).

The Darling River and its major effluents are characterised by an open forest of river red gum (*Eucalyptus camaldulensis*) on heavy-textured cracking clay. These areas are flooded on average once every five years.

Since white settlement, arid and semi arid Australia have been subject to a changed grazing regime. This has involved the reduction or elimination of medium sized mammals combined with an increase in large kangaroos and the introduction of several grazing species, notably rabbits, sheep, horses, cattle and goats. Scientific evidence suggests that recruitment of a number of native plant species is not taking place under this grazing regime.

Of particular concern is the status of purple-wood wattle (*Acacia carneorum*), listed as vulnerable under the Threatened Species Conservation Act. Purple-wood wattle primarily occurs on red sand dunes, alluvial soils and occasionally on level sandy areas in association with rosewood, belah, black bluebush and very occasionally with Murray pine. Purple-wood wattle rarely sets seed but regenerates by suckering during autumn or spring each one or two years, possibly in response to average or above average rainfall.

The research conducted in western NSW and South Australia, including research in Kinchega National Park, concludes that grazing pressure, notably from rabbits is the primary cause of the decline in purple-wood wattle. Rabbits contribute further to the destruction of purple-wood wattle by undermining their root and trunk systems by construction of warrens. Kangaroos, whilst they do exert some grazing pressure on the community, have not been identified as a primary cause for the plants decline. The eradication of rabbits is essential for the long term survival of purple-wood wattle.

The flat black soil floodplain extends from the river and is characterised by an open woodland of black box (*E. largiflorens*) with coolabah (*E. coolabah*) on the billabong (oxbow) banks. The transition of flood plain to red sandhill landscape is characterised by friable clays wherein water erosion causes deep fissures or cracks.

The remainder of Kinchega National Park comprises red sand dunes and sand plains characterised by light textured red sand and loams. The dunes are of a coarse sandy texture and susceptible to wind erosion. The surface of the sand plains is hard and calcareous and the edges often scalded. Tongues of red sand have been blown across the grey soils of the floodplain while some sand ridges have been isolated by flood action.

Belah (*Casuarina pauper*), rosewood (*Heterodendron oleifolium*), wattles (*Acacia carneorum, A. ligulata*), hopbush (*Dodonea attenuata*) and turpentine (*Eremophila sturtii*) dominate the dune crests and slopes, while milgee (*Acacia oswaldii*) and

sugarwood (*Myoporum platycarpum*) are widespread but scattered. Prickly wattle (*Acacia victoriae*), nelia (*Acacia loderi*), needlewood (*Hakea leucoptera*) and black bluebush (*Maireana pyramidata*) grow on the sand plains. After rains, ephemeral plants germinate rapidly and cover large areas of the park in brilliant colour for two months or longer. Regeneration of long-lived plants is also cued to rainfall. However, grazing by introduced rabbits and goats prevent successful regeneration of a number of plant communities.

Lunettes occur on the eastern and north-eastern sides of the lakes where the prevailing Pleistocene westerly winds threw up white-to-yellow crescent-shaped sand and clay dunes on the lake margins. Bluebush (*Maireana pyramidata*) and sandhill canegrass dominate these dunes which are very susceptible to turbulent airflow and hence windblown soil erosion.

Landcare and total catchment management provide frameworks within which the Service can work with neighbours and other land management authorities to achieve cleaner water, less soil erosion, improved vegetation cover, the maintenance of ecological processes and a balanced and healthier environment. They also provide a focus to balance conservation needs and development pressures and encourage a more aware and involved community. The National Parks and Wildlife Service will continue to support total catchment management committees and land care groups established in the district.

Policies

* Management will aim to promote the long term conservation of vegetation communities and associated native animals.

* Close liaison will be maintained with the Department of Land and Water Conservation to promote the management of Lakes Menindee and Cawndilla and their associated works in a manner sympathetic to the objectives of management for Kinchega National Park.

* The Service will continue to support the principles of Landcare and total catchment management, and will liaise with neighbours and other authorities to maintain and improve the land and water quality of the park.

* The landforms of Kinchega National Park and their associated vegetation communities will be interpreted to visitors to the park

* Regeneration of native plant communities will be encouraged by maintaining an active rabbit control program.

* Vehicle tracks and roads which are subject to unacceptable levels of erosion will be re-routed where practicable.

* Vehicles will be restricted to formed roads and tracks

* No additional development will be undertaken on lunettes and red sandhills which are highly susceptible to erosion.

* Research into the conservation of native plants will be encouraged.

4.1.2 Native Animals

Old records show that twenty-eight species of native mammals, not including bats, occurred in the general area of Kinchega National Park early in the nineteenth century. European settlement led to a dramatic decline in the number of species in the west Darling country. Recent fauna surveys in Kinchega National Park have recorded nine species of amphibians, including one species of turtle; thirty species of lizard and eight species of snakes; two hundred and two species of birds; one monotreme and sixteen species of native mammals (including bats).

The sand plains of Kinchega are the home of the emu (*Dromaius novaehollandiae*), the red kangaroo (*Macropus rufus*), the western grey kangaroo (*Macropus fuliginosus*) and the euro (*Macropus robustus*). The timbered areas of the park provide shelter for the eastern grey kangaroo (*Macropus giganteus*), the brush-tailed possum (*Trichosurus vulpecula*) and many species of birds. The knob-tail gecko (*Nephrurus levis*) is found in the sandhill canegrass.

The Wildlife Atlas of NSW records the following small mammals as still occurring in Kinchega National park; the kultarr (*Antechinomys laniger*), paucident planigale (*Planigale gilesi*) and narrow-nosed planigale (*Planigale tenuirostris*). The kultarr is listed as endangered under the Threatened Species Conservation Act.

In addition to the larger animals noted above, there are a number of smaller mammals that frequent, in particular, the black box woodlands and the hopbush shrublands. The smaller mammals have suffered the most species decline. Included in the species now absent from Kinchega National Park and rare or extinct elsewhere in Australia are the numbat (*Myrmecobius fasciatus*), bilby (*Macrotis lagotis*), brush-tailed bettong (*Bettongia pencillata*), boodie (*Bettongia leseur*) and brown hare-wallaby (*Largorchestes leporides*). The western native quoll (*Dasyurus geoffroii*) is also locally extinct. The remains of giant Pleistocene animals have also been found in the park.

Lake Menindee, Lake Cawndilla and the associated drainage channels constitute an important waterfowl feeding and breeding refuge in the Western Division of NSW. Large rookeries of cormorants, egrets and pelicans along with extended breeding of spoonbills, Australian darters and white ibis have been recorded therein. Other species of interest include the freckled duck (*Stictonetta naevosa*), peregrine falcon (*Falco peregrinus*), white-breasted seaeagle (*Haliaectus leucogaster*) and Major Mitchell cockatoo (*Cacatua leadbeateri*). The major cormorant and egret rookery in the southern section of Menindee Lake is of high conservation value. Fluctuating water levels in the lakes and drainage channels can significantly affect waterfowl populations and often stimulates breeding activity.

The national park also includes part of New Lake, a small ephemeral lake at the terminus of Stephens Creek. This creek and lake are a separate land system to that of the Menindee Lakes and provide important habitat, when filled, for a suite of waterfowl and micro-invertebrates.

A boundary fence is maintained in co-operation with neighbours along the western and southern edges of the park. This fence, together with Lake Menindee to the north and the Darling River to the east, provides a physical deterrent to the movement of native animals, particularly the emu, and introduced animals. There was initially concern that the fence would keep kangaroo and emu numbers artificially high and that they might retard the regenerating vegetation. However, the numbers of kangaroos appeared to fluctuate according to food supply and over-population without significant detriment to the vegetation communities. Kangaroos also frequently jumped the fence and created holes in the mesh at the base of the fence.

The boundary fence of the park currently skirts around the foreshore of New Lake excluding the area from the fenced in section of the park. To better protect the habitat values of New Lake, it is proposed to liaise with the park neighbour regarding water and stock management.

Policies

* All native animals will be protected.

* The habitats of locally rare and threatened species will be maintained as far as possible.

* The bird rookeries will be protected.

* Research into the conservation of native animals will be encouraged.

* A stock proof boundary fence will continue to be maintained in conjunction with neighbours.

Action

* Management options to protect New Lake will be investigated in consultation with the neighbouring landowner.

4.1.3 Water Management

The native plants and animals of the Darling River floodplain and associated wetlands and overflow lakes within Kinchega National Park are dependent upon periodic flooding and subsequent drying for their continued survival. Key water requirements for these communities concern the periodicity of flooding, the length of time an area is flooded and the length of time an area is dry. Extended flooding will cause loss of species as will repeated flooding at very short frequencies. A dry

period after flooding is required to allow plants to complete their life cycle, for nutrients to be recycled and for populations of reptiles and small mammals such as planigales to recover. Wetlands should remain inundated continuously for at least four to six months to ensure appropriate conditions for plant and waterbird succession, and rapid drainage is not consistent with maintenance of this succession.

Management of waters stored within the external boundaries of Kinchega National Park as part of the Menindee Lakes Scheme is the responsibility of the NSW Department of Land and Water Conservation. The lands subject to this scheme are not reserved as national park but are held as a permissive occupancy from the Department and are conditional on the Department maintaining a number of works, rights of access, and the flooding and draining of Lakes Menindee and Cawndilla.

Critical changes to the flooding and drying regime that have occurred as a result of the Menindee Lakes Scheme include:

- Lakes Menindee, Cawndilla and Speculation are now more or less permanently flooded. In particular this has resulted in the loss of the vulnerable plant *Solanum karsense* and the death of extensive stands of black box *(E. largiflorens)*;

- flooding of other sections of Kinchega National Park above RL 60.45m (relative level 60.45 metres or 204 feet) has regularly inundated plant communities that would otherwise have only been flooded by occasional major flood events. These include communities of *Maireana pyramidata* and *Acacia loderi*;

- repeated long duration flooding of small ephemeral lakes which fill off Lakes Menindee and Cawndilla when these lakes are maintained at high capacity. This regime has a major impact on waterbird populations which require alternate flooding and drying;

- flooding of Tandou Creek from the south (or downstream) direction. Natural flow of Tandou Creek would flood from the Darling River (to the east) but backup waters from the Cawndilla Channel have increased the frequency and duration of flooding and resulted in the death of black box communities throughout the south-eastern corner of the park; and

- some small ephemeral lakes such as Emu Lake and floodplains which would normally be flooded from the Darling River are no longer regularly flooded by moderate or minor flood events.

Populations of *Solanum karsense* occur in overflow lakes which fill either directly from the Cawndilla Channel or from Tandou Creek at the southern end of Kinchega National Park. These populations are at risk because of the changed hydrological regime along the Cawndilla Channel and Tandou Creek. The long term survival of *S. karsense* requires specific water management, notably periodic flooding but not

continuous flooding and a dry period of at least six months after floodwaters have drained or evaporated.

In recent years, erosion has led to the discovery of extensive Aboriginal occupation and burial sites near the lakes. The rapidly changing water levels have increased the likelihood that more sites will be exposed.

The Menindee Lakes Scheme has a significant environmental impact upon the hydrology, Aboriginal heritage and native plant and animal communities of the park. Accordingly the Service will seek the co-operation of the Department of Land and Water Conservation in preparing a water management plan which aims to manage the waters stored within the national park and flowing through the park to provide increased benefits to wildlife, particularly those which are recognised as vulnerable.

Policies

* The following objectives to improve the environmental values of Kinchega National Park will be addressed in a water management plan for the park:

  - to maintain the water level of Lakes Menindee and Cawndilla at or below RL 60.45m (204 feet) to permit revegetation of the foreshores;

  - to ensure that ephemeral lakes that fill from Lakes Menindee and Cawndilla are not flooded for excessive periods;

  - in the event that water is artificially drained from the lakes, to ensure that water remains in the pools and is allowed to evaporate naturally;

  - a strategy to allow water flooding the drainage patterns of the ephemeral lakes and blackbox depressions to the east of the Cawndilla Channel to drain away;

  - to ensure that water from the Cawndilla Channel does not break the levee and flood adjacent areas of the park;

  - to control and monitor water levels in the Cawndilla Channel to ensure that ephemeral lakes and black box swamps which contain *Solanum karsense* are not subject to excessive flooding;

  - to prevent water backing up into Tandou Creek from the south of the national park;

  - to provide for flooding of at least four to six months duration to allow succession of invertebrates and plant life cycles and allow waterbirds to reproduce successfully;

  - to provide that areas remain dry for at least three months after flooding has receded; and

- to provide a minimum flood frequency in areas that are the habitat for *S karsense* of six months.

Action

* A water management plan will be prepared in association with the Department of Land and Water Conservation to provide an ecologically and culturally sensitive basis for managing the lakes and creeks within the park.

4.1.4 Non Native Plants and Animals

Large weed infestations occur on the lake shores and watercouses after flood waters recede, the most noticeable being noogoora burr (*Xanthium occidentale*), stinkwort (*Dittricha graveolens*), medics (*Medicago* spp.) and castor oil plant (*Ricinus communis*). Potentially invasive weeds such as boneseed (*Chrysanthemoides monilifera*) and African boxthorn (*Lycium ferocissimum*) occur in isolated patches. Other ephemeral weeds are widespread across the park after favourable rains, the most notable being hops (*Acetosa vesicaria*), wild turnip (*Brassica tournefortii*), several grasses (*Hordeum leporinum, Bromus rubens, Lophochloa pumila*) and melons (*Citillus lanatus, Cucumus myriocarpus*).

The following weeds are of highest priority for control in Kinchega National Park:

Boneseed: Isolated plants establish themselves along the Darling River following heavy rains or flooding, and in places along the foreshores of Lake Menindee.

Noogoora Burr and Bathurst Burr: Both occur in moderate to high densities in the park along watercourses, floodplains, around dams and ground tanks. High soil reserves of dormant seed of both species readily germinate after rain making this weed difficult to control.

African Box Thorn: Occurs as scattered plants along watercourses and around old homestead and camp sites. African box thorn also exhibits long time dormancy in soil banks.

Patersons Curse: Occurs in moderate to major infestations along all major roads and management tracks and in the vicinity of camp grounds. It is an aggressive invader of all areas following autumn and spring rains. High soil reserves of seed remain viable for extended periods which makes control of large areas of infestation difficult.

Castor Oil Plant: Occurs in scattered plants around the foreshores of Lake Menindee and Lake Cawndilla.

Elephant Grass: Occurs as scattered plants along the foreshores of Lake Menindee and the banks of the Darling River. This plant forms dense thickets that can out-compete native plants.

Onion Weed: Minor infestations are found along public access roads and management tracks, and around the Kinchega airstrip and the Kinchega woolshed.

The Noxious Weeds Act 1993 places an obligation upon public authorities to control noxious weeds on land that it occupies to the extent necessary to prevent such weeds spreading to adjoining lands.

Non-native animals found in the park include rabbits, pigs, goats, foxes and cats. Of major concern is the damage to regenerating native shrubs and herbs being caused by rabbits, goats and pigs. Cattle are restricted by the park boundary fence but occasionally enter the park from the north-east when the lake level is low and also cause damage to vegetation and archaeological sites. In addition, a stock route was incorporated in the park when it was reserved, and cattle are still occasionally moved through the park.

The introduction of the rabbit calicivirus, together with ripping and fumigating of burrows, has resulted in a significant reduction in the number of rabbits in the park and an increase in the recruitment of rare plants (especially purple wood wattle).

The following animals are of highest priority for control in Kinchega National Park:

Rabbits: large populations of rabbits on Kinchega National Park have been responsible for the decline of many native plant communities and contributed to soil erosion. Rabbits also compete with native animals for food.

Goats: Minor occurrences of goats are found in Kinchega National Park.

Foxes: Occur in moderate to large numbers throughout the park.

Feral Cats: Are present on Kinchega National Park in moderate densities.

Feral Pigs: Are found in moderate numbers on Kinchega National Park.

Policies

* Non-native plants and animals will be controlled and where possible eliminated.

* Highest priority will be given to the control of rabbits within and near stands of purple-wood wattle. Control of foxes will also be given priority.

* Control programs will emphasise the protection of Aboriginal and non-Aboriginal cultural sites and use techniques which have minimum negative impact on native plant and animal communities.

* Environments currently free of introduced plant species that may be susceptible to invasion by weeds will be monitored and control/ eradication measures will be implemented in these areas if invasion by weeds occurs.

* Weed and feral animal control programs will be carried out in conjunction with adjoining landholders and the Rural Lands Protection Board where appropriate.

* Weed control around water edges will be undertaken in co-operation with the Department of Land and Water Conservation.

* The Service will continue to support community programs such as the Menindee Landcare Group in the control of boneseed both on and off the national park.

* Domestic stock and horses found on the park will be removed or impounded.

* Stock travelling through the park will be restricted to existing roads and tracks and will be subject to any requirements of the District Manager.

Actions

* Pest control programs will continue to be implemented in accordance with the above policies and the NPWS Broken Hill District Pest Management Strategy.

4.1.5 Fire Management

Fire is regarded by the NSW National Parks and Wildlife Service as a natural process, one of the abiotic factors of the Australian environment to which native plant and animal communities have become adapted. The correct management of fire is essential to avoid the extinction of native plant and animal species.

The incidence of fire in Kinchega National Park is low. The majority of fires have started as a result of camp fires escaping from camp sites along the Darling River, particularly during the first six years after the park was established in 1967. Permanent campsites and fireplaces were then provided and the incidence of fire has reduced. The camping areas along the Darling, however, remain the greatest potential source of fire in the park.

In the rest of the park only two fires have been recorded since 1967. Lightning strikes started a fire near the Darling River in 1972 which burnt south and was contained within the park. In December 1976 a fire started near Emu Lake from causes which are not known and burnt across the dry lake. This fire was suppressed on the south side of the lake. Wildfires have never been recorded on the sandplain country in Kinchega, which are dominated by black bluebush and other plants which have a low flammability.

Outside the national park, fire records are very poor. It is known, however that in 1931 extensive areas of the Menindee-Ivanhoe area were burnt.

Semi-arid rangelands have an unpredictable fire frequency pattern. The vegetation fails to produce sufficient fuel to carry fire except in response to above average

rainfall. In western NSW anecdotal evidence suggests that ‘big floods’ occur on average twenty to twenty-two years and it has been suggested that the potential for wildfires corresponds with these rainfall events. Large scale fires occurred in the 1930s, 1950s and 1970s following above average rains.

Above average rainfall promotes the growth of grasses which increases fuel continuity. This potential is highest in the floodplains adjacent to the Darling River where fuel can reach high levels and where a potential source of ignition is present in the camp sites.

In an average or below average rainfall year there is not usually sufficient fuel for a fire to develop to the extent where life or property are endangered or where plant and animal communities are significantly at risk.

The National Parks and Wildlife Service is a fire authority under the Rural Fires Act 1997and is responsible for all fire management in Kinchega National Park. This includes the control and suppression of fires and fuel management programs to protect life and property in the event of fire.

Kinchega National Park is located within Central Darling Shire. The Service is represented on the Central Darling Shire District Bush Fire Committee which is responsible for shire-wide bush fire management plans required under the Rural Fires Act. Bush fire management plans contain both an operations plan and a risk management plan.

A draft fire management plan for Kinchega National Park is currently being prepared by the Service and will be placed on public exhibition. The fire management plan will detail measures for protecting life and property, including the park management trail system which is used primarily for fire management purposes. An important element of this system of fire management trails is the perimeter management trails.

The plan will also establish the ecologically desirable fire frequencies for the major plant communities of the park. If these frequencies are exceeded, the decline and extinction of plant species can be expected. The following general considerations have been identified as a basis for fire management within Kinchega National Park:

- all stands of purple-wood wattle should be protected from fire. Fruit production in the wattle is rare, and regeneration is by root suckers. These are very susceptible to damage and destruction by disturbance such as grazing and it is reasonable to expect that fire could damage or destroy regenerating suckers in a similar manner;

- the park includes a number of other fire sensitive species such as bladder saltbush and bluebush. Adults of these species are killed by fire and regeneration from seed is slow. If fire recurs before black bluebush has regenerated, a the population of this species will be significantly reduced;

- increased fire frequency will lead to increased regeneration of eucalypts and shrub species such as turpentine and hopbush; and

- spring fires enhance shrub regeneration and autumn fires enhance the regeneration of herbaceous species.

Policies

* Fire management in Kinchega National Park will aim to:

  - protect human life;

  - maintain species and habitat diversity, avoid local extinctions of native plant and animal species and enhance the conservation of endangered and vulnerable species;

  - prevent fire moving off Kinchega National Park onto neighbouring properties; and

  - prevent fire moving into Kinchega National Park from neighbouring properties.

* The role and management of fire within Kinchega National Park will be promoted in the community, particularly amongst neighbours.

* Records of fire occurrence will be maintained with particular emphasis on accurate mapping and recording of the extent, frequency, seasonality and intensity of fire.

Actions

* A fire management plan will be finalised for Kinchega National Park. The plan will be placed on public exhibition by June 2000 and public comment invited prior to its approval by the Service.

* The Service will continue to participate in the preparation and revision of District Bush Fire Management Plans.

4.2 CULTURAL HERITAGE

Kinchega National Park has a variety of outstanding cultural features. These include Aboriginal sites which go back to the Pleistocene, as well as many others which belong to later times.

The area of Kinchega National Park has been occupied by indigenous people for many thousands of years. Evidence of Aboriginal occupation dates back to around 25,000 BP. At the time of European contact the area was occupied by the Paakantji people, with the explorers Mitchell (1834) and Sturt (1844) reporting groups averaging 60 people living in the area. Aboriginal people continued to live in the

area until around the mid 20th century, with an Aboriginal camp being located near the original Kinchega Homestead.

Over 220 Aboriginal sites have been recorded on the park and this is certainly only a small percentage of the total. Most of the sites are located close to the lakes which would have provided a source of food. The Aboriginal sites include camps and middens with freshwater mussel shells. Hearths, animal bone and yabbie remains may be associated with these camps and middens. Palaeontologically important remains are often associated with Aboriginal occupation sites. Stone artefacts are also present. These mainly consist of waste flakes derived from a variety of materials. Other common artefacts are grinding slabs, cores and flake tools. Cooking pits filled with burnt clay are another common feature. Aboriginal burials are also numerous in certain areas of the park and Aboriginal scarred trees occur along the river.

The long association of Aboriginal people with the area and the presence of occupation sites and burials mean that Kinchega National Park is of continuing importance to Aboriginal people. The local Aboriginal community has been actively involved the management of Aboriginal sites on the park. Of continuing concern however is the protection of remains associated with the lake system, which are affected by changing water levels in the lakes which exposes and covers sites. Proposed developments and more radical changes in water levels have the potential to significantly impact on sites.

Historic sites dating after European contact are also prominent. These include the remains of European settlements, riverboat traffic and the pastoral industry.

Following the early explorers (Mitchell in 1834, Sturt in 1844 and Burke and Wills in 1860-61), pastoralists moved westwards and Kinchega Station was among the first large pastoral leases to be taken up west of the Darling River in the 1850s and 1860s. Remains of the pastoral industry at Kinchega include the woolshed which was built of local timber during 1872. Many artefacts of the shearing and pastoral activities undertaken at Kinchega are displayed in and around the restored woolshed, which is listed on the NSW Heritage Register. Of the old Kinchega homestead, estimated to have been built during the 1850s of locally kilned bricks, only the chimney, foundations and remains of the garden plantings can be seen today. The old Kinchega cemetery, the boiler of the paddlesteamer "Providence" which blew up in 1872, a regulator on the homestead billabong (built 1926) and the remains of an open pipeline built to carry water from the river to the homestead are also included as part of an interpretative program.

Most of the Aboriginal sites and many of the European ones are not readily identifiable to the majority of park visitors and can be protected by careful location of roads and visitor facilities. Some sites are close to the main visitor use areas and are suitable for interpretation.

Kinchega National Park is very important to Aboriginal people. Kinchega National Park falls within the area of the Menindee Local Aboriginal Land Council and the

Western Regional Aboriginal Land Council. The advice of these Land Councils will be sought to determine which sites are suitable for interpretation.

Policies

* All Aboriginal sites will be protected.

* Where appropriate liaison will be established by Service archaeologists with the Australian Museum for the recovery of fossil animal bones as they become exposed by erosion of the lunettes.

* All works in Kinchega National Park will be preceded by an Aboriginal site survey of both the development site and its immediate surrounds

* Archaeological research will be encouraged under Service research licences.

* The Menindee Local Aboriginal Land Council and the Western Regional Aboriginal Land Council will be consulted on all matters relating to Aboriginal site management.

* Suitable Aboriginal sites will be interpreted to visitors to the park.

* All historic structures and places within Kinchega National Park will be conserved in accordance with the provisions of the Burra Charter

* Conservation plans will be prepared for all historic places before any major changes are made to any building or to its precinct.

* All development works will be preceded by an archaeological survey.

* The history of the area will be interpreted to park visitors with emphasis on the dependence on the river of both Aboriginal and European communities

Actions

* Recording and monitoring of Aboriginal sites will be continued.

* A program of recording and protecting Aboriginal burials will be established in conjunction with the Land Councils.

* A plan for the interpretation of Aboriginal Heritage to the public will be developed in consultation with the Aboriginal community.

* A conservation plan will be prepared for the precincts of the homestead ruins and woolshed before development, stabilisation or interpretation.

* The homestead ruins will be interpreted in accordance with the recommendations of the conservation plan.

* Documentary surveys will be undertaken on the pastoral and riverboat history of the park and the history of the period of early contact between the Aboriginal people and the early European settlers.

4.3 USE OF THE AREA

Kinchega National Park will be managed to ensure that its use, whether by the general public, special interest groups, Service managers or other authorities, is appropriate and conforms with the National Parks and Wildlife Act and the management objectives and policies of this plan.

The major categories of use which may be appropriate within Service areas are:

* promotion of natural and cultural heritage conservation and environmental education;

* recreation in a natural setting; and

* management operations by the Service and other authorities.

The extent to which these categories of use are appropriate to Kinchega National Park are indicated below.

4.3.1 Promotion of the Park

Interpretative information and displays will emphasise the role of the Murray-Darling river system in the geological and cultural history of Australia. Important aspects of this latter theme are the history of Aboriginal occupation, pastoralism, Aboriginal contact and riverboats.

An office and basic visitor centre is located in the shearers quarters. It is proposed to extend and upgrade the visitors centre at this location. To complement improved visitor centre facilities at the shearers quarters it is also proposed to upgrade the system of walking tracks in the park. The improved walking track system will include additional tracks, information bays at carparks and track heads and on route interpretation by signs and other means. An information shelter will be provided at the main park entrance near Menindee. Additional interpretation will be provided at the Cawndilla camping area as well as at campsite 2 on the start of the River Drive.

The shearers quarters near the woolshed were formerly used as accommodation for scientists and students involved in research projects. The shearers quarters have been adapted for public accommodation, although they are still available for booking by research groups. Research projects aimed at conserving the native plants and animals of the park will continue to be encouraged.

Policies

* Interpretation will emphasise:
  - the geology of the Murray-Darling Basin;
  - the native plant and animal communities of the park;
  - Aboriginal culture;
  - pastoral and Aboriginal contact; and
  - the history of riverboats on the Darling and Murray rivers.

* Aboriginal heritage will be interpreted in accordance with the plan outlined in section 4.2.

Actions

* The interpretation display in the visitors centre will be upgraded and integrated with other interpretation programs.

* Short interpretive walks which provide information on the natural and cultural heritage of the park (including Aboriginal occupation during the pastoral period and on-going Aboriginal associations with the park) will be provided.

* Additional interpretation will be provided through information bays at carparks and track heads, and on route interpretation by signs and other means.

* Additional interpretation will be provided at:
  - the park entrance near Menindee;
  - the Cawndilla camping area;
  - campsite 2 at the start of the River Drive; and
  - Kinchega homestead (relating to Aboriginal occupation and European contact).

4.3.2 Recreation Opportunities

Recreation use of Kinchega National Park is concentrated around the lakes and along the Darling River. Highest visitation from both locals and tourists is over the Easter and the milder school holiday periods. Bird watching is a favoured past time, especially when the lakes are partly filled and water bird populations are high. No power boating is permitted on the lakes within the park.

Some informal sites have been provided along the eastern foreshores of the lakes to cater for visitors. These include picnic areas, wildlife observation points and a small camping area between Cawndilla Lake and Eurobilli Lake.

Basic camping areas have also been constructed along the river. These campsites are in the pattern of a string of 35 numbered sites along 20 kilometres of river and are outlined on the diagram on the previous page. Garbage disposal facilities are provided for visitors but alternative methods of garbage disposal to replace camp site garbage bins are currently being considered in an attempt to reduce the maintenance commitment to the camping sites.

Many of these camping areas are showing evidence of heavy use from tents and cars and damage from the gathering of firewood. There is also some crowding of day visitors and campers at some sites. These sites will be redeveloped and defined picnic, camping and parking areas and additional toilets will be provided. They will not however be significantly upgraded as a higher standard of accommodation is provided in Menindee and at the shearers quarters in the park.

A wet weather and group camping area will also be provided on the northern side of Emu Lake billabong.

Most visitor use of Kinchega National Park is vehicle based. The park road system includes a road called the Old Pooncarie Road which is used as an alternative route by tourists and which also gives access to the neighbouring property of "Tandou". This name is confusing because the Old Pooncarie Road was along the river bank not the present route, and it implies that the road is excluded from the park. The park road system also includes that section of the river road between Menindee and the old homestead billabong, and a series of loop tracks connecting the river road to the Old Pooncarie Road via the woolshed and along the shore of the lakes. These roads provide access to the main recreational areas of the park and to sites of natural and cultural interest.

The park road system will be maintained primarily to provide for park visitor access and appreciation, and for use by the Service for park management purposes. Some roads require upgrading to increase their trafficability after rain and their safety for public use. Significant changes to road routes and/or the pattern of public vehicle access within the park will be subject to an environmental assessment and, where necessary, public exhibition of an amendment to this plan of management.

The roads between campsite 15 and the Old Pooncarie Road and between Menindee Lake and Eurobilli Lake on the Lakes Drive are no longer used and

provide no access to facilities or features of interest. Some campsites at Cawndilla and on the southern end of the River Drive at high water height will need to be closed to better protect Aboriginal sites.

A system of management tracks exists within the park which is promoted as part of the walking track system.

Walking is permitted anywhere in the park, although most of this activity is concentrated along the river and lake foreshores. Short nature trails and walks to historic sites and viewpoints may be provided. Any new walking tracks will be subject to an environmental assessment and public exhibition of an amendment to this plan of management. Pack camping is permitted but walkers are requested to register at the office.

Policies

- The main concentration of visitor facilities and access will continue to be located along the river and the lake foreshores and in the vicinity the woolshed complex.

- The remainder of the park will be managed as a natural area with no day use or overnight facilities other than roads, car parking, walking tracks and signs.

- Campfires will only be permitted in designated fireplaces.

- Bush camping will be allowed on a permit basis and will be subject to gas or fuel stoves only (wood fires will not be permitted).

- Power boats will continue to be prohibited on those sections of the lakes which are within the park.

Actions

* The camping areas along the river will be redeveloped and picnic areas provided.

* A wet weather and group camping area will also be provided on the northern side of Emu Lake billabong.

* The roads between campsite 15 and the Old Pooncarie Road and between Menindee Lake and Eurobilli Lake will be closed and rehabilitated.

* The park roads shown on the map, page 2, will be maintained to a level suitable for park visitor access and appreciation, and where necessary upgraded to improve trafficability and safety.

* The renaming of Old Pooncarie Road (for example, to Cawndilla Drive) to indicate it is a park road will be investigated.

* Signposting will be improved at intersections and information bays will be provided to guide visitors to the visitors centre and other sites of interest.

* The safety and amenity of the park entrance at the Menindee outlet regulator will be improved.

* Wood fuel will be provided for barbecues in those areas where firewood collection is having an unacceptable impact.

* All gates other than the Tandou, Menindee and main entrance gates will be locked and duplicate keys given to immediate neighbours and the local bush fire brigade under specific access agreements.

4.3.3 Management Operations

The remoteness of Kinchega National Park from the District Office and services in Broken Hill necessitates on-site staff and facilities. There is a residence and workshop on the park near the woolshed complex and one house for staff in Menindee.

An airstrip is located near the workshop for management purposes. Additional management support is provided from the District office located at Broken Hill.

A management track system exists within the park to service the Department of Land and Water Conservation facilities, windmills and pipelines used by neighbours, the boundary fence and is used for fire management, pest control and research operations by the Service. These tracks break the park into a number of management blocks. The management track system is shown on the map, page 2.

These and other roads are maintained by the Service using sand and gravel from the park. Material for road maintenance will continue to be taken from the park in accordance with an approved extraction plan and environmental assessment procedures. Extraction pits will be rehabilitated when no longer required.

The Department of Land and Water Conservation maintains a number of works in the park associated with the Menindee Lakes Storage Scheme. These include regulators at the outlets from Lake Menindee and Lake Cawndilla and at the southern end of the Cawndilla Channel. The Department requires access to these works and to certain other sites for the operation of the scheme.

Policies

* A residence and workshop will be maintained in the vicinity of the woolshed and staff accommodation maintained in Menindee.

* The existing airstrip will be maintained for Service and other authorised uses.

* The management track system outlined on the map will be maintained.

* Management tracks will be gated and locked to prevent unauthorised use.

* Close liaison will be maintained with the Department of Land and Water Conservation concerning the operation of the Menindee Lakes Storage Scheme within the external boundaries of the park.

* Extraction pits will be rehabilitated when no longer required for management purposes.

Action

* A gravel / sand extraction and rehabilitation plan will be prepared.

5. PLAN IMPLEMENTATION

This plan of management is part of the system of management developed by the National Parks and Wildlife Service. The system includes the National Parks and Wildlife Act, the Service's Corporate Strategy, management policies and established recreation and conservation philosophy. It also includes regional and district strategic planning.

The orderly implementation of this plan of management will be undertaken within the annual programs of the Service's Broken Hill District. Priorities will be determined during the development of these programs and will be subject to regional priorities and to funding, staff and any special requirements of the Director-General or Minister.

District programs are subject to ongoing review within which works and other activities carried out at Kinchega National Park will be evaluated in relation to objectives laid down in this plan.

The environmental impact of all development proposals will continue to be assessed at all stages of the development and any necessary investigations undertaken in accordance with established environmental assessment procedures.

In accordance with section 81 (1) of the National Parks and Wildlife Act, this plan of management shall be carried out and given effect to. In addition, and in accordance with Section 81 (4) of the National Parks and Wildlife Act, no operations shall be undertaken in relation to Kinchega National Park unless those operations are in accordance with this plan. If after adequate investigation operations not included in the plan are found to be justified, this plan may be amended in accordance with Section 75 of the Act.

To assist in implementing this plan of management, the management proposals outlined in the plan have been summarised in the following table.

	Plan Reference
HIGH PRIORITY	
Undertake pest control programs	4.1.4
Prepare water management plan in association with Department of Land and Water Conservation	4.1.3
Prepare fire management plan	4.1.5
Assist in development of District Bush Fire Management Plans	4.1.5
Continue Aboriginal site recording	4.2
Prepare interpretation plan	4.3.1

Preparation of a conservation plans for the homestead ruins and woolshed	4.2
Redevelopment of river and lake edge campsites	4.3.2
Close and rehabilitate unnecessary roads	4.3.2
Provide additional signposting along roads	4.3.2
Improve safety and amenity of regulator area	4.3.2
Gate non-public roads and tracks	4.3.2
Prepare gravel/sand extraction plan	4.3.3
MEDIUM PRIORITY	
Continue program of recording and protecting Aboriginal burials	4.2
Provide additional interpretation at the old homestead	4.2
Upgrade visitor centre at the shearers quarters	4.3.1
Investigate management options to protect New Lake	4.1.2
Develop Emu Lake camping area	4.3.2
LOW PRIORITY	
Undertake further historic research	4.2
Provide additional short interpretive walks	4.3.1
Provide other interpretive information and signs	4.3.1

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