



B

Recommendations



2 General recommendations

The River Red Gum Forests Investigation area is a much loved and popular place. Both visitors and residents enjoy its many aesthetic, cultural and economic values and uses. However many of these values are under serious threat from both changing and ongoing patterns of water and land use. Indeed, some economic uses of the River Red Gum forests, such as grazing and forestry, are already being affected particularly in the face of climate change.

Public land occupies some 269,000 hectares of the total investigation area (1,220,000 hectares) and comprises some 22 percent of the former extent of River Red Gum forests and related ecosystems. As these ecosystems are poorly represented on public land and under significant threat, VEAC recommends that a substantial area be protected within the conservation reserve system. The enhanced conservation reserve system will protect threatened ecosystems, flora and fauna in accordance with many national and state biodiversity goals. At the same time recreation and tourism uses will continue and have the potential to form the basis for renewed economic prosperity in the region.

VEAC's public land use recommendations are underpinned by a series of environmental water recommendations. The evidence is strong that, without environmental water flows to the River Red Gum floodplains, the forests will be lost over time. The Murray-Darling Basin river systems are under extreme stress during the current extended drought, and if flows are not restored to forest and wetland systems, they will suffer irreparable damage and will be permanently lost for future generations.

The recommended conservation reserve system consolidates and improves public land connections between habitats. Public land use categories have been simplified; notably the existing River Murray Reserve which has been incorporated into adjoining categories, reducing potential boundary management issues. The River Murray corridor is identified as a critical environmental element of this floodplain forest system and the majority of public land in this zone is recommended to be protected in a series of national parks and regional parks, particularly the proposed Murray River Park (recommendation B3).

In some places visitor use needs to be managed and coordinated in a more effective manner, especially along the rivers and during the peak periods of long weekends and school holidays. If some activities continue in their current pattern and visitor numbers continue to grow, natural values will inevitably decline with diminished appeal for visitors. Dispersed camping, horseriding, four-wheel driving and other popular activities will still be available throughout all major land use categories in the investigation area. Management planning will be undertaken by the land managers in consultation with the community to provide for biodiversity protection and sustainable recreation activities.

In Victoria, Indigenous involvement in public land management is minimal compared to other Australian states and territories. In the past, there have been few mechanisms for Traditional Owners to engage with public land planning and management. Involvement in decision making is almost non-existent. VEAC recommends a range of mechanisms to increase the involvement of Traditional Owners in public land use planning and management. Such increased involvement benefits both land managers and Indigenous people and is a significant practical mechanism towards the reconciliation of traditional Indigenous cultural values and practices with the needs and interests of the wider Australian community.

Implementation of the recommendations

VEAC acknowledges that its recommendations for the investigation area raise a series of complex implementation issues that will need to be addressed. While implementation of approved recommendations falls outside VEAC's role, Council notes that the wide range of implementation issues in the River Red Gum Forests Investigation are similar to the types of issues raised during the Box-Ironbark Forests and Woodlands Investigation conducted by the Environment Conservation Council and presented to the Government in 2001.

To facilitate implementation of approved recommendations, VEAC recommends that Government establish an implementation team to engage with industry, local government, stakeholder groups, licence-holders and communities. This team could be modelled on the project team established by the former Department of Natural Resources and Environment to help implement the approved Box-Ironbark recommendations. The Box-Ironbark project team addressed implementation issues, communicated recommendations, advised on implementation processes, and generally responded rapidly to community and individual concerns (within the scope of the recommendations and Government decisions). The project team also managed a timber industry adjustment process, and worked with the community to identify detailed firewood access plans and recreation plans.

The key implementation issues for the River Red Gum Forests Investigation area are:

- adjustment for the timber industry in keeping with similar adjustments made elsewhere in Victoria
- establishment of new parks, including legislation, staffing and resourcing
- planning of domestic firewood access and streamlined licence processes that provide for firewood supply, particularly at the local level
- prioritising and managing the phase-out of grazing on public land water frontages
- developing processes for Indigenous co-management of national and other parks and enhanced roles for Indigenous people in the management of parks including legislation and resourcing

- detailed management planning for parks (including a recreation and camping strategy) to provide clarity around biodiversity protection and recreation uses and sites, and ensuring continued access for dispersed camping
- development of statutory procedures and consultations for seasonal bans on solid fuel fires
- determining the process or processes for addressing identified environmental water requirements
- initiating the River Murray Strategy
- enhancing small business capacity and developing associated tourism opportunities
- reservation and management of small reserves.

Some of the above issues should be initiated quickly after the government responds to VEAC's recommendations, to provide certainty for communities and users; for example, planning for domestic firewood access. Other issues will take a longer time to resolve, but are no less urgent, such as adjustment for the timber industry and processes for addressing environmental water requirements.

VEAC recognises that the recommendations will not suit all users. It acknowledges that many people have had long associations with the land, through family connections, ongoing camping trips, long-term occupancy under licence and economic dependency. Some of the recommendations will impact directly on these people and for others there will be minimal effect. VEAC believes that as part of the implementation of approved recommendations, it is the responsibility of the State government to address the impacts and make provision for financial relief, where this is warranted, and other forms of assistance appropriate to individual cases. VEAC also believes that adequate new funding should be made available to land managers to manage the lands at a level equivalent to national benchmarks for park and reserve management.

Throughout the report, when referring to the management of public land, VEAC has used the term 'land manager' or the Department of Sustainability and Environment. In practice there is a broad range of land managers. The Department of Sustainability and Environment is the government's primary steward for the management of public land and the relevant minister or the department assigns most of the public land to other managers (although it retains direct management control of state forest in the investigation area). Examples of assigned or delegated land managers include: Parks Victoria as the manager for national parks and other parks and conservation reserves; and committees of management comprising local government or elected community members for management of many local reserves. For example, the Port of Echuca Public Purposes Reserve is managed by a local council committee focussing on its tourism and heritage businesses. VEAC's recommendations do not impact on local committee roles unless this is specifically mentioned.

GENERAL RECOMMENDATIONS

Implementation

- R1** Government establishes a project team to implement the approved recommendations and coordinate associated planning and, as part of that process, consult with local government, relevant industries, stakeholder groups and communities.

Implementation resources

- R2** Government allocates adequate financial and staff resources for implementation of these recommendations and ensure that the objectives of the report and recommendations are achieved.

Resources for ongoing land management

- R3** Government allocates additional resources in parity with national benchmarks, to address the current and future public land management needs across the region, with priority given to fire protection, pest plant and animal control, track maintenance, on-ground staff presence, and the provision and servicing of recreation and tourist facilities.

Assistance

- R4** Where individuals or local communities are adversely affected as a result of the implementation of recommendations in this report, government establishes a process to evaluate and implement mechanisms and levels of assistance required to minimise those effects.

Interim management and minor boundary adjustments

- R5** Upon government approval of VEAC recommendations that:
- (a) relevant land be managed in accordance with those recommendations and be consistent with national and international conventions where appropriate; and
 - (b) subsequent implementation of recommendations allow flexibility for minor boundary adjustments.

Knowledge and information

- R6** Land managers base their management on adaptive management practices and address current and future information and knowledge gaps, particularly in relation to climate change trends.

Community engagement and awareness

- R7** Government supports measures to increase awareness, appreciation, education and interpretation of River Red Gum forests and associated ecosystems throughout the investigation area, Victoria and nationally.
- R8** Government supports community participation through adequate resources for planning processes associated with changes in land use categories and future management arrangements.

Nature conservation

A recent survey of residents, visitors and tour operators in the Murray River region found that the community valued the 'wilderness, biological, learning and life sustaining' values of existing national parks as well as the 'wilderness and biological' values of Gunbower and Barmah forests, which are currently classified as state forest. The natural beauty and integrity of the River Murray landscape and ecosystems are clearly important features for a broad cross section of the community.

Many ecosystems in the investigation area have been substantially reduced by clearing for agriculture. The riverine forests and woodlands that remain are under significant stress due to reduced and altered flooding regimes. This stress is likely to be exacerbated as climate change reduces rainfall and runoff. All Australian governments (federal, state and territory) have agreed to protect substantial examples of remaining ecosystems and endangered species in parks and reserves with no commercial exploitation. VEAC seeks to implement these policies and statutes for the ecosystems in the investigation area, which are underrepresented in the reserve system. VEAC also seeks to reduce the impact of a number of processes that place further pressure on an already stressed landscape. The Council has consequently recommended nine new or expanded national parks, and 135 new or expanded conservation reserves.

A recent CSIRO assessment reported that protecting habitat is one of the best ways to conserve species under climate change. While the species and ecosystems in any one area will change over time, the greater the total area of habitat available and the more diverse that habitat, the greater the number of ecosystems and species that will be able to survive.

One of VEAC's key responses to the threats facing biodiversity in the River Red Gum Forests investigation area is the establishment of a comprehensive, adequate and representative system of protected areas, as defined under the nationally agreed CAR criteria. Establishing such a reserve system is an important part of VEAC's Terms of Reference for this investigation and a requirement under the *Victorian Environmental Assessment Council Act 2001*. In summary, protected areas should contain examples of all types of ecosystems found in the area (comprehensive). For each ecosystem, the reserved areas should be of sufficient size and configuration to maintain the integrity of their biodiversity (adequate). Each ecosystem should also be represented within each bioregion to cover the range of biological variation (representative). VEAC, in line with recent national and international conservation science, has also placed an increased emphasis on the robustness and connectedness of the reserve system.

VEAC's recommended national parks and other protected areas meet nationally agreed criteria for a comprehensive, adequate and representative reserve system, by protecting high quality examples of the region's diverse range of ecosystems (defined in terms of ecological vegetation classes or EVCs). These protected areas are complemented by recommendations for regional parks, the Murray River Park and various natural features reserves which seek to ensure native vegetation is maintained in a relatively

natural state while encouraging a range of recreational and other activities. For a number of ecosystems, reservation targets could not be met because they now mainly occur on private, rather than public, land. On the Northern Plains in particular, where private land predominates and public land is often small and fragmented, Conservation Management Networks are recommended to coordinate and integrate the management of public and private conservation lands across the landscape. A Conservation Management Network (CMN) is a network of vegetation remnants, the people who manage those remnants and other interested parties. CMNs have been established in a number of fragmented landscapes in southeastern Australia to facilitate the coordination of remnant vegetation conservation and management across public and private land. Landholders and other interested individuals are an integral part of CMNs.

In relation to wetlands, VEAC has sought to balance opportunities for duck hunting on many popular wetlands, with refuges for waterfowl in nearby wetlands by adding the refuges to national parks and nature conservation reserves.

These recommendations will protect both the habitat of threatened species and other outstanding natural values. New protected areas will expand the area currently within the reserve system from 69,641 hectares to a recommended area of some 173,379 hectares. The substantial change reflects the shifting priorities for public land use since the last systematic assessments in the investigation area, the majority of which were carried out more than 20 years ago. These recommended changes are designed to provide a resilient reserve system that represents and protects the different ecosystems and natural values from the potential effects of climate change. In choosing areas as national parks and other reserves, VEAC has emphasised the need for improved connectivity and habitat links across bioregions. Strengthening the links along the vegetated corridors of major waterways in the investigation area was a key consideration, particularly given that the River Murray forms an important biolink traversing a range of inland environments across south-eastern Australia. In such areas where the public land is narrow or discontinuous, private protected areas may be established to achieve similar objectives.

Nature conservation is not only restricted to parks and reserves. A range of recommendations seeks to ensure that natural resources are more sustainably managed across *all* public land in the investigation area. These recommendations include the removal of grazing from most public land, the need to establish more appropriate flow and flooding regimes to maintain the health of riverine forests, and the re-establishment of crucial habitat such as coarse woody debris for woodland-dependent fauna. Within state forests, key sites for colonially nesting waterbirds, such as endangered egrets, will be managed to maintain habitat and avoid disturbance. These recommendations are outlined in greater detail later in this chapter.

Although our ecological understanding of aquatic and terrestrial ecosystems is relatively well-researched, many aspects of floodplain ecology, particularly terrestrial floodplain ecology, are poorly understood. This ultimately

impacts on how ecosystems and species are managed. Key aspects requiring urgent research include:

- refining and improving our knowledge of the water requirements of ecological vegetation classes (EVCs) and threatened species, including frequency, duration, drying intervals
- identifying the factors affecting the recovery of threatened species such as basin-wide and landscape-scale aspects (habitat continuity), habitat condition, climate change, species richness, and
- establishing a basis for prioritising different values for environmental watering.

There is a particular need to review the conservation status of species and EVCs in light of the ongoing and increasing threat posed by altered flow regimes. Although reduced watering is the greatest threat to the natural values of the floodplain, and is predicted to worsen, it has largely not been incorporated into current assessments of conservation status. It is important that this research be publicly available.

Another important focus of VEAC's nature conservation considerations is coarse woody debris—sticks, logs and wood on the ground. This material provides essential habitat for many ground-dwelling animals. The estimated current level of coarse woody debris in River Red Gum forests is approximately 20 tonnes per hectare on average, reduced from a pre-European average of about 125 tonnes per hectare. The main cause of this reduction is firewood collection. Some animals dependent on coarse woody debris such as the Yellow-footed Antechinus only occur at sites with more than 45 tonnes per hectare. Accordingly, VEAC believes that it is important to re-establish ground layer habitats and proposes that land managers seek to retain mosaics of coarse woody debris accumulations across riverine forests and parks, with a target of at least 50 tonnes per hectare on average.

RECOMMENDATIONS

Nature conservation

Several recommendations to improve nature conservation in the River Red Gum forests and associated ecosystems apply to specific public land use categories and are formally documented later in this report as follows:

- The reserve system itself is recommended as a series of national parks (recommendations A1–A9), some regional parks (recommendations B4–B7), nature conservation reserves (recommendations D1–D50), reference areas (recommendation F1) and some natural features reserves (recommendations G1–G81).
- Removal of domestic stock grazing from most public land in the investigation area (recommendation R38)
- Development of an adaptive management approach based on clearly defined, transparent and scientifically supported ecological objectives (e.g. ecological burning to promote certain fire-dependent ecosystems, ecological thinning and short-term grazing for ecological or management purposes such as targeted weed control (recommendations A(d) and B(d))
- Re-establish habitat crucial to a number of species of woodland fauna; a target of retaining an average of at least 50 tonnes per hectare of coarse woody debris in riverine parks and state forests is proposed (recommendation R36)
- Planning for provision of environmental flows that maintain and improve the health and long-term viability of floodplain-dependent ecosystems (recommendations R13–R14)

Specific recommendations for nature conservation not detailed elsewhere are:

- R9** That ongoing scientific research be conducted into terrestrial floodplain ecology to provide a basis for adaptive management of floodplain watering.
- R10** That the conservation status of ecological vegetation classes and flora and fauna be reviewed in light of threats posed by insufficient floodplain watering.
- R11** That government protect and restore River Red Gum forests and other vegetation communities on private land, using incentives and market-based mechanisms, particularly where these areas adjoin or link public land blocks and (where opportunities exist) acquire areas in order to consolidate vegetation or wildlife corridors.
- R12** That voluntary Conservation Management Networks be established by the relevant catchment management authority, in partnership with private landholders, public land managers and other interested parties, at suitable locations.

Examples of suitable locations include the Avoca Plains, Lower Goulburn floodplain, areas between the Warby Range and Ovens River forests, Loddon floodplain between Leaghur and Wandella forests and north of Kerang.

Environmental water

The River Red Gum Forests Investigation Discussion Paper (2006) highlighted the long term environmental impact of insufficient flooding on the survival of wetlands and riverine forests in the investigation area. Since then, this impact has been exacerbated by continuing drought, and the potentially devastating impact of climate change has become more apparent. The Murray Darling Basin Commission recently released its first audit on river ecosystem health for each of the 23 valleys in the Basin. All 11 river valleys in the investigation area were found to be in very poor or poor condition. Since the Draft Proposals Paper was released, many aspects of the management of environmental water have changed significantly, with new proposals to provide more environmental water and new arrangements between the Commonwealth and the states for the Murray Darling Basin. Such a dynamic setting emphasises the need for recommendations on environmental water that will remain relevant and workable in the face of such changes in the future.

The approach VEAC has adopted in this final report is different to that taken in the draft proposals paper which focussed on overbank flooding and an estimated volume required to achieve adequate flooding (in the order of 4000 gigalitres every five years). Where possible, overbank flooding is still the optimal method of environmental water delivery for many ecosystems. It is the mode of inundation to which the native biota has adapted, and does most to maintain ecological connectivity along and across the floodplain—including between the rivers and their floodplains. However, overbank flows may not be feasible, and in these cases a comprehensive description of assets and their water requirements is a necessary tool for decision-making. When overbank flows are not feasible, VEAC supports targeted works to provide water to protect natural values on the floodplain.

To this end VEAC has directed its focus to the natural values that depend on watering other than local rainfall for their existence. The location and water requirements of these values are independent of the physical, political and administrative means by which water may be delivered. VEAC has mapped and documented the flood-dependent natural values of the investigation area in detail and ascribed a watering requirement (minimum frequency and duration) for each area. The project is described in appendix 11 and more fully on VEAC's website (www.veac.vic.gov.au). Two sets of values have been mapped: ecological vegetations classes (EVCs) as a surrogate for ecosystem diversity, and threatened species. In addition, expert scientific knowledge has been used to identify the water requirements of each EVC and threatened species. These water requirements have been condensed into two variables: the minimum flood frequency and the duration required to maintain the relevant value in a healthy state. The resultant maps provide a comprehensive account of the required flood frequency (every second year, every fifth year, and so on) across the entire floodplain (see maps D and E). Additional parameters describing water regimes, such as flood duration, have been incorporated by DSE as part of the process of developing the Northern Region Sustainable Water Strategy.

Comprehensive coverage of the flood-dependent natural values across the floodplain improves the data available for decision-making on environmental watering and allows options to be compared in the assessment of trade-offs in environmental watering programs. VEAC's mapping can be used in conjunction with floodplain inundation models to predict which natural assets would be adequately inundated under various scenarios.

This approach has several advantages. By focussing on the assets to be maintained, it provides a single, relatively simple yardstick against which decisions can be evaluated. The approach remains useful as an input to decision-making, regardless of whether that water is delivered artificially or naturally, by overbank flows or other means, from purchased entitlements or water savings projects. The mechanisms by which water is delivered can thus be treated as a separate issue for discussion and decision-making. The approach also provides a good basis for increasing community engagement in environmental water management.

Mapping the flood-dependent natural values in a single consolidated data set also establishes a baseline that can improve as a result of regular reviews and new data. VEAC's work to date provides the basis for an ongoing, continually improving and publicly transparent undertaking. Scientific peer review should be incorporated into an ongoing program. VEAC's project was limited to the Murray, Goulburn, King and Ovens floodplains, to EVCs and threatened species, and to state-significant terrestrial vertebrates and vascular plants. To ensure the comprehensiveness of the inventory of assets, future work should cover all flood-dependent natural assets in northern Victoria (notably the Kerang and Corop Lakes, and the Kiewa, Campaspe, Loddon and Avoca floodplains), and value sets (such as species richness, habitat condition, other plant and animal groups, regionally significant values). The role of groundwater is complex, and fell outside the scope of VEAC's work.

Key areas for further work include clarifying the interaction of surface and groundwater hydrology with watering, and the relationship between watering (particularly frequency and duration) and the health of the targeted assets. As with the other additional work mentioned above, monitoring and feedback of results will be important elements for the adaptive management of these flood-dependent environments.

Climate change

While VEAC's focus has shifted, the need for water to sustain the natural assets of the floodplain remains the primary environmental concern of the River Red Gum Forests Investigation. The large volumes of water that are required present a very significant challenge for land and water managers. Newly published information about water yields under climate change makes it clear that the challenge is greater than previously thought. For example, as shown in the 2008 Discussion Paper for the Northern Region Sustainable Water Strategy, unless there are changes to the rules under which water is allocated to environmental as opposed to consumptive uses, the average amount of water for environmental flows in the Murray system could be reduced by as much as 44 percent, based on a continuation of the low inflows of the past ten years.

The comparable figure for consumptive uses is approximately ten percent. Even under less severe climate change scenarios—for example, CSIRO's "medium" climate change scenario—the water available for environmental flows in the Murray system will be reduced by 33 percent (six percent for consumptive uses).

In terms of the impacts on the natural values of the floodplain, the predictions are even more severe. Work carried out for DSE as part of the development of the Northern Region Sustainable Water Strategy shows that without remedial action the frequency of medium-level floods in Gunbower forest (reaching approximately 50 percent of River Red Gum dominated ecological vegetation classes) will decrease by 85 percent, from 39 in 107 years (based on the last 107 years) to only 6 in 107 years.

These figures are based on the 'worst case' scenario of future water availability described in the Discussion Paper for Northern Region Sustainable Water Strategy—a continuation of the low inflows of the past ten years. In the last ten years, the natural ecosystems on the floodplain have been watered only artificially. If this continues, large areas supporting flood-dependent values that are currently highly stressed will be lost. Some 190,000 hectares or 70 percent of public land in the investigation area supports flood-dependent natural values. While perhaps in the order of a fifth of this area is reasonably easily watered (especially areas that are part of or close to waterways used in the management of irrigation and drainage water), the extent to which the rest can be sustained will depend on future environmental watering. Some values, such as the 30,000 hectares of Black Box-dominated Riverine Chenopod Woodland, are likely to be difficult to water and under extreme threat in the long term. The outcome in Victoria is likely to mirror that in other states—overall, many hundreds of thousands of hectares of one of the most ecologically significant systems in Australia could be lost, including places such as the Ramsar sites which Australia has committed to protect under international agreements.

There is currently little integration of environmental flows on public land along the length of the River Murray, including its Victorian tributaries and associated wetlands. In part this reflects the site-specific nature of current programming required around timing and availability of water for environmental flows, as well as the focus on "icons" rather than the system as a whole. The current programming of environmental flows, while successful in recognising and responding to short-term imperatives, is not well suited to meet the requirement for a long-term comprehensive approach. A long-term approach is essential in the face of climate change and reduced water availability that confronts governments in their aim to reverse the decline of rivers and floodplain ecosystems in the Murray Darling Basin.

Site-specific issues

In addition to determining the most appropriate flow regime for the River Murray there are four specific operational and ecological issues warranting particular comment.

Wetland management

The first specific issue relates to the various wetland systems such as Kerang Lakes, Corop Wetlands, Boort Wetlands and Kanyapella Basin scattered throughout the investigation area. Many of these lake systems, like the River Red Gum forests, are under stress and unless an appropriate environmental flow regime is determined, secured and implemented over the long term there is a real risk that the biodiversity, aesthetic and recreational values of these ecosystems may be lost in the future. Compared to the floodplains, total volumes of water may be a less important issue for these wetlands than the unnatural flow regimes in parts of the lake systems that deliver water for nearby irrigators and downstream users. In cases where environmental water is delivered to wetlands which have existing water diversion licences, utilisation of these licences should not be at the expense of the water requirements of the wetland.

Barmah forest flooding

The second issue relates to summer flooding in Barmah forest and its detrimental effects on the ecology of the forests and wetlands. These floods occur as a result of irrigation water being released into the river system but then rejected by irrigators because of summer rain. Irrigation water in the river system then reaches the Barmah choke (the restricted section of the River Murray) where it is forced out onto the floodplain and wetlands, resulting in unseasonal floods. These floods degrade the ecology of the floodplains, and the Moira Grass plains have retreated through the encroachment of Giant Rush and River Red Gums. VEAC believes this encroachment is a major concern and will irreversibly change vegetation communities and ecology of the forests if left unmanaged. This issue should be addressed through a range of policy and management tools, rather than relying solely on engineering solutions such as proposals which will allow some irrigation flows to by-pass the physical constraint of the Barmah choke.

Levee banks

The third issue is levee banks for flood mitigation. Throughout the investigation area there are numerous levee banks used to manage or mitigate flooding, mostly on private land but some also located on public land. Many, including both those located on private and public land, are in need of major maintenance or upgrade. Many of these levee banks (such as along the Old Mail Road in the Lindsay–Wallpolla area and in the lower Goulburn River area) either impede water movement across the floodplain or are in disrepair. Where levees are in disrepair, there should be an assessment of whether the structures are still required or in fact could be removed or constructed in an alternative manner, thereby achieving greater spatial coverage during flooding events. Management of flooding at the boundaries of private and public land could be done without levees and facilitate the greater floodplain connectivity through the use of special area

plans under the *Catchment and Land Protection Act 1994* and environmental overlays under the *Planning and Environment Act 1987*.

Salt accumulation on the floodplains

The final issue is salt accumulation in the floodplain soils where the groundwater is shallow. This salt accumulation has increased as a result of shallower groundwater levels from irrigation and native vegetation clearing. Salt levels were kept in check naturally by flooding and rainfall but with a decline in both the rate of salt accumulation in the Lindsay-Wallpolla area has led to significant areas of degraded vegetation. Salt accumulation coupled with lack of flooding and drought conditions is showing visible signs progressively up the River Murray.

RECOMMENDATIONS

Environmental water

- R13** That environmental watering of the floodplains, conducted through the relevant existing or new national and state water programs, include:
- (a) identifying appropriate allocations of water to maintain flood-dependent natural assets;
 - (b) distributing that water in a way that maximises the maintenance of the flood-dependent natural assets, through overbank flows if feasible, otherwise using targeted works;
 - (c) monitoring so that the sites, requirements and prioritisation of natural values and selection of watering regimes are regularly refined and updated; and
 - (d) developing a greater public understanding of the natural values, and monitoring and publicly reporting on the delivery of water to sites.
- R14** That, more broadly than in recommendation R13 above, an environmental flow strategy be developed with the objective of achieving an integrated and consistent approach to environmental flows across the River Murray area, its Victorian tributaries and the key wetlands of Kerang Lakes, Corop Wetlands, Boort Wetlands and Kanyapella Basin.
- R15** That, more broadly than in recommendation R13 above, the improvement of the knowledge base of the forests and wetlands floodplain, hydrology, the river as a system, and in particular the use of models to integrate this information, be given a high priority and be readily available to the community.
- R16** That sufficient resources be allocated as a matter of highest priority for the development of a detailed long-term environmental water accounting system across the entire investigation area.
- R17** That land and water managers consider non-engineering options to mitigate the causes of summer flooding in Barmah forest.
- R18** That the relevant agencies conduct an audit of existing levee banks and where appropriate remove those levees in disrepair or seek alternative structures to facilitate greater dispersal of flood waters across floodplains; and where this is deemed necessary land and water management agencies undertake an extensive consultation process with private land holders and relevant public land managers.
- R19** That where changes to water supply infrastructure occur in the future environmental flows should not be adversely affected and additional costs associated with the provision of environmental flows be borne by the whole community.
- R20** That where opportunities exist, special area plans and the statutory planning processes be applied to more effectively manage environmental flows for ecological outcomes at the interface between public and private land.

Indigenous involvement

Aboriginal people have a connection with the River Red Gum Forests Investigation area that has endured and evolved over some 50,000 years. The relationship between Aboriginal people and the land, as well as the current extent of Aboriginal involvement in land management, was discussed in detail in the Discussion Paper. Information was also presented on public land management options and generalised models of Indigenous involvement in land management.

In carrying out its investigation VEAC is specifically required to take into consideration possible opportunities for Indigenous management involvement and the existing Yorta Yorta Co-operative Management Agreement.

To facilitate the participation of Aboriginal people in the investigation, VEAC commissioned consultants to seek the views of Aboriginal people and communities in the investigation area, through a series of workshops. An Indigenous Steering Committee was established to advise on consultation processes. The consultants' full report on workshops after release of the Draft Proposals Paper is provided in appendix 3. Despite being committed to consultation with Aboriginal people throughout the investigation, VEAC recognises that consultation is limited by the finite timeframe of the investigation and the competing demands on the time and resources of Aboriginal people, particularly Traditional Owners. The consultation conducted during this investigation is therefore considered to be the preliminary development stage of an ongoing relationship between public land management agencies and Indigenous people in the investigation area.

Australian jurisdictions are increasingly adopting various forms of shared land management as a means of reconciling Indigenous land claims and, in some cases, the legal requirements of native title interests. Victoria has not taken the steps that most other states and territories have taken to provide for direct participation in land management. A flexible framework for the direct involvement of Aboriginal people and Traditional Owners is needed for the management of public land in the investigation area.

There is a broad range of community aspirations for Aboriginal involvement in public land management across the investigation area. The recommendations presented below provide for greater levels of involvement of Aboriginal people, but acknowledge the need for flexibility to accommodate the differing capacity and aspirations of different communities. The recommendations also provide for greater access to public land for traditional cultural practice.

During all of VEAC's formal submission periods, many stakeholders expressed their wish to see greater involvement in public land management for Aboriginal people. Groups who identified as Traditional Owners described aspirations ranging from the handback of Barmah forest, through to increased consultation and sustainable harvest of native species for traditional cultural practice and use. In some submissions, joint management was proposed as a mechanism to improve social outcomes and economic development for Aboriginal people. These improvements include increased tourism revenue and employment in land

management. A relatively small number of submissions opposed greater Aboriginal involvement in public land management, with some specifically opposing any handback arrangements.

Many Aboriginal communities have expressed the desire to participate in public land management but are constrained in various ways including through their limited access to resources (see appendix 3). Native Title Services Victoria (NTSV) and the new Registered Aboriginal Parties (RAP) cultural heritage processes undertake registration and identification processes for Aboriginal people. However, resources for groups to establish or conduct internal consensus/agreement or informed consent processes are not provided unless specifically related to core functions.

In other states and territories, Aboriginal representative bodies perform a mediator function on behalf of Aboriginal landowners and Aboriginal people living on the land. These functions are established as a legal obligation using agreed informed consent or group consensus/agreement processes. Traditional Owner identification, registration, internal informed consent processes or protocols are necessary if a greater level of involvement in public land management decision-making—both strategic and practical—is to be achieved.

In more general terms, Traditional Owners are regularly consulted by public land managers and government agencies on matters related to land or natural resource management without clearly structured decision-making processes or resources for Aboriginal communities to undertake such processes. Aboriginal communities and individuals typically do not receive remuneration for provision or use of their knowledge, but under some Federal accreditation processes for state and local natural resource management agencies (e.g. National Action Plan for Salinity and Water Quality funding), Aboriginal community consultation must be demonstrated.

Traditional Owner groups have identified the following as major impediments to their participation in management and decision-making processes associated with public land:

- lack of administrative infrastructure to manage or coordinate activities
- lack of payment for time and expertise provided to government agencies when consulted about specific areas of public land or related management issues
- lack of funding to enable Traditional Owner groups to establish and undertake ongoing informed consent and internal group decision-making processes or protocols.

VEAC believes a properly resourced program is required to facilitate greater involvement of Aboriginal people in management and decision-making processes for public land. The program needs to include a brokering and advisory capacity to assist Traditional Owner groups to undertake processes that achieve agreement on identification of traditional Country, registration and effective internal processes and decision-making. Achieving these things may lead to improved outcomes (including resourcing and capacity building) through more structured and strategic engagement between public land and natural resource management agencies and Traditional Owners.

Agreements established by processes such as the Murray Darling Basin Commission's Murray Lower Darling Rivers Indigenous Nations (MLDRIN) Living Murray Initiative and Native Title registration may be used as a basis to formally identify and register Traditional Owner groups.

RECOMMENDATIONS

Increasing Indigenous community capacity

R21

That government provides relevant Aboriginal Traditional Owner Groups with assistance to participate in public land management by establishing a properly resourced program to assist with:

- (a) a mediated process to facilitate Aboriginal Traditional Owner identification and registration, identification of Country, group internal decision-making and procedures, and engagement with public land managers;
- (b) administrative support;
- (c) coordination of consultation requests from government agencies, and preferential selection of appropriately qualified Traditional Owner groups or organisations for contract services for public land and natural resource management projects;
- (d) targeted training and capacity building exercises;
- (e) initiatives aimed at retaining traditional knowledge and integrating this knowledge in public land management projects and partnerships on Country;
- (f) support for relevant Aboriginal Traditional Owner groups wanting to develop a permit regime as described in recommendations R29 and R30 for the traditional hunting, gathering and ceremonial use of Country.

Notes:

1. Aboriginal Traditional Owners are defined as those people who are the direct descendants of specific Indigenous groups present prior to European settlement.
2. Indigenous people refer to land and natural resources of an area over which they have a profound cultural and spiritual relationship as their traditional Country.

Current management of public land in Victoria does not generally provide for meaningful participation of Indigenous people in decision-making, although there are some examples of positive relationships and effective consultative arrangements. At the same time, many Indigenous communities have reflected a general aspiration for increased involvement in public land management, particularly on their traditional Country.

The Discussion Paper for this investigation provided detailed examples of various models of Aboriginal involvement. Involving Traditional Owners in the management of national parks and other protected areas is common in Australian states and territories. This approach has not been adopted to date in Victoria, although VEAC notes the Gunditjmarra agreement which includes a form of co-management of Mount Eccles National Park in western Victoria.

Indigenous communities in the River Red Gum Forests Investigation area have clearly expressed a desire for increased involvement in public land management generally and also for specific areas of public land. The recommendations below provide for varying levels of Aboriginal involvement in public land management (recommendations R22-R28). In some cases, specific areas have been designated for particular shared management regimes. It is important that legislative provision is made for additional areas to be added in the future as Traditional Owners decide on the level of management involvement they wish to seek for particular areas of public land.

RECOMMENDATIONS

Enhancing Aboriginal involvement

R22 That:

- (a) public land planning and management processes and policy acknowledge the unique relationship of Aboriginal people with Country and be based on recognition and respect for the traditional and contemporary relationship of Aboriginal people with the land;
- (b) prior to implementing VEAC's recommendations for parks and reserves, and changes in public land management, government consult with each relevant Traditional Owner or Aboriginal group regarding their native title rights and interests;
- (c) government, in consultation with each relevant Traditional Owner Group, establish mechanisms to improve and resource Indigenous participation in public land and water management;
- (d) opportunities for increased employment and training for local Aboriginal people be resourced and provided in the implementation of parks and reserves in the River Red Gum Forests Investigation area; and
- (e) cross-cultural awareness training continue to be available for agency staff involved in the implementation of recommendations R21-R30.

Joint management and co-management

Shared management in its various forms has the potential to be a partnership between Traditional Owners, the broader community and government working together within a framework of shared decision-making and management responsibility. One of the key social attributes of such management arrangements is that they recognise Traditional Owners and reaffirm their ties with their Country. The exercise of traditional practices of caring for Country through a management structure gives Indigenous people a stronger and active role in land management. Traditional Owners see this as a means of valuing and respecting their knowledge of land and wildlife, along with mainstream scientific approaches, to achieve better land management and conservation outcomes.

Employment opportunities can be created for Aboriginal people in a range of roles under shared management structures. It is expected that, through training and participation, Aboriginal people will develop skills and gain employment as rangers and in other park-related services and enterprises.

Typically, for a momentum to be established that will lead to meaningful Indigenous involvement in public land management, processes and arrangements must be underpinned or initiated by specific legislation. Without specific legislation, progress towards shared management can be very slow or stall completely. VEAC therefore proposes that changes be made to the *National Parks Act 1975* to provide for the increased involvement of Traditional Owners in the management of parks, and specifically for shared management arrangements. It is also recommended that legislative provision be made within five years to enable the transfer of national and other park land to Traditional Owners in the future, and for processes to be established for nominating parks for that schedule. Changes are also required to the *National Park Act 1975* for parks scheduled under that Act to be co-managed by a management board with a majority of Traditional Owners. These management board provisions are essentially the same whether the parks remain in public ownership (referred to here as co-management), or transferred to Traditional Owners (referred to here as joint management). See Glossary for more detailed definitions. The following recommendations outline the legislative changes that VEAC considers are required to facilitate future Aboriginal joint management and co-management.

RECOMMENDATIONS

Joint management provisions for national and other parks

R23

That the *National Parks Act 1975* be amended within five years of acceptance of this recommendation to make provision for a new schedule to be established and for a process where areas on that schedule may be transferred to Aboriginal Traditional Owners as National or other Park Aboriginal Land (inalienable freehold), and

- (a) that transfer be subject to agreement to enter into a lease for use of the land as a national or other park;
- (b) for each such park a board of management be established with a majority of members from the relevant Aboriginal Traditional Owner group or groups; and
- (c) a process be established for nomination and addition of areas to the schedule.

Co-management provisions for parks and reserves

R24

That the *National Parks Act 1975* be amended to make provision for co-management of specific parks with which an Aboriginal group or groups have a traditional association by establishing co-management agreements, and

- (a) the co-management agreements will be between relevant Aboriginal Traditional Owner groups and government, and
- (b) the park or reserve be managed by a co-management board consisting of a majority of members from the relevant Aboriginal Traditional Owner group or groups;
- (c) the co-management board provide for (amongst other obligations):
 - (i) protection of flora and fauna, and other natural values
 - (ii) preservation and protection of Aboriginal sites, features, objects and structures of spiritual or cultural significance within the area
 - (iii) continued enjoyment of the area by the relevant Aboriginal groups for cultural, spiritual and traditional uses
 - (iv) continued enjoyment of the area by members of the public in a manner consistent with the designated public land use category
- (d) the co-management board prepare a management plan for the park, and
- (e) the co-management board manage the park on the 'business as usual' basis until the first co-management plan comes into operation.

R25

That the *National Parks Act 1975*, and other relevant legislation such as the *Crown Land (Reserves) Act 1978* be amended to provide for:

- (a) a process for additional areas with which an Aboriginal group or groups have a traditional association to be added to the areas over which the co-management arrangements outlined in recommendation R24 may apply (including parts of a park or reserve), and
- (b) other co-management arrangements not necessarily involving a board of management or a board of management with majority Aboriginal Traditional Owners.

Specific areas for co-management

Areas with a high level of Aboriginal cultural heritage and groups with a willingness to engage in management issues are suitable for co-management arrangements. VEAC recommends that co-management agreements be initially developed for the following parks.

Nyah–Vinifera Park co-management

Nyah and Vinifera forests have an outstanding range and concentration of Aboriginal cultural heritage sites.

Keeping the culture, including caring for Country, was expressed as the most important thing to Aboriginal people from this area. Co-management with the relevant Aboriginal Traditional Owner group or groups for the recommended Nyah–Vinifera Park (recommendation B7) will provide an opportunity for culture and tradition to be supported, practised and shared. There may also be opportunities for both nature and culture based tourism business development in Nyah–Vinifera Park. This park is recommended as an addition to Schedule Three of the *National Parks Act 1975*.

Barmah National Park co-management

Many Traditional Owners of the Barmah forest have expressed a desire to join in partnership with the government in the ongoing operation and management of this area of their traditional lands as a national park. This progresses the existing advisory role of the Yorta Yorta Co-operative Management Agreement in which the State of Victoria acknowledges the cultural connection Aboriginal people have with areas under the agreement, including Barmah forest.

There is widespread support from environment and other community groups for such a partnership, which is viewed as an opportunity to link the skills and knowledge of Aboriginal people with those of the government agency park managers. This partnership has the potential to achieve the most desirable and effective conservation and cultural heritage outcomes, while ensuring public access for visitors and providing a richer visitor experience. VEAC acknowledges a substantial spiritual and cultural connection for Traditional Owners of the recommended Barmah National Park (A7).

RECOMMENDATIONS

Co-management of specific parks

R26

That a co-management agreement be entered into between the government and the relevant Traditional Owner group or groups and that the following areas be managed by a co-management board consisting of a majority of Traditional Owner group representatives in accordance with recommendation R24:

- (a) Nyah–Vinifera Park (recommendation B7)
- (b) Barmah National Park (recommendation A7).

Note:

1. The establishment of this co-management arrangement for the proposed Barmah National Park is not intended to affect the existing agreements for other areas of public land under the Yorta Yorta Cooperative Management Agreement.

Advisory bodies

Consultative or advisory roles also provide for Aboriginal Traditional Owners or Aboriginal people more generally to participate in public land management. Although this structure does not provide for decision-making responsibilities, it provides a more flexible means of engaging Aboriginal people in public land management, without imposing onerous or under-resourced management responsibilities.

RECOMMENDATIONS

Aboriginal advisory committees

R27

That provision be made for involvement of Aboriginal people in management of designated areas of public land by:

- (a) establishing advisory committees (under existing legislation) consisting of Aboriginal Traditional Owner representatives, to provide the land manager with advice on one or more aspects of land management,
- (b) adequately funding advisory committees to perform their functions and that, if required, legislation be amended to provide for allowances and expenses, and
- (c) reviewing and changing the specific role of the advisory committees by agreement of the parties.

VEAC has identified four areas for the initial establishment of Aboriginal advisory committees.

West Wallpolla Island Aboriginal Advisory Committee

West Wallpolla Island State Forest is currently managed by a committee of management established under the *Forests Act 1958*. Members of the committee represent the land manager, grazing licensee, cultural heritage group representing the Latje Latje Traditional Owners and other government land management agencies. This committee was based on relationships developed over several years of negotiations for protection of Aboriginal cultural heritage sites.

Recommendation R28(a) provides for the Traditional Owners to remain involved in management of west Wallpolla Island and cultural heritage sites in particular, after it is added to the expanded Murray-Sunset National Park (recommendation A1). This advisory committee can be established under existing provisions of the *National Parks Act 1975*. The level of involvement may be re-negotiated at some later time to cover other locations and matters other than cultural heritage protection. As outlined in the general recommendations for advisory committees above, resources are required to support the advisory committee and provide appropriate payments for service. These recommendations ensure a resourced and ongoing role for Aboriginal people in management of this area. VEAC does not believe this recommendation will diminish the current level of

engagement Aboriginal people have with public land managers in this area, and has the potential to be expanded to include other areas such as Mulcra and Lindsay Islands in the future. However, future amendments to the *National Parks Act 1975* should consider extending co-management provisions to part of a park (see recommendation R25(a)).

Hattah-Kulkyne National Park and Murray-Kulkyne Park Aboriginal Advisory Committee

VEAC has recommended only small changes to the existing Hattah-Kulkyne National Park (A2) and Murray-Kulkyne Park (B5). The new recommendation for an Aboriginal advisory committee over this area (R28(b)) reflect the expressed desire of Aboriginal people in this area to participate in public land management. There are existing relationships between Aboriginal people and park managers for management of cultural heritage sites within Hattah-Kulkyne National Park. Establishment of an Aboriginal advisory committee will provide an opportunity for Traditional Owners to enhance their current level of engagement and facilitate resourcing for consultation.

Bumbang Island Aboriginal Advisory Committee

Currently Bumbang Island Historic and Cultural Features Reserve, comprising some 570 hectares near Robinvale, protects one of the most significant clusters of scarred trees in the investigation area (see also recommendation E2). Many other Aboriginal sites and places also occur in this area. In recognition of the ongoing management and planning required for protection of these sites, VEAC recommends that an Aboriginal advisory committee be established to work with the land manager (recommendation R28(c)). This will, in some respects, formalise existing relationships but also provide for a clear allocation of resources to the Aboriginal advisory committee.

Gunbower National Park Aboriginal Advisory Committee

Gunbower National Park (recommendation A4) comprises 8892 hectares of Gunbower Island, the remainder comprising Gunbower State Forest (recommendation C3). Whilst acknowledging that cultural heritage and spiritual connections to Country exist across the entire Island, VEAC believes that an Aboriginal advisory committee should be initially established for the national park portion only (recommendation R28(d)) as a capacity-building program. At a later time, a form of shared management may be considered over the entire Gunbower Island area.

RECOMMENDATIONS

Specific Aboriginal advisory committees

R28

That an Aboriginal advisory committee be established as described in recommendation R27 for:

- (a) west Wallpolla Island area of Murray-Sunset National Park (A1)
- (b) Hattah-Kulkyne National Park (A2) and Murray-Kulkyne Park (B5)
- (c) Bumbang Island Historic and Cultural Features Reserve (E2)
- (d) Gunbower National Park (A4).

Aboriginal traditional cultural practice

During consultation with Aboriginal people, the right and ability to practice traditional cultural activities on Country was raised. Although provisions exist under various pieces of legislation (*Wildlife Act 1975*; *Fisheries Act 1995*; *Commonwealth Native Title Act 1993*) allowing for some activities (e.g. hunting for Aboriginal cultural purposes) there is no broad understanding about how to obtain such permissions, nor is the role of Traditional Owners in the process clear. Changes to legislation are required to provide for an appropriate role for Traditional Owner groups in the issue of permits to undertake cultural practice involving hunting or gathering on their traditional Country. In order to facilitate this process, authority must be devolved to Aboriginal people to develop their own internal decision-making processes around such matters. Traditional Owner groups need to be identified and supported by public land managers to perform such tasks.

VEAC recommends that provision be made for hunting, food gathering and ceremonial practice across public land in the investigation area. Traditional cultural practice may be restricted by the identified Aboriginal Traditional Owners of the Country, through a permit system established in consultation with the land manager.

There are many examples throughout Australia and internationally of permit regimes that accommodate traditional cultural practice, including protocols for matters such as the protection of threatened species. In addition, other jurisdictions acknowledge that evolution and modification of traditional cultural practice has occurred over time allowing for modern forms of hunting with firearms or other weapons and is not restricted to practices undertaken before European colonisation.

RECOMMENDATIONS

Aboriginal traditional cultural practice

R29

That policies and legislative restrictions inhibiting traditional cultural practice on specified areas of public lands and waters be amended to provide for Aboriginal Traditional Owners to undertake the following activities for personal, domestic and non-commercial communal use on Country:

- (a) hunting (including using licensed firearms), gathering, collecting, fishing and collecting earth materials,
- (b) conducting a cultural or spiritual ceremony, including (if required) having exclusive use of specified areas for a specified time, and
- (c) use of fire as related to (a) and (b) above.

R30

That Aboriginal traditional cultural practice may be governed by a permit regime and protocols established by the relevant Aboriginal Traditional Owners for the specific area in partnership with the public land manager.

Notes:

1. The use of firearms is subject to specific licensing and legal requirements.
2. The exclusive use of an area for traditional cultural practice is not to be used as a permanent exclusion zone.
3. The use of fire is subject to regulations and restrictions relating to declared total fire ban days as a matter of public safety and is not intended to include broad scale or 'fire-stick' farming.
4. The above recommendations are not intended to contravene the Commonwealth *Native Title Act 1993* where this applies.

Recreation and tourism

Popular recreational activities in the investigation area include camping (and associated activities), dogwalking, boating (including waterskiing, wakeboarding and canoeing), fishing, horseriding and camping with horses, four-wheel drive and general car touring, trailbike riding, hunting, bushwalking, birdwatching and other nature study. The tourism industry relies on the River Murray and its environs and offers a wide variety of built accommodations and activities such as paddleboat tours, houseboat hire, golfing holidays, visiting food and wine outlets and cultural heritage sites; horse-riding and canoeing tours.

Tourism Victoria's Nature-based Tourism Strategy 2007-2011 depends on the healthy and sustainable use of the River Murray and associated public land. The Strategy will encourage additional public and private sector investment in higher yielding tourism experiences that focus on high quality visitor facilities and access to a range of recreation opportunities associated with parks. This will be serviced by a range of accommodation types, including camping in parks, and nature retreats and eco-lodges adjacent to parks.

Camping

Camping on public land is an extremely popular activity along all major river frontages in the investigation area and provides for low-cost holidays. The most favoured activity is 'dispersed camping'. This is generally defined as camping along the river frontage accessible by vehicle, at a site of one's choosing, and where there are generally no toilets, drinking water, or fireplaces. It includes the ability to have an open fire and obtain firewood.

Many submissions place a high value on the relatively unregulated experience of dispersed camping along the River Murray and other major rivers in the investigation area. VEAC has provided for this use to continue in all riverine national parks, the Murray River Park, regional parks and state forests, and intends that dispersed camping will remain the dominant form of camping in these areas.

Some visitors seek a more remote camping experience, where campsites are located away from tracks and the noise of vehicles and require users to arrive on foot or by boat. There are limited remote campsites in the investigation area.

Other visitors wish to camp in designated camping areas that include facilities such as bush toilets, tables, water supply and fireplaces. Designated campsites are currently located at Wills Bend, Wharparilla North, Hattah Lakes and Barmah Lakes. In addition, there are a number of formal camping and caravan parks on public land (and private land). These areas are not affected by the recommendations.

Given the range of camping experiences sought by visitors to the River Murray, VEAC recommends that a recreation and camping strategy across all public land categories provide for the full range of experiences sought by campers and other users, and acknowledges the preference for dispersed camping.

The strategy will need to take into account the impacts of camping and other recreation uses. For example, there can be significant impacts on the environment such as removal of coarse woody debris for firewood, development of large cleared areas, inappropriate disposal of human waste and rubbish accumulation, especially in peak periods when visitor numbers are very high. Additionally, high density camping may lead to disputes between campers over sites and noise and may reduce the quality of the experience—especially if people are primarily camping in these areas for peace and quiet. At peak periods it can be difficult for day visitors to access popular stretches of the major rivers if all available sites are occupied by campers. Land managers need to plan for these different camping experiences and minimise negative impacts, by addressing rubbish removal and facilitating environmental recovery by resting of certain sites.

The support and cooperation of campers will be required for this strategy to be successful. The recreation and camping strategy should be prepared by the land managers in close consultation with the community, user groups, local government, tourism bodies and campers. Education programs may help encourage the responsible and sustainable use of the public land.

Many visitors like to camp with their dogs. Camping with dogs is permitted in the recommended Murray River Park, the regional parks and state forests. VEAC has enlarged the area available for camping with dogs in these final recommendations by extending the Murray River Park north of Barmah township, and near Torrumbarry Weir, and on Wallpolla Island near Wentworth. The Shepparton Regional Park has also been extended to allow for camping with dogs. These changes have meant a corresponding reduction in the area of national park. Camping with dogs is not permitted in recommended national parks and nature conservation reserves in the investigation area.

Within the regional parks (including the Murray River Park), the land manager should define any sensitive areas where dogs may need to be excluded either to protect particular natural values of a site, where dogs are incompatible with other recreational uses, or where it may be necessary to allow dogs only on leashes. These small and localised exclusion areas would be defined in management plans, in consultation with the community.

In some areas, public land between the River Murray (and the other major rivers) and adjoining private land is too narrow to accommodate temporary campers' toilets at a distance of 100 metres from the river edge (as required by camping regulations). As a result, land managers have prohibited camping at these sites. This is particularly the case around some towns such as Echuca. However, these narrow stretches of public land may provide important points of access to the river for day visitor use, fishing or launching of boats, and in some cases may be suitable for camping. It may be beneficial for land manager to review these areas, in consultation with the community, and determine whether day visitor use or camping is the most appropriate use. If camping is suitable, it should be a requirement either that an appropriate style of chemical toilet is used by campers or the land manager may need to provide suitable toilets. This may require an amendment to the camping regulations.

The River Murray frontage is approximately 1600 kilometres in length between the South Australian border and Wodonga, and dispersed camping is a permitted use over most of this area. For those wishing to camp with dogs, the recommended Murray River Park, extending over approximately 75 percent of the River Murray frontage, is available for this use. National parks and conservation reserves where camping with dogs is not permitted extends over 23 percent of the frontage.

Fishing

Recreational fishing is an increasingly popular activity and many fishers access the Murray and Goulburn Rivers by boat in pursuit of their sport. Land managers need to consult with recreational fishers and ensure a range of boat launching facilities are available, including the existing sites capable of launching a boat off the bank and more formal boat ramps in certain locations.

Four wheel driving

Four wheel driving is a popular recreation activity in the investigation area, often associated with other outdoor pursuits such as fishing and dispersed vehicle-based camping. The extensive road and track network provides diverse opportunities both for short trips and extended touring. VEAC is aware of the constructive relationship four wheel drive clubs and associations have with DSE and Parks Victoria across Victoria, especially in relation to track identification and signage, developing routes, seasonal access and environmental management.

Because of the extensive network of river frontage tracks in the investigation area, VEAC believes there is considerable scope for sharing of information and co-operative ventures between land managers and four wheel drive groups.

RECOMMENDATIONS

Recreation use

R31

That public lands in the River Red Gum Forests Investigation area be available for a range of recreation activities for community enjoyment and appreciation appropriate to the land use category.

Dispersed camping and camping with dogs

R32 That:

(a) dispersed camping be provided for in riverine national parks, the Murray River Park, regional parks and state forests as the predominant form of camping (see also general recommendations for these land use categories), and

(b) camping with dogs be permitted in the Murray River Park, regional parks and state forests.

Recreation and camping strategy

R33 That:

(a) a recreation and camping strategy be coordinated, as part of management planning processes for all parks across the investigation area, to show where and how each of the major popular recreational activities can be enjoyed so that overall, there is an appropriate mix of experiences (where permitted in the specific public land use category), including in particular:

- (i) dispersed camping
- (ii) camping areas with facilities such as toilets and fireplaces
- (iii) camping areas with dogs, or areas with dogs on leash only
- (iv) camping areas with horses
- (v) camping areas without noise from generators, pump houses or utilities either fixed or temporary
- (vi) day visitor areas

(b) camping be managed to minimise impacts, which may include temporary restriction on some uses in areas of high conservation values,

(c) the strategy be coordinated with tourism destination planning, and tourism development and management, undertaken by the tourism bodies,

(d) the strategy address waste management in consultation with local government, tourism authorities, tourism providers and user groups.

Camping on narrow river frontages

R34

That the land manager should review the capacity for a range of recreation uses along the Murray, Ovens and Goulburn Rivers where the public land frontage is less than 100 metres wide from the top of the bank and determine whether camping is an appropriate use, and that

(a) the review be conducted in consultation with the community as part of the planning for camping specified in recommendation R33, and

(b) if camping is permitted, the land manager specify whether portable chemical toilets are required.

Campfires

For many visitors, campfires are an important part of the experience of camping. However, many people and organisations have raised concerns about campfire safety over summer. Additionally, many stakeholders expressed concern about the environmental impact of firewood collection by campers. Coarse woody debris (sticks, logs and wood on the ground) is essential habitat for many ground-dwelling animals.

Escaped campfires are a major cause of wildfires in River Red Gum environments over summer. For example over 60 percent of wildfires in the Barmah forest of known source from 1983 to 2004 were started from escaped campfires. In New South Wales and South Australia there is a seasonal solid fuel fire ban over the high fire danger period on public land along the River Murray.

VEAC recommends that campfires should continue to be a permitted use in parks across the investigation area except in the high fire danger period. VEAC is also recommending a seasonal ban to reduce the fire hazard over the summer months and align Victoria with the seasonal fire ban regimes operating in New South Wales and South Australia.

In order to minimise impacts on the levels of coarse woody debris being utilised for campfires in the vicinity of campsites, land managers should consider directing campers to alternative sources of wood elsewhere on public land, which may become available as a result of safety works, road clearing, fire protection works or ecological thinning. Land managers should explore alternatives as adopted elsewhere in Victoria where, for example, firewood is available for purchase at certain park camp sites and in other instances campers are encouraged to bring wood from home.

RECOMMENDATIONS

Solid fuel fire bans and firewood strategy for campers

R35 That:

(a) solid fuel fires and collection of firewood for campfires not be permitted on public land adjoining the Murray, Ovens and Goulburn Rivers within the investigation area during the officially declared high fire danger period, and

(b) solid fuel fires and collection of firewood for campfires be generally permitted outside the high fire danger period in parks and state forest areas adjoining the Murray, Ovens and Goulburn Rivers.

R36

That the Department of Sustainability and Environment develop (in the context of management planning) a firewood strategy for campers (outside the solid fuel fire ban period):

(a) with a target of retaining at least 50 tonnes per hectare of coarse woody debris across each frontage block, and

(b) specifying where wood can be obtained elsewhere on forested public land, as a result of safety works, road clearing, fire protection works or ecological thinning.

Note: Campers could also be encouraged to bring wood from home or purchase it from local suppliers prior to entering the park.

River Murray Strategy

Many aspects of camping and associated recreational activities on public land along the River Murray are similar to the Victorian coast. In both locations public land often occurs in narrow strips with multiple access points across and to public land. These strips of public land provide an opportunity for safe, affordable family holidays and many families repeatedly camp at the same location over many years, developing a sense of ownership of the area. Although a major appeal of these camping destinations is the perception of being close to nature, some popular areas (particularly those closest to Melbourne) are in danger of being 'loved to death'. Their popularity, particularly during peak periods, may lead to environmental degradation, with pressure also being increased by the development of adjoining private land.

The complexity and differences across public land along the coast has been recognised by successive governments in the Victorian Coastal Strategy, which was developed to take an integrated approach to coastal planning and management. VEAC proposes that a River Murray Strategy, similar to the Victorian Coastal Strategy, be developed to bring together multiple stakeholders and agencies with responsibility for managing different parts of the River Murray, its anabranches, wetlands, catchments, and adjoining public and private land. The strategy aims to improve outcomes for conservation and recreation, as well as ensure appropriate and sustainable development (including on adjacent private land) through long-term strategic planning.

Long term strategic planning is particularly important along the River Murray given the added level of complexity associated with defining the border and with cross border issues. For example, some recreational activities along the River Murray will take place in both Victoria and New South Wales, and be subject to the two different regulatory regimes. Like the Victorian Coastal Strategy, such a strategy is not intended to replace or duplicate the detailed management plans for specific parks and reserves on public land, but is intended to articulate a long-term vision for use and development of the River Murray corridor, and to pick up longer-term planning issues, particularly those relating to pressures from outside the public land estate such as adjacent private land and activities on the River Murray itself.

RECOMMENDATIONS

River Murray Strategy

R37

That a River Murray Strategy be developed within three years of government acceptance of these recommendations, in consultation with relevant Victorian and New South Wales government agencies and relevant planning bodies to provide a long term framework for the co-operative use of the River Murray and environs on a sustainable basis for recreation, conservation, tourism, commerce and similar uses.

Domestic stock grazing

Domestic stock grazing on public land was highlighted as a significant issue in the Discussion Paper, and attracted considerable comment in public consultations following release of the Draft Proposals Paper. VEAC has considered this feedback and other inputs in forming the view that while domestic stock grazing may be an effective management tool to address specific problems at particular locations and times, scientific evidence indicates that stock grazing in general adversely affects natural values, especially biodiversity, water quality and soil condition. Accordingly, VEAC recommends that domestic stock grazing be generally excluded from public land in the investigation area, with some limited exceptions (recommendation R38).

This recommendation is consistent with recommendations for other relevant public land categories (notably national parks, the Murray River Park, nature conservation reserves and state forests) which specifically exclude domestic stock grazing.

The recommendation to largely exclude grazing on public land is a significant change in emphasis from existing management of domestic stock grazing on public land. As documented in the Discussion Paper, domestic stock grazing is currently common on public land water frontages (a sub-category of natural features reserves), unused roads ('services and utilities—transport (roads)' that are not in use), state forests, regional parks and some other public land use categories. In most of these areas public land grazing continues largely on the basis that it is permitted unless it is demonstrated to be not ecologically sustainable or causing environmental damage. Stock grazing usually has significant impacts on ecological communities which have not evolved under such grazing regimes. Nevertheless, demonstrating specific environmental damage (or sustainability) at individual locations is costly, time-consuming and is consequently rarely done.

VEAC's recommendations on stock grazing in this investigation differ from the intent of earlier government-approved recommendations of the Land Conservation Council. LCC investigations have recommended that grazing be allowed to continue along public land water frontages provided it does not contribute to environmental damage. For example, the LCC (1991) Rivers and Streams Investigation recommended that grazing

continue on stream frontages where it does not conflict with several other uses, notably conservation of native flora and fauna, and restoration of native vegetation. The LCC recommendations are reflected in the Victorian River Health Strategy (2002) which states that 'the Government has a vision for the rivers of Victoria which is based on ecological sustainability'.

This past approach, however, does not appear to have been entirely successful at preventing environmental damage through stock grazing. Although the LCC recommendations and Victorian River Health Strategy has provided some impetus for the removal of grazing as part of frontage protection programs undertaken by catchment management authorities and DSE, it has had little if any effect on grazing elsewhere even where it seems likely that damage is occurring. This is why VEAC is explicitly recommending in this investigation area grazing generally not be permitted other than to address a particular environmental or management problem, such as controlling particular weed infestations or maintaining a specific grassy habitat structure.

Grazing for ecological management purposes is unlikely to be required very often and when it is, the framework under which it is managed would be different from the current general approach. That is, domestic stock grazing should only occur to address a specific, explicitly-stated problem and with grazing-specific management planning and research, and control of stock numbers residing with the land manager. This is currently the case in Terrick Terrick National Park where, for example, sheep grazing is closely monitored and administered through short-term contracts rather than under licence or agistment permits. It should be noted that VEAC does not see broad-scale fuel reduction for fire protection as a specific problem for which domestic stock grazing is an appropriate management tool—the scientific evidence concerning the effects of grazing on broad-scale fire protection in the vegetation types of the investigation area is equivocal at best.

VEAC recommends two other limited exceptions to the immediate removal of grazing. Because of the large number (approximately 2000) and long boundaries (often unfenced) of grazing licences along public land water frontages ('stream frontages'), VEAC is recommending a five year phase-out of stream frontage licences, to allow time for the administration of the change and for fencing and, where required, alternative water sources to be established. This phase-out of grazing needs to be completed as a matter of priority, and any incentives offered to adjoining land-owners need to be scaled to prioritise the most vulnerable and sensitive areas. Implementation costs are considered as part of resourcing and assistance in recommendations R1 to R4 above.

There are also a large number of unused road licences, most of which are not completely fenced, if at all. Because it would currently be impractical to manage these areas separately from the agricultural land in which they are embedded, VEAC is recommending that grazing continue to be permitted in these areas.

In addition to the large number of grazing licences, there are a small number of current licences for cultivation or cropping in the investigation area. Consistent with the removal of grazing elsewhere VEAC is also recommending

the removal of cultivation from these areas. There may also be areas of unlicensed cultivation or cropping in the investigation area which should be removed immediately. All areas from which cultivation is removed should be revegetated.

Although a general decline in natural values has been identified due to grazing pressure, VEAC acknowledges the appropriate management practices of many licensees and adjoining land-owners. This is particularly the case for adjoining owners involved with catchment management authority projects to fence and re-vegetate stream frontages. A new Riparian Conservation Licence is recommended to encourage adjoining landowners to maintain their connection with public stream frontages and waterway by managing the land for environmental objectives (recommendation R39).

Catchment management authorities are well placed to be effective on-ground managers, engaging communities and adjoining land-owners about the new licence category. Implementation of the recommendations will require a dedicated change management program and community engagement (as described in recommendations R7-R8). The cost of such processes is outweighed by the significant gains that will be achieved through retaining native vegetation, strengthening habitat corridors, improving water quality and river ecology and reducing water pollution. Adjoining land-owners will also see benefits with reduced erosion, improved soil structure and ecosystem services. The benefits to waterways and water quality—particularly with climate change affecting run-off and stream inflows—are likely to be significant and of both environmental and economic benefit, especially in the lower catchment areas.

RECOMMENDATIONS

Domestic stock grazing

R38

That cultivation, cropping and domestic stock grazing not be permitted on public land in the investigation area, except:

(a) in areas proposed to remain as public land water frontages (G105-G112) and stream beds and banks (G113) grazing may continue for a phase-out period to be completed within five years of government accepting this recommendation; and

(b) in areas proposed to remain as unused roads (services and utilities—transport (roads) where an unused road licence is current).

R39 That:

(a) for public land water frontages, a Riparian Conservation Licence be established where appropriate for adjoining landowners and be subject to agreement to manage these areas as described for natural features reserves general recommendation G and public land water frontages recommendations G105-G112, and

(b) the Riparian Conservation Licence be managed by the relevant catchment management authority in consultation with the Department of Sustainability and Environment, and

(c) the relevant catchment management authority in consultation with other appropriate government agencies establish management plans with individual licensees to achieve the objectives outlined in (a).

Notes:

1. Land managers may utilise domestic stock grazing on public land under contract for ecological or management purposes such as targeted weed control.
2. That the phase-out of grazing on recommended public land water frontages and stream beds and banks be prioritised with incentives to licensees scaled to benefit those participants who install fencing and off-stream water points early in the phase-out period.
3. In general, unused roads should remain in public ownership.

Domestic firewood collection

Domestic firewood is obtained from public land in the investigation area mainly from thinning of state forests to provide future sawlogs, but also from a range of other sources such as windthrow, and drought-killed trees. Across the state, it is estimated that some 11 percent of firewood demand is provided from public land, the remainder is from private land and other sources. This firewood is used for domestic purposes, particularly as an affordable option for residents of small settlements that are not connected to natural gas. A large proportion of commercial firewood is used to supply markets in Melbourne, regional centres and other consumers such as the Echuca paddlesteamer fleet.

Harvesting of forest products (including sawlogs, posts and firewood) is not consistent with national park objectives and will not be continued where they currently exist in recommended national parks. VEAC acknowledges that the cessation of timber harvesting in certain state forests, for example as a result of the creation of the Barmah National Park, will have an impact on the supply of firewood for domestic and commercial use. To supply firewood to local users, VEAC has identified additional zones within the Murray River Park and has designated additions to the Murray River Park near Barmah and Wallpolla Island within which firewood may be obtained (see recommendation B3). Firewood collection zones in the Murray River Park will need to be carefully managed to ensure sustainable cutting and minimise biodiversity impacts. The Department of Sustainability and Environment should continue to have the overall responsibility for management of firewood across public land, in consultation with the manager of the Murray River Park. VEAC's intention is to utilise the existing systems of site identification, environmental analysis, public consultation and licensing for domestic firewood collection.

A strategic approach to managing the supply and demand for firewood should be coordinated at the statewide level and implemented regionally. Much work has been commenced in this area. For example in the Bendigo area, five year firewood plans have been developed to ensure a sustainable flow of wood and to provide certainty to local communities. Licensing systems have been upgraded to ensure wood is preferentially available to local users and concession card holders. The collection season has been reduced to minimise illegal firewood collection and a maximum firewood volume has been set for firewood collection licences. In certain instances, additional volumes of firewood have been made available from increased thinning operations in state forest and from ecological thinning in parks. Additional emphasis has been placed on advising residents of the government rebate system that provides an allowance for those wishing to convert to energy efficient gas appliances, solar hot water and home insulation. The North East Firewood Strategy Implementation Committee which consists of members from relevant departments, local government and the North East Catchment Management Authority has played a lead role in identifying additional firewood sources, setting up local woodlots and galvanising local support.

Plantations provide a potential future firewood resource. Five hundred hectares of firewood plantations were recently established on private land in northeast Victoria, under a cooperative project led by the Catchment Management Authorities and government departments. A study undertaken by the Goulburn Broken Catchment Management Authority shows that the establishment of firewood plantations at the rate of 100 hectares per year for 15 years would provide 15,000 tonnes of firewood per year from 2020. If managed on a sustainable basis, such plantations may play an important part in the providing carbon credits. These approaches should be further evaluated and extended into the investigation area.

RECOMMENDATIONS

Firewood collection zones in the Murray River Park and Shepparton Regional Park

R40 That:

(a) domestic firewood collection not be permitted in the Murray River Park, other than in zones to be identified by the land manager and the community in consultation with the Department of Sustainability and Environment, near Mildura, Robinvale, Boundary Bend, Swan Hill, Barmah, Cobram and Rutherglen

(b) domestic firewood collection not be permitted in the Shepparton Regional Park, other than in zones to be identified by the land manager and the community in consultation with the Department of Sustainability and Environment, and

(c) firewood may only be cut and removed where this action will promote growth of large old trees, improve flora and fauna habitat and assist fire protection strategies.

Improved planning, licensing and monitoring systems for domestic firewood

R41

That land managers implement a planning, licensing and monitoring system that will ensure domestic firewood is made available on a sustainable basis to local communities and in particular to concession card holders who rely on wood for cooking, heating and hot water.

Notes:

1. The Department of Sustainability and Environment oversees the planning, public consultation and monitoring of firewood demand and supply from state forest at a statewide and regional level. Domestic firewood collection is licensed under provisions of the *Forests Act 1968*. It is intended that the collection of firewood in the Murray River Park continue to be part of this system, in consultation with the land manager.
2. Domestic firewood collection should be subject to appropriate controls and management systems to ensure protection of biodiversity and reduce theft of wood.

Silvicultural thinning of state forest

R42

That land managers give consideration to increasing the area subject to silvicultural thinning programs in Gunbower State Forest (recommendation C3) to enhance the development of sawlogs and produce additional volumes of domestic firewood, and to extend the silvicultural program to additional River Red Gum state forest areas at Benwell and Guttram (see recommendations C1 and C2).

Plantations and other sources of firewood and incentives

R43 That:

(a) the government encourage the establishment of firewood plantations and woodlots on suitable cleared areas on public land and private land and that incentive funding be provided to assist in their development.

Note: Where areas of cleared public land become available for alternative uses, government could give consideration to establishment of firewood plantations. Areas in this category that could be considered include Beveridge Island, Pental Island and other sites near Robinvale.

(b) That energy authorities in conjunction with local authorities promote the availability of energy subsidies for gas appliances, solar heating and home insulation and encourage the uptake of alternative energy sources.

(c) That subject to the results of appropriate research and monitoring, ecological thinning of River Red Gum forests in parks and reserves be applied where required; for example to promote the survival and growth of retained trees, the protection of Moira Grass plains in Barmah National Park, and swamps.

Note: Production of firewood is not an objective. Where ecological thinning is approved, the operation will produce wood as a by-product which may be used as firewood where this does not conflict with ecological objectives, including the retention of coarse woody debris on the forest floor.

Firewood strategy implementation

R44

That government develop a strategic and coordinated approach to delivery of regional firewood requirements, at both a state and regional level, including establishment of a regional committee consisting of the land managers, catchment management authorities, local government, industry and the community, modelled on the successful North East Firewood Strategy Implementation Committee.

3 Public land use recommendations

A National parks

Victoria's national and state parks are the cornerstone of the state's protected area system. Parks currently comprise approximately 62,000 hectares or about 23 percent of public land in the investigation area. These areas are set aside primarily to protect natural values whilst also allowing a range of visitor experiences. Visitors enjoy the sense of rejuvenation and inspiration provided by these natural environments. Environmental education often occurs jointly with recreational pursuits in these areas. For many years, national parks in the investigation area have been popular with tourists for visits ranging from day trips to extended camping holidays. The River Murray and its tributaries are a major focus for recreation and tourism but other natural environments away from the river also offer their own range of different visitor experiences.

National parks are generally, although not always, larger than state parks but the two categories of parks are otherwise established and managed for the same objectives under provisions of the *National Parks Act 1975*. For the River Red Gum Forests Investigation area no new state parks are recommended and existing state parks are recommended to become part of larger consolidated national parks. Although national and state parks have the same management intent and level of protection, the objectives of national parks are generally better understood by the general public and the park visitor. VEAC has therefore adopted the national park category for these areas.

VEAC has recommended a number of new national parks and nature conservation reserves in line with nationally agreed criteria for a comprehensive, adequate and representative reserve system (as explained in the 'Nature Conservation' section of Chapter 2). These recommendations will protect threatened species habitat and other outstanding natural values. New park boundaries will expand the area currently within national and state parks from about 62,000 hectares to around 146,830 hectares. This substantial change reflects the new approaches and data on ecosystems and flora and fauna since the last systematic assessments in the investigation area, the majority of which were carried out more than 20 years ago. In recommending this change, VEAC has endeavoured to design a robust national park system that represents and protects the different ecosystems and natural values from the potential effects of climate change and other threatening processes. In recommending areas as national parks, VEAC has emphasised the need for improved habitat links across bioregions. Strengthening the links along the vegetated corridors of major waterways in the investigation area was a key consideration, particularly given that the River Murray forms an important biolink across a range of inland environments across south-eastern Australia. In areas where public land is narrow or discontinuous, private protected areas and conservation management networks (see recommendations R11–R12) may be established to achieve similar objectives.

There is a danger that increasing visitor numbers to the investigation area will, over time, reduce the natural values that initially attracted people to the area. This is particularly the case for peak periods around long weekends, Easter and Christmas/New Year. A recreation and camping strategy is recommended that will identify the distribution of camping sites and amenities, while protecting natural values, and encouraging year-round use of the area. A ban on solid fuel campfires is recommended during the high fire danger period. Harvesting of forest products (including sawlogs, posts and firewood), and hunting and grazing by domestic stock are not consistent with national park objectives and will cease in those parts of recommended national parks where they currently occur. Mineral exploration licences may continue, be renewed (if they do not lapse), and proceed to a mining licence and work authority, with appropriate consent, but no other new exploration or mining licences can be granted once the recommended national parks are established.

Altered flooding regimes and other management practices have changed the condition of some ecosystems and these changes are likely to continue under current regimes. For example, Giant Rush and River Red Gums are invading the Moira Grass plains in Barmah Forest as a result of summer flooding. In such instances, park managers need the flexibility to undertake adaptive management to restore ecosystems or to return them to a condition more closely resembling their natural condition. Such management should be based on clearly defined, transparent and scientifically supported ecological objectives. Examples of adaptive management include ecological burning to promote certain ecosystems that are responsive to fire, ecological thinning and short term grazing for ecological or management purposes such as targeted weed control.

Following the analysis of submissions on the draft proposals, VEAC has decided to retain the national park proposals, with some variations. VEAC believes this is a sound long term decision that meets the requirement to protect the biodiversity attributes of the land, achieves nationally agreed targets for a conservation reserve system, particularly in a time of climate change, and allows most users of the land to continue their favoured activities.

As well as the general national park recommendations below, which apply to all new or expanded national parks, specific recommendations may apply to individual parks or areas within parks. A detailed description of the location, values, uses and implications of recommended public land use changes for each recommended new or expanded national park is provided on the following pages. An overview of public submissions for each park and VEAC's deliberations on submissions is also provided.

RECOMMENDATIONS

General recommendations for national parks

A That national parks shown on Map A (numbered A1 to A9) and described below:

(a) be used to:

- (i) conserve and protect biodiversity, natural landscapes and natural processes
- (ii) protect significant cultural and historic sites and places, including Aboriginal cultural sites and places
- (iii) provide opportunities for recreation and education associated with the enjoyment and understanding of natural environments and cultural heritage;

and that:

(b) the following activities generally be permitted:

- (i) bushwalking, nature observation, heritage appreciation, picnicking,
- (ii) camping (in particular dispersed camping) in accordance with recommendations R32–R33
- (iii) campfires and collection of wood for campfires, outside the high fire danger period in accordance with recommendations R35–R36
- (iv) car touring, including four wheel driving, on formed roads and tracks
- (v) mountain bike and trailbike riding on formed roads and tracks
- (vi) horseriding on formed roads and tracks
- (vii) fishing
- (viii) apiculture at existing licensed sites, subject to the outcome of research into the ecological impacts of this industry, and park management requirements
- (ix) research, subject to permit;

and that:

(c) the following activities not be permitted:

- (i) harvesting of forest products
- (ii) grazing by domestic stock (see note 2 below)
- (iii) hunting and use of firearms (see note 3 below)
- (iv) exploration and mining, other than continuation of operations within existing permits and licences, as approved
- (v) dogwalking and camping with dogs
- (vi) overnight camping with horses;

(d) subject to clearly defined, transparent and scientifically supported ecological objectives, park managers may undertake adaptive management to restore ecosystems or to return them to a condition more closely resembling their natural condition (see notes 1, 2 and 3 below);

(e) unused road reserves be added to adjoining parks where appropriate; and

(f) the parks be reserved under Schedule Two to the *National Parks Act 1975*.

Notes:

1. Ecological thinning may be permitted where required for ecological or management purposes.
2. Short-term grazing may be contracted for ecological or management purposes such as targeted weed control.
3. Hunting and use of firearms may be authorised as part of a pest animal control program and/or for traditional Aboriginal cultural purposes in accordance with recommendations R29–R30.
4. Practical access should continue to be provided to existing private land holdings surrounded by the national parks.
5. Implementation of recommendations and land management should allow flexibility for minor boundary adjustments.

A1 Murray–Sunset National Park

Murray–Sunset National Park was originally established to protect a broad range of environments from the South Australian border and the River Murray in the west and north, across the Sunset Country to adjoin Hattah–Kulkyne National Park in the east. This national park is the second largest in Victoria comprising some 633,000 hectares of which 96 percent is within the Murray Mallee and Lowan Mallee bioregions. The remaining four percent in the Murray Scroll Belt bioregion comprises nearly all of the park's extent in the River Red Gum Forests Investigation area.

The recommended Murray–Sunset National Park (57,172 hectares in the investigation area) enhances features and attributes relating to the Murray River floodplain and strengthens the existing natural vegetated corridor along this important biogeographic link. The expanded park complements the existing Neds Corner Station, a Private Protected Area established by the Trust for Nature (Victoria). The national park extends east from the South Australian state border, providing a continuous protected frontage to the River Murray for nearly 200 kilometres along its many bends and meanders, through the arid mallee country to a point east of the Great Darling anabranch junction.

A large, generally consolidated block, the expanded park incorporates the existing Murray–Sunset National Park (26,340 hectares in the investigation area) and the existing Mullroo Creek Wildlife Area (1140 hectares), as well as state forest (27,980 hectares), natural features reserves and River Murray Reserve (940 hectares), Lock Nine Historic Area Reserve (0.01 hectares) and areas of uncategorised public land (770 hectares).

Consolidating this national park improves the representation of ecological vegetation classes (EVCs) in reserves and protects threatened species, significant geomorphological features and habitat links as well as providing a buffer for future climate change. The expanded Murray–Sunset National Park represents a large proportion of the Murray Scroll Belt bioregion and includes the vulnerable EVCs Shallow Freshwater Marsh and Alluvial Plains Semi-arid Grassland. The area hosts five endangered and 15 vulnerable flora species, including chenopods (saltbush), wattles, swainson-peas, lilies, emu-bush and daisies. Within Victoria, many of these species are limited to the far northwest of the state. This area, notably Wallpolla Island, is also particularly important for threatened reptiles such as the critically endangered Beaked Gecko, the endangered Inland Carpet Python and the vulnerable Curl Snake, Red-naped Snake, De Vis' Banded Snake and Tree Goanna.

Three geological and geomorphological sites of international and state significance lie within the expanded Murray–Sunset National Park including the nationally significant Lindsay Island floodplains comprising scroll plains, anabranch and channels. The sites of state significance are Olney Bore Eocene to Miocene type section and Wallpolla Island and Creek anabranch and floodplain.

The ecological and recreational values associated with the creation of a national park are heavily dependent on adequate environmental water flows. These are outlined further in chapter 2 under recommendations R13–R20.

In some areas engineering works may be required to deliver water across existing structures such as the Mail Route Road that currently acts as a levee limiting the extent of medium sized floods in the Lindsay Island area.

The River Murray is a drawcard for a number of visitor activities and experiences, but education and management strategies are required to strike a balance between sustainable tourism and protection of conservation values. It is estimated that visitor numbers range from 11,000 to 15,000 per annum in the two main areas of public land recommended as national park additions—Mulcra Island and Wallpolla Island. Visitor levels are similar at Lindsay Island in the existing national park. Some restrictions to recreational use such as no campfires and firewood collection during the high fire danger period and no camping with dogs will occur in the recommended Murray–Sunset National Park.

Commercial harvesting of sawlogs has not occurred in the recommended national park additions for several years. VEAC acknowledges that the recommendations may have some impact on local domestic firewood collection and, since the Draft Proposal Paper, has reduced the size of the national park at the eastern end of Wallpolla Island. This change will provide an additional source of domestic firewood for local users, and for camping with dogs. Existing apiculture sites will continue to be permitted in the recommended additions to the national park.

Commercial grazing over around 22,000 hectares of state forest and public land water frontages will be excluded in the recommended national park additions. Adjoining land owners may need to control stock access to the abutting national park by fencing property boundaries. Trust for Nature has reported significant improvements in biodiversity values such as vegetation condition and increases in reptile populations since grazing was removed from Neds Corner Station in 2003.

The recommended park has a significant number of Aboriginal cultural heritage sites and places of spiritual importance for Traditional Owners, including burial sites. VEAC recommends that the joint DSE and Aboriginal community committee of management established for west Wallpolla Island State Forest under the *Forests Act 1958* be replaced by a new Aboriginal advisory committee under the *National Parks Act 1975*, to provide advice and information to the park manager on cultural heritage management over the west Wallpolla Island area and land management more generally (recommendations R27–R28).

Community views

As previously discussed in Chapter 1, many submissions expressed concern about changes to the use of land recommended for this national park. Many people argued against any changes to existing recreational uses, including camping and hunting and forest uses such as grazing and firewood collection. Submissions were received from neighbouring property owners concerned about the loss of grazing on public land and the impact this would have on their farming enterprise, and from Traditional Owners concerned about management of their heritage. The general issues raised, and VEAC's response to them, are discussed in more detail in Chapter 1.

Other submissions supported the additions to the national park because of its high biodiversity values and protection for the Chowilla Floodplain Living Murray Icon site. Community views highlighted the importance of the connectivity along the River Murray and the role that this area performs as a drought refuge and zone for species movement, both seasonally and under the effects of climate change.

Response

VEAC has retained the proposal for an expanded national park and has varied the draft proposals to provide for campfires outside the high fire danger period. VEAC has also emphasised that dispersed camping will continue to be the predominant form of camping in the park. The proposed national park has been reduced in size in an area along the River Murray at the eastern end of Wallpolla Island. This area has been included in the Murray River Park to provide additional areas for camping with dogs, and to provide an additional source of firewood for Mildura and adjacent townships. Since the draft proposals, a small area has been excluded from the recommended park adjacent to Lake Cullulleraine township (recommendation I1).

VEAC acknowledges that land managers may undertake adaptive management to restore ecosystems or to return them to a condition more closely resembling their natural condition, such as short term grazing for ecological or management purposes or targeted weed control. VEAC also acknowledges the concerns of Traditional Owners and believes that these can be addressed in the establishment and operation of the recommended advisory committee. In developing legislation for shared management arrangements in national and other parks, VEAC's recommendations allow for circumstances where Traditional Owners have an interest in part of a park, such as west Wallpolla Island (see recommendation R25).

RECOMMENDATIONS

Murray–Sunset National Park

A1 That:

- (a) the area of 57,172 hectares shown on Map A be used in accordance with the general recommendations for national parks
- (b) an appropriate environmental water regime be established for this national park as outlined in recommendation R13
- (c) camping (in particular dispersed camping) continue in accordance with recommendation R32–R34
- (d) campfires and collection of wood for campfires, continue outside the high fire danger period in accordance with recommendations R35–R36
- (e) acknowledgment of the spiritual importance and cultural heritage values of this park, and in particular west Wallpolla Island, for Traditional Owners be reflected in the management and visitor interpretation of values of this area, and
- (f) an Aboriginal advisory committee be established in accordance with recommendation R28(a) to facilitate greater Aboriginal community involvement and provide expert advice to the park manager on cultural heritage site management specifically for west Wallpolla Island, and also more generally in land management, planning and works throughout the national park.

Notes:

1. The area of the park within the investigation area encompasses two existing reference areas (see recommendation F1). Reference areas are managed in accordance with the *Reference Areas Act 1978*.
2. Subject to assessment of existing values and uses, areas of Lindsay Point State Forest immediately adjacent to the recommended national park that are outside the investigation area, are suggested as logical additions to the recommended national park.
3. Engineering solutions be adopted to facilitate medium sized floods across Mail Route Road maintaining Lindsay Island floodplain system linkage to the River Murray and other waterways.

A2 Hattah–Kulkyne National Park

The Hattah lakes area, located some 70 kilometres south of Mildura, has long been identified as an area of outstanding natural values. Hattah Lakes National Park (7200 hectares) was reserved in 1960 and additional areas of state forest were added to the park in 1980 to form Hattah–Kulkyne National Park. The park consists of riverine and floodplain vegetation close to the Murray River and a lake system as well as rolling sand dunes and distinctive mallee extending inland from the river and lakes. The River Red Gum Forests Investigation area encompasses about 48 percent (24,428 hectares) of the existing Hattah–Kulkyne National Park, entirely within the Robinvale Plains bioregion. The national park abuts Murray–Kulkyne Park (see Recommendation B5) for a significant proportion of the Murray River frontage. The recommendations presented here are a minor expansion of the current national park with the addition of Brockie Bushland Reserve (5.2 hectares).

Two hundred and forty-five native fauna species, including 47 threatened and near threatened species, have been recorded from the portion of Hattah–Kulkyne National Park in the River Red Gum Forests Investigation area. These include five species considered critically endangered in Victoria: Intermediate Egret, Australian Painted Snipe, Plains-wanderer, Murray Hardyhead and Silver Perch. Hattah–Kulkyne National Park also provides habitat for Greater Long-eared Bat, Mallee Emu-wren and Regent Parrot—all considered vulnerable Australia wide. Four hundred and sixty-four native plants including 92 rare and threatened species have also been recorded. These include Winged Peppergrass which is endangered in Victoria and Australia. The area also includes the most secure Victorian populations of endangered Dwarf Swainson-pea and vulnerable Spreading Scurf-pea, which is almost entirely restricted in Victoria to the national park.

The portion of Hattah–Kulkyne in the investigation area contributes significantly to the representation of the vulnerable Semi-arid Woodland, depleted Riverine Chenopod Woodland and Riverine Grassy Woodland Ecological Vegetation Classes (EVCs). The addition of Brockie Bushland Reserve south of Lake Kramen contributes vulnerable Woorinen Mallee and Semi-arid Woodland EVCs to the recommended national park.

The Hattah lakes are the River Murray's largest overflow lake system and of national geomorphological significance. This area is different from the floodplain inundation areas that constitute most of the Murray's geomorphology. The system of anabranch lakes and associated channels takes overflow from the Murray River along Chalka Creek returning only a small amount of flow to the Murray with the majority retained in ponded terminal lakes. Red sand dunes have migrated into the area from the desert to the west providing a unique geomorphological system in this region. Other overflow lake systems occur on tributaries to the Murray (e.g. the Willandra Lakes on the Darling River) but not on the River Murray.

The lakes in Hattah–Kulkyne National Park are attractive habitat for waterfowl and have been identified as wetlands of international significance under the Ramsar convention and JAMBA, CAMBA and RoKAMBA migratory bird agreements.

Two Ramsar inland wetland types are recognised: permanent freshwater lakes and seasonal intermittent freshwater lakes including floodplain lakes. Two wetland types are also recognised under the Victorian classification of wetlands: Deep Freshwater Meadow and Permanent Open Freshwater. The lakes and wetlands are currently managed to protect these values.

VEAC received a number of public submissions arguing that the Hattah Lakes area should receive adequate environmental flows. The Council recognises that the ecological and recreational values associated with the Hattah–Kulkyne National Park are heavily dependent on adequate environmental flows. This is outlined further in chapter two in the discussion of environmental water.

There are a significant number of Aboriginal cultural heritage sites and places in the national park, including burial sites and a large number of scarred trees near the lakes system. Shell middens occur around the margins of current lakes or stream and also palaeolakes that encompassed a much larger area during periods of higher rainfall in the past.

Recreation is an important activity in Hattah–Kulkyne National Park. Camping is provided for at Lake Mournpall and Lake Hattah campgrounds where toilets, picnic tables and fireplaces are located. Camping on the River Murray within the park is restricted to Firemans, K1 and Jinkers Bends. Camping with dogs is not permitted within the national park, but dogs are permitted in the adjoining Murray–Kulkyne Park. Campers enjoy Hattah–Kulkyne National Park for its natural setting and the feeling of remoteness. The park is popular with birdwatchers as the diverse range of habitats and access to water provide for many bird species.

Community views

Submissions supported the small addition to Hattah–Kulkyne National Park and the environmental flow requirements. A number of submissions suggested the adjoining Murray–Kulkyne Park should be added to the national park.

Response

VEAC has retained the two park categories to ensure camping with dogs can continue at the popular sites along the River Murray frontage within Murray–Kulkyne Park.

RECOMMENDATIONS

Hattah–Kulkyne National Park

A2 That:

(a) the area of 24,428 hectares shown on Map A be used in accordance with the general recommendations for national parks, and

(b) an appropriate environmental water regime be established for this national park as outlined in recommendation R13.

A3 Leaghur–Koorangie National Park

The Leaghur–Koorangie National Park (7790 hectares) incorporates a number of public land units in the Loddon and Avoca River Floodplains, to the south and west of Kerang as listed below.

• Leaghur State Park	1556 hectares
• Lake Leaghur water supply reserve	83 hectares
• Leaghur Wildlife Reserve	176 hectares
• Appin State Forest (Special Protection Zone)	290 hectares
• Appin Recreation Reserve	4 hectares
• Lake Meran (Meering) Lake Reserve	205 hectares
• Wandella Flora and Fauna Reserve	981 hectares
• Lake Wandella Wildlife Reserve	62 hectares
• Pelican Lake Wildlife Reserve	38 hectares
• Lake Elizabeth Wildlife Reserve	121 hectares
• Koorangie (The Marshes) Wildlife Reserve	3255 hectares
• Yassom Swamp Flora and Fauna Reserve	362 hectares
• Mystic Park Bushland Reserve	646 hectares

The creation of Leaghur–Koorangie National Park contributes significantly to the representation of the threatened Ecological Vegetation Classes (EVCs) including the endangered Chenopod Grassland, the vulnerable Riverine Chenopod Woodland, Lignum Swampy Woodland, Lignum Swamp, Freshwater Lake Aggregate and Red Gum Wetland and the depleted Lake Bed Herbland and Intermittent Swampy Woodland.

The Avoca Marshes are part of the internationally significant Kerang Wetlands Ramsar site and are of state geomorphological significance. The Avoca Marshes are especially important for waterbirds. In particular, Third Marsh is of statewide importance for species such as Eurasian Coot, Grey Teal and Hardhead, and also supports the endangered Freckled Duck and Blue-billed Duck. First Marsh has been an important breeding area for a variety of cormorant species, as has Second Marsh for the Australasian Darter. In most years, Lake Bael Bael has supported the endangered Freckled Duck and Australian Little Bittern as well as providing habitat for the Australian Painted Snipe. The Black Box woodlands of the Leaghur, Appin and Wandella blocks are important habitat for the endangered Grey-crowned Babbler and a number of other declining woodland bird species. The native grasslands surrounding Yassom Swamp support critically endangered Plains-wanderers. Lake Elizabeth provides habitat for Freckled Duck and Blue-billed Duck, and for the critically endangered fish species, the Murray Hardyhead.

A number of sites of Indigenous cultural significance have been identified in various sections of the recommended national park, including scarred trees at Leaghur, Appin and Wandella forests and cooking mounds, burial sites and shell deposits at the Avoca Marshes. The national park should be managed to protect these values.

The Leaghur–Koorangie National Park offers a variety of recreational opportunities. Bushwalking and horseriding occurs in the Leaghur, Appin and Wandella Forests while birdwatching is popular at the Avoca Marshes. Waterskiing and picnicking occur at Lake Meran (Meering). These activities will be able to continue in the national park, although horseriding would be restricted to formed roads and tracks.

Hunting is currently permitted within the Koorangie (The Marshes), Lake Wandella, Lake Elizabeth and Lake Leaghur sections of the recommended Leaghur–Koorangie National Park but would not be permitted in the new national park. No timber harvesting currently occurs in the recommended park. Only a small part of the recommended Leaghur–Koorangie National Park is grazed under licence. Grazing would be discontinued in the new park. There are no apiary sites in the recommended Leaghur–Koorangie National Park. There are currently three exploration licences over parts of the recommended Leaghur–Koorangie National Park and these may continue, be renewed (if they do not lapse) and proceed to a mining licence and work authority, with appropriate consent. No new exploration or mining licences can be granted once the national park is established.

Due to the changes in the hydrology of the landscape, the wetlands and woodlands of the Leaghur–Koorangie National Park will require environmental water allocations to maintain the health of these ecosystems.

Community views

Hunters oppose the creation of this park on the basis that waterfowl hunting and camping with dogs will not be permitted. Adjacent landowners, the water authority and the Catchment Management Authority have identified the environmental and water supply roles of some of the wetlands. Many submissions support the park and consider it should be extended to cover additional wetland areas, and that adjacent areas could be protected as part of conservation management networks.

Response

VEAC has retained the recommendation for the national park. Because the objectives of the park are to protect biodiversity values, recreational hunting is not permitted. The draft proposals have been varied to provide for campfires outside the high fire danger period. VEAC has also emphasised that dispersed camping will continue to be the predominant form of camping in the park. Council acknowledges that water is supplied from the park to adjacent properties, and this should be able to continue where no other sources of water are available, as part of a plan to ensure achievement of environmental flows. Many nearby areas outside the national park remain available for traditional recreational pursuits including hunting, notably Hird Swamp and Cullens Lake.

RECOMMENDATIONS

Leaghur–Koorangie National Park

A3 That:

- (a) the area of 7790 hectares shown on Map A be used in accordance with the general recommendations for national parks
- (b) an appropriate environmental water regime be implemented as outlined in recommendation R13
- (c) speed boating and fishing within parts of Lake Meran (Meering) be permitted, by arrangement with the land manager, and
- (d) existing water diversion licences be allowed to continue from particular wetlands where no other sources of water are available to adjoining landowners providing the environmental water requirements for these wetlands can be achieved.

Note:

1. Certain public land areas now managed by Goulburn–Murray Water are to be incorporated in the park under these recommendations. Goulburn–Murray Water has an ongoing role to operate, maintain and monitor flood retardation and drainage systems within the park.

A4 Gunbower National Park

Gunbower forest is the second largest River Red Gum forest in Victoria and includes wetlands and billabongs as well as extensive Black Box and saltbush woodlands to the south. This wetland area is listed under both the Ramsar Convention and the Directory of Important Wetlands in Australia.

The recommended Gunbower National Park (8892 hectares) encompasses 8265 hectares of the Gunbower State Forest (much of which is existing special protection zone) as well as 430 hectares of River Murray Reserve upstream of and including McClure Bend. Smaller areas included are part of Spence Bridge Education Area (35 hectares) and part of Gunbower Creek Public Land Water Frontage (149 hectares). The boundary for the recommended national park has been chosen to protect a diversity of vegetation types, including endangered and under-represented Ecological Vegetation Classes (EVCs), important flora and fauna habitat, whilst also providing a diversity of recreational opportunities and retaining timber harvesting activities in the adjoining Gunbower State Forest (recommendation C3).

The creation of Gunbower National Park contributes significantly to the representation of threatened EVCs such as the endangered Riverine Chenopod Woodland and Plains Woodland, the vulnerable Riverine Grassy Woodland and Spike-sedge Wetland, as well as smaller areas of Sedgy Riverine Forest, Riverine Swamp Forest and Tall Marsh.

One hundred and ninety-five species of native fauna have been recorded in the recommended Gunbower National Park, including 30 threatened species such as endangered

Inland Carpet Python, Silver Perch, Giant Bullfrog, Broad-shelled Turtle and Squirrel Glider. A number of egret and other colonially nesting waterbird breeding sites exist within Gunbower forest but there have been very few breeding events in the last 30 years due to insufficient flooding. The most recent event was in 2005/06 when egrets bred along Little Gunbower Creek (recommended to remain part of the Gunbower State Forest) after environmental water flooded parts of the forest. Within the recommended Gunbower National Park, egrets bred at Charcoal Swamp in the early 2000s. Although this area is protected in the Gunbower National Park it will require environmental water allocations to ensure the habitat is suitable for the breeding of these threatened species. This is outlined further in chapter 2 in the discussion of environmental water.

The floodplain forests, wetlands and drier Black Box woodlands provide habitat for 242 native plant species including 14 rare and threatened species. The threatened species include Western Water-starwort, a semi-aquatic plant that is threatened by altered flooding regimes, and Winged Peppergrass, with rare saltbushes and daisies also present.

Recreation is a major use of Gunbower forest. The river bends are particularly popular for dispersed camping in a natural setting and facilities at the existing Spence Bridge Education Area also provide a focus for recreational activities. Horseriding, trailbike riding and four wheel driving are popular in the forest and are recommended to be permitted to continue on existing trails and roads. Hunting, previously permitted within state forest, is not consistent with national park objectives and will not be permitted in the new park.

Commercial timber harvesting is currently a major use of Gunbower forest. For example, DSE's 2006/07 Wood Utilisation Plan allocated 7485 cubic metres from Gunbower State Forest. However, as no timber is currently harvested from the special protection zones or the Murray River Reserve, recommended for inclusion in the national park, the recommended Gunbower National Park does not impact greatly on the volumes of timber available for harvesting in this area. A number of historic sites, mostly representing early timber harvesting practices, have been identified in Gunbower forest and the national park should be managed to protect these values.

Cattle grazing in Gunbower forest was primarily by agistment in the past but stock have not been agisted in the forest for several years. The 12 current grazing licences in the Black Box woodland in the south of the park cover a total of 1481 hectares. Grazing will not be continued in the recommended national park.

There are currently 21 apiculture sites in the recommended Gunbower National Park and these will continue to be permitted. There are two mineral exploration licences over the recommended Gunbower National Park and these may continue, be renewed (if they do not lapse) and proceed to a mining licence and work authority, with appropriate consent. No other new exploration or mining licences can be granted once the recommended national park is established.

Community views

Those submissions opposed to the national park cited loss of recreational activities such as fishing, camping with dogs, campfires, hunting and the impact on local communities as a result of reduced timber availability, and loss of revenue to adjacent towns from visitors. Other submissions suggested the entire forest be made national park due to its size, Ramsar wetland status and importance for colonially nesting waterbirds.

Response

VEAC has largely retained the proposal for the Gunbower National Park and has varied the draft proposals to provide for campfires outside the high fire danger period. VEAC has also emphasised that dispersed camping will continue to be the predominant form of camping in the park. The national park has been reduced in size in an area along the River Murray from Brereton Road upstream to Horseshoe Bend north of Torrumbarry township. This area has been included in the Murray River Park. It provides for camping associated with the popular waterskiing area near Torrumbarry Weir and additional areas for camping with dogs. Another area near McNab Bend, along Gunbower Creek at the western end of the recommended park, is now recommended to remain as state forest, further reducing the size of the recommended park. This change is in response to the views of people who hunt and camp in this area with dogs.

RECOMMENDATIONS

Gunbower National Park

A4 That:

- (a) the area of 8892 hectares shown on Map A be used in accordance with the general recommendations for national parks
- (b) camping (in particular dispersed camping) continue in accordance with recommendations R32–R34
- (c) campfires and collection of wood for campfires continue outside the high fire danger period in accordance with recommendations R35–R36, and
- (d) an appropriate environmental water regime be implemented as outlined in recommendation R13.

Note:

1. Goulburn-Murray Water has an ongoing role to operate, maintain and monitor outfall systems within the park.

A5 Terrick Terrick National Park

The expanded Terrick Terrick National Park (3483 hectares within the investigation area, 5882 hectares in total) incorporates the existing Terrick Terrick National Park, the Terrick Terrick East, Roslynmead, Roslynmead East, Kotta, Tomara Gilgais, Pine Grove, and Wanurp Nature Conservation Reserves, The Meadows Wildlife Reserve, uncategorised public land known as 'Canegrass Swamp' and parts of the Bendigo Creek water frontage reserve. The additions to the national park are centred on an area known as the Patho Plains, between Echuca and Mitiamo.

This expanded national park more than doubles the extent of endangered Northern Plains Grassland Ecological Vegetation Class (EVC) already protected in the existing Terrick Terrick National Park. With the majority of this recommended park already part of the conservation reserve system in a variety of categories, consolidation in a single national park will simplify management. Although the recommended park appears to be fragmented, areas of native grasslands on private land provide ecological connections for the expanded park. The Northern Plains Conservation Management Network which is currently operates over the Patho Plains, seeks to coordinate the management of native grasslands over public and private land.

Besides the size and quality of the Northern Plains Grasslands themselves, the area is the most important in the state for the critically endangered Plains-wanderer, a small quail-like bird endemic to Australia. As many of the grasslands have not previously been cultivated, they provide habitat for significant reptile species such as Curl Snake and Hooded Scaly-foot. The shallow ephemeral wetlands within the grasslands provide habitat for Brolgas. The grasslands are also renowned for their flora, with the area being a stronghold for a number of threatened species including the nationally vulnerable Red Swainson-pea and Slender Darling-pea. The Bendigo (Mount Hope) Creek provides habitat for a number of threatened woodland fauna species, including Grey-crowned Babbler, Tree Goanna and Bush Stone-curlew.

The expansion of the Terrick Terrick National Park complements significant investment in conservation efforts on public and private land in this area, ranging from land purchase, conservation covenants, fencing and ecological grazing regimes. Sites of Aboriginal cultural significance have also been identified in sections of the Bendigo (Mt Hope) Creek. The national park should be managed to protect these values.

Recreational opportunities are mainly restricted to the woodland section of the national park (outside of the investigation area) and have not been widely encouraged in the grasslands section of the existing Terrick Terrick National Park nor in the nature conservation reserves. Hunting was previously permitted within The Meadows and Bendigo Creek Water Frontage Reserve sections of the recommended Terrick Terrick National Park but would not be permitted in the new park. No commercial timber harvesting currently occurs in the recommended national park area.

There are currently four apiculture sites in the Terrick Terrick National Park, in the woodland section outside of the investigation area and these will continue to be permitted. There are four mineral exploration licences over the expanded Terrick Terrick National Park and these may continue, be renewed (if they do not lapse) and proceed to a mining licence and work authority, with appropriate consent. No other new exploration or mining licences can be granted once the recommended national park is established.

The grasslands section of Terrick Terrick National Park and the existing nature conservation reserves are currently grazed by sheep at times of the year to provide desirable structure for Plains-wanderer and other flora and fauna. This grazing is for ecological purposes, in accordance with the respective management plans, and is not under licence. The timing and stocking rate is strictly controlled by Parks Victoria. In the short term at least, it would be desirable to retain this management regime. The current licensed grazing of Bendigo (Mt Hope) Creek would not continue in the recommended national park. The restoration of fencing along parts of the creek would be required to exclude stock.

Community views

A small number of submissions called for the addition of various grassland reserves on the Patho Plains to the Terrick Terrick National Park. A number of submissions supported the expanded Terrick Terrick National Park.

RECOMMENDATIONS

Terrick Terrick National Park

A5 That:

- (a) the area of 3483 hectares shown on Map A be used in accordance with the general recommendations for national parks
- (b) existing water diversion licences be allowed to continue where no other sources of water are available to adjoining landowners, and
- (c) low intensity sheep grazing under contract, where necessary for biodiversity conservation, be permitted at the land manager's discretion.

Notes:

1. Some small areas along Bendigo (Mt Hope) Creek have been cropped (legally and illegally) and require restoration to enhance their grassland and woodland ecosystems. Fencing to align with cadastral boundaries is required to prevent further loss of values along this creek.
2. There is currently an agricultural licence over an area of Crown land adjoining Bendigo (Mt Hope) Creek (Parcel number P129443) and this area has been cropped for a number of years. However considering its proximity to native grassland areas (both on public and private land), and a population of the endangered Striated Sun-moth, restoration of a native grassland community on this site is considered desirable. The agricultural licence should be discontinued and no further cropping should occur.
3. Improved fencing for parts of Bendigo (Mt Hope) Creek is required.

4. VEAC is aware that the government has recently reached agreement to purchase approximately 220 hectares of private land in the Parish of Patho for addition to the reserve system. This land, which contains high quality native grasslands, would be an appropriate addition to the Terrick Terrick National Park once transferred to the Crown.
5. The reach of Bendigo (Mt Hope) Creek between parcels P129443 and P129444 has not been parcelised but is public land in the stream beds and banks public land use category and should be included in the recommended national park.

A6 Lower Goulburn River National Park

The Lower Goulburn River National Park (12,154 hectares) incorporates much of the Lower Goulburn and Murray River State Forests as well as the Little Gilmartin and Big Gilmartin State Forests. It also includes the Wyuna Bushland Reserve, Yambuna Bridge Streamside Reserve, Loch Garry and Kanyapella Basin Wildlife Management Cooperative Areas, and sections of water reserves along Yambuna and Warrigal Creeks.

The Lower Goulburn River corridor has strong ecological integrity and is a recognised biolink through the landscape. In recognition of its unique natural, recreational, scenic and cultural values, the Goulburn Heritage River was declared in 1992. Kanyapella Basin and the Lower Goulburn River Floodplain are both listed under the Directory of Important Wetlands in Australia. The Lower Goulburn River National Park makes significant contributions to improving the representation of a number of Ecological Vegetation Classes (EVCs) in the Murray Fans bioregion, including Riverine Grassy Woodland, Sedgy Riverine Forest and Floodplain Riparian Woodland, as well as protecting areas of endangered Plains Woodland and Riverine Chenopod Woodland along the River Murray.

The Lower Goulburn forests are particularly important habitat for a number of significant fauna species, including the Squirrel Glider, Brush-tailed Phascogale and Barking Owl. Kanyapella Basin provides habitat for a number of threatened bird species, including the critically endangered Australian Painted Snipe, the endangered Bush Stone-curlew and the vulnerable Royal Spoonbill, Diamond Firetail and Musk Duck. Flora species of note include the endangered Grey Billy-buttons, Small Scurf-pea and Jericho Wiregrass. The recommended Lower Goulburn River National Park contains a number of known sites of Aboriginal cultural heritage including scarred trees and artefacts along the riverine forests, and cooking mounds at Loch Garry and Kanyapella Basin. The national park should be managed to protect these values.

The Goulburn River forests are popular for camping, fishing, canoeing, bushwalking and a variety of other recreational activities, particularly close to Shepparton and where the Goulburn and Murray Rivers meet. Camping with dogs will not be permitted within the recommended park but dogs will be permitted in the adjoining recommended Murray River Park (recommendation B3) where the Goulburn River and Murray River meet, and in the recommended Shepparton Regional Park (recommendation B2). Onlead dog walking will also be permitted in Gemmill Swamp Nature Conservation Reserve (recommendation D46).

Hunting is currently permitted within the state forest portion of the recommended Lower Goulburn River National Park and in Kanyapella Basin, but would not be permitted in the new national park.

The state forests in the Lower Goulburn contribute six percent of total sawlog production in the Murray Fans bioregion (which includes Barmah and Gunbower forests). Domestic firewood collection also occurs.

Grazing licences occupy approximately 60 percent of public land along the Lower Goulburn forests, although it is unlikely that this proportion is grazed at any one time. Firewood collection and grazing would be discontinued in the national park. Small areas of Kanyapella Basin have been cleared for agriculture and cropped, an activity not consistent with national park objectives and which would not continue. Such areas will require restoration.

There are currently five apiculture sites in the recommended Lower Goulburn River National Park and these will continue to be permitted.

Due to the changes in flow regimes down the Goulburn River and into Kanyapella Basin, the wetlands and woodlands of the Lower Goulburn River National Park will require manipulated watering to maintain health of the floodplain and associated ecosystems. This is outlined further in chapter two in the discussion of environmental water.

Community views

Submissions supporting the park highlighted the value of its riverine forests and associated woodlands for wildlife and as a biodiversity corridor. Submissions that opposed the park cited a desire for continued access to the river with dogs, for hunting and fishing, for grazing and for firewood collection.

Response

VEAC has retained the proposal for the Lower Goulburn National Park but has varied the draft proposals to provide for campfires outside the high fire danger period. VEAC has also emphasised that dispersed camping will continue to be the main form of camping in the park. The national park has been reduced in size to provide for additional uses around Shepparton. Reedy Swamp has been returned to its former category as a wildlife reserve to allow waterfowl hunting to continue and Gemmill Swamp has been returned to its former category as a nature conservation reserve (dog walking on lead will be permitted). Other areas to the north and south of Shepparton have been included in the Shepparton Regional Park to provide for camping and sledding with dogs and some areas for firewood collection. An area used by the Scouts Association has been recommended as a Community Use Area.

RECOMMENDATIONS

Lower Goulburn River National Park

A6 That:

- (a) the area of 12,154 hectares shown on Map A be used in accordance with the general recommendations for national parks
- (b) camping (in particular dispersed camping) continue in accordance with recommendations R32–R34
- (c) campfires and collection of wood for campfires continue outside the high fire danger period in accordance with recommendations R35–R36
- (d) an appropriate environmental water regime be implemented as outlined in recommendation R13, and
- (e) existing water diversion licences be allowed to continue where no other sources of water are available to adjoining landowners.

Notes:

1. Certain public land areas now managed by Goulburn–Murray Water are to be incorporated in the park under these recommendations. Goulburn–Murray Water should continue to manage channels and regulators within the Kanyapella Basin section of the park for the purpose of flood mitigation and water transfer and the outfalls and drainage services in other sections of the park.
2. Sections of Kanyapella Basin have been cleared for agricultural purposes. Restoration of these areas using indigenous species matching benchmarks for Ecological Vegetation Classes should be undertaken.
3. The water requirements for Kanyapella Basin and options for achieving an improved water regime in this area are outlined in the Kanyapella Basin Environmental Management Plan.

A7 Barmah National Park

With the adjoining Millewa forest in New South Wales, Barmah forest forms the largest River Red Gum forest in the world. It is also the pre-eminent site in the investigation area in terms of natural values—many of which are threatened. Accordingly, VEAC is recommending the creation of Barmah National Park (28,521 hectares) encompassing most of the existing Barmah State Forest (19,853 hectares), Barmah State Park (8366 hectares in two blocks) and River Murray Reserve (220 hectares). Additionally public land water frontage along Broken Creek (63 hectares) and Ulupna Creek (eight hectares) as well as six hectares of road reserve and three hectares of uncategorised public land would be included. Two reference areas in the existing Barmah State Park are recommended to be retained in the new national park (recommendation F1).

Not included in the park is an area of 22 hectares around the Dharnya centre buildings and nearby muster yards. This envelope (currently partly state forest and state park) is recommended as community use area (recommendation I6) to provide greater flexibility for potential development and use of this 'gateway to the park'. Barmah Island, just north of Barmah township, is not included in the national park, and forms part of the recommended Murray River Park.

The Barmah–Millewa forest is recognised internationally as a wetland of significance under the Ramsar Convention. It supports approximately 224 native fauna and 370 native flora species with some 39 threatened or near-threatened fauna species, including breeding sites for the Superb Parrot (the only remaining site in Victoria) and colonially breeding water birds such as Eastern Great, Intermediate and Little Egrets. The recommended national park will protect habitat for 38 rare or threatened plants including the endangered Mueller Daisy, Slender Love-grass, Spiny-fruit Saltbush, and Winged Peppercreep. Creation of the park will also significantly improve the reserve system protection of a large number of endangered, vulnerable, or depleted ecological vegetation classes. The EVCs include the endangered Plains Woodland and vulnerable Riverine Swampy Woodland and Riverine Grassy Woodland.

The Barmah–Millewa forest exists because of the limited flow capacity of the main river channel and presents a range of geomorphological features of national importance. The forest ecology has formed as a result of the interaction between tectonic movements of the earth and the River Murray's changing hydrology. The Murray in this region has been strongly influenced by local, relatively recent tectonic movements on the roughly north–south oriented Cadell Fault, and the changing sequence of channels across the floodplain. The region is also characterised by a severely constricted reach, known as the Barmah Choke, in which the river channel capacity significantly decreases, thereby forcing the river's flow into the Edward River in New South Wales and out onto the broader floodplain, including its network of channels and anabranches. The floodplain is characterised by its width and swampy nature—shallow but widespread floods are common.

Barmah forest has a significant number of Aboriginal cultural heritage sites and places including scarred trees, mounds, stone artefact scatters, middens and burial sites.

Traditional Owners have articulated a strong affinity with the Barmah forest and continue to assert their claims of ownership of this area as their traditional Country. VEAC acknowledges the cultural importance of this area for Traditional Owners and recommends that a shared management structure be established for the recommended Barmah National Park. The management board or committee would consist of a majority of Traditional Owner representatives as outlined in general recommendation R24.

Currently, Barmah forest is used extensively for recreational activities, including camping along the river and creeks, horseriding, fishing, waterskiing, swimming and canoeing. The forests, sandy river beaches, creeks and lakes provide an ideal setting for low cost family holidays, particularly over Easter, Christmas and the Melbourne Cup long weekend. In addition, many visitors stay in adjacent caravan and camping parks and make use of the forest for similar recreation activities. A number of commercial tour operators provide horse riding, canoeing and bike riding tours of Barmah forest. VEAC strongly supports the continued use of the recommended Barmah National Park for these recreation activities.

VEAC is recommending that dispersed camping continue as the main form of camping in Barmah forest—as elsewhere in the investigation area—and, along with the designated camping area at Barmah Lake be managed in accordance with recommendations R32 and R33. Land managers will need to pay particular attention to the protection of conservation values and take steps to minimise conflicts between different user groups in times of peak visitation, during holidays and long weekends.

Campfires and collection of wood for campfires will be permitted in the recommended Barmah National Park, except during the high fire danger period. This recommendation is consistent with concerns about escaped campfires. Particular attention will need to be given to managing the collection of wood for campfires to minimise the negative impacts on the biodiversity values of the area. The use of public land areas for camping with dogs and undertaking day visits with dogs is important for many people. Dogs will not be permitted in the recommended national park for Barmah, but will be allowed in the adjoining recommended Murray River Park.

Historically, hunting in Barmah State Forest focused on feral animals, notably pigs and deer, with waterfowl taken occasionally. Under the recommended national park, hunting will not be a permitted recreational use. However, as a result, the removal of introduced animals by land managers, in association with organised hunting groups, is supported.

Comparatively frequent flooding has allowed Barmah forest to supply over half the timber resource (including commercial firewood) harvested in the investigation area in recent years. However, timber harvesting is not permitted in national parks and will not be permitted in the recommended Barmah National Park. Most of Gunbower State Forest and forests near Koondrook will remain available for commercial timber production.

Similarly, domestic firewood collection under permit—which currently occurs in Barmah State Forest—will not be allowed in the recommended national park. VEAC is recommending

that a zone for domestic firewood collection be established in Barmah Island block of the recommended Murray River Park (recommendation B3) near Barmah in order to provide firewood for local residents, many of whom have few viable alternative heating sources.

Domestic stock grazing has occurred in Barmah forest for several generations. The average of 2000 (summer) and 800 (winter) head of cattle agisted in the forest has been reduced in response to recent drought conditions, culminating in the destocking of the forest from the start of the 2007 winter term. There are also seven current grazing licences covering a total of 78 hectares and with a total carrying capacity of 112 Dry Sheep Equivalent that would be excluded from the recommended national park. Grazing with domestic stock is incompatible with national park status and will not be permitted in the recommended park. As well as domestic stock, Barmah forest is also grazed by feral horses and deer which, together with feral pigs, should be controlled in the recommended national park to protect its highly significant natural values.

Apiculture is currently permitted in Barmah forest other than in and within two kilometres of the two reference areas. This will continue to be the case in the recommended Barmah National Park.

Community views

A large number of submissions mentioned the Barmah forest, highlighting its special significance to a wide range of people, including Traditional Owners. Submissions were received from neighbouring property owners and residents of adjacent townships, recreation groups, tour operators, licensees, clubs and individuals. Significant themes represented include those seeking no change to existing recreational uses, particularly dispersed camping and forest uses such as timber harvesting, grazing and firewood collection. There were a large number of submissions supporting the creation of the national park. The environmental values of the forest and the need for environmental water were acknowledged by many, but many also questioned how environmental water will be obtained and at what cost.

Response

VEAC has retained the proposal for a Barmah National Park but has varied the draft proposals to provide for campfires outside the high fire danger period. VEAC has also emphasised that dispersed camping will continue to be the main form of camping in the park. The proposed national park has been reduced in size in the area north of Barmah township to The Gap. This area (Barmah Island block) has been included in the Murray River Park to provide additional areas for people to go camping with their dogs and to provide a source of firewood for adjacent townships including Barmah and Nathalia.

RECOMMENDATIONS

Barmah National Park

A7 That:

- (a) the area of 28,521 hectares shown on Map A be used in accordance with the general recommendations for national parks
- (b) camping (in particular dispersed camping) continue in accordance with recommendation R32–R34
- (c) campfires and collection of wood for campfires continue outside the high fire danger period in accordance with recommendations R35–R36
- (d) an appropriate environmental water regime be established for this national park as outlined in recommendation R13, and
- (e) an Indigenous co-management board be established for the national park in accordance with recommendation R26 (b).

Notes:

1. Over time the course of the River Murray has altered since the state border was determined. A 43 hectare area of NSW known as 'Native Dog Flora Reserve' (part of Thornley State Forest) is effectively an inlier and contiguous with the Ulupna Island section of Barmah National Park. An agreement should be sought with the NSW Department of Primary Industries to enable DSE or a designated agency to manage Native Dog Flora Reserve as part of the Barmah National Park under existing provisions of Section 19D of the *National Parks Act 1975*.
2. The park encompasses two existing reference areas (see recommendation F1). Reference areas must be managed in accordance with the *Reference Areas Act 1978*.
3. VEAC notes that feral horses and pigs have been present in the Barmah forest for several decades. The land manager has responsibility for eliminating and controlling pest plants and animals, and should make a concerted effort to control these animals in the recommended national park.
4. Goulburn–Murray Water has an ongoing role to operate, maintain and monitor outfall and drainage systems within the park.

A8 Warby Range–Ovens River National Park

The recommended Warby Range–Ovens River National Park (total area 15,889 hectares) links the existing Warby Range State Park (11,460 hectares outside the River Red Gum Forests Investigation area) with 4367 hectares of public land along the Lower Ovens River near the confluence of the Ovens and Murray Rivers. Within the investigation area, the recommended national park consists of the existing Lower Ovens State Forest (2591 hectares), Lower Ovens Regional Park (1223 hectares), Peechelba Flora Reserve (220 hectares), water authority land (130 hectares) and approximately 20 hectares of public land water frontage. A further 62 hectares of public land water frontage reserve and bushland reserve along Chinaman and Irishtown Creeks linking the Killawarra and Lower Ovens Forests are also included in the national park.

The Ovens River—a Heritage River—remains the only substantial, essentially unregulated Victorian tributary of the Murray River, with only two tributaries (the Buffalo and King Rivers) having a small storage each. The resultant near natural flow regime partly explains the high biodiversity values and moderate–good condition stream condition of the Lower Ovens. The flooding pattern also generates floods further downstream along the River Murray and its floodplains. Maintaining the Ovens River as an unregulated system is essential to protect the natural values along the river.

The Warby Range–Ovens River National Park will protect wetlands and streams that provide habitat for many threatened bird and frog species including egrets, spoonbills, White-bellied Sea-Eagle and the Growling Grass Frog. Significant aquatic species include the Murray and Trout Cod, Golden Perch, Flat-headed Galaxias, Unspecked Hardyhead and Murray Spiny Cray. The forests have particular importance for the near threatened Southern Myotis, usually a cave dwelling bat, which roosts in River Red Gums in this area. More than 185 native animal species have been recorded in the Lower Ovens forests including 30 threatened species.

Two hundred and one native plant species (including nine rare or threatened species) have been recorded in the area. The region is extremely important for the endangered Mueller Daisy. This species occurs in only about four populations across northern Victoria (as well as a small area in NSW) and is threatened by overgrazing. A regionally significant localised shrubland of Rough-barked Honey-myrtle is located in the recommended park near Peechelba.

Creating the Warby Range–Ovens River National Park will substantially increase reserve system representation for the threatened ecological vegetation classes Sedgy Riverine Forest, Floodplain Riparian Woodland, Riverine Swampy Woodland and Billabong Wetland Aggregate.

The Lower Ovens forests provide an important north–south vegetated link between the River Murray and the Warby Ranges that will increase in importance with climate change. Consolidating the Lower Ovens forests with the Warby Range State Park in one park will lead to a more integrated conservation management approach and ultimately more effective onground connections between

the areas to achieve conservation objectives. The creation of a larger national park, whilst occurring in two discrete units, is supported by native vegetation corridors on private land between the two areas.

The forests and wetlands of the Lower Ovens River provide a tranquil setting and are popular for recreational activities including camping and fishing. Convenient access from the Murray Valley Highway and the ability to reach the nearby town of Bundalong by boat add to the camping experience. Camping peaks (beyond capacity) over Easter, Christmas and Melbourne Cup weekend and is most popular at Parolas Bend (15,000 annual camper nights and up to 2000 individuals at Easter). Such large numbers of campers create high demand for firewood and remove habitat for ground dwelling fauna. The use of pit toilets is also a problem in the narrow band of less than 100 metres between the river and the adjacent wetlands. VEAC recognises the need to better manage human waste disposal close to waterways and recommends that all campers at Parolas Bend be required to provide and use a chemical toilet. In riverine areas, dispersed camping will continue in the Warby Range–Ovens River National Park and campfires will be permitted outside the high fire danger period.

No sawlog or commercial firewood harvesting activities have occurred recently in the Ovens forests and departmental thinning activities have been carried out in the last five years to provide firewood. A number of grazing licences (including broadacre, water frontage, and unused road reserve) cover approximately 70 percent of the recommended national park within the investigation area. These activities are inconsistent with the objectives of a national park and will be discontinued.

There are currently five apiculture sites in the Lower Ovens forests and these will continue to be permitted in the recommended national park. A base mineral exploration licence is current over most of the Lower Ovens forests and this may continue, be renewed (if it does not lapse) and proceed to a mining licence and work authority, with appropriate consent. However, no other new exploration or mining licences can be granted once the recommended national park is established.

Community views

Many submissions were received from local and regional residents and local authorities. Many opposed the park based on concerns about cessation of grazing and its perceived impacts such as fire risk, weed management, fencing costs and loss of income, and loss of access for traditional camping uses. Local fire authorities voiced concern regarding any loss of access for fire protection and suppression. Some submissions raised concern about the cessation of domestic firewood collection. Many others supported the park because of its biodiversity values, high quality condition of the forests and unregulated nature of the Ovens River.

Response

VEAC has retained the proposal for the Warby Range–Ovens River National Park because of its high biodiversity values. The draft proposals have been varied to provide for campfires and collection of firewood for campfires outside the high fire danger period in riverine sections.

VEAC has also emphasised that dispersed camping will continue to be the predominant form of camping in the park. In keeping with national park status, grazing is to cease. However, land managers may utilise domestic stock grazing on public land under contract for ecological management purposes such as targeted weed control. Access for domestic firewood is to cease, and VEAC recommends that land managers develop strategies to ensure wood is available to local communities from other sources (see R40–R44). Fire protection plans will need to be reviewed to ensure protection and suppression strategies are updated as required in consultation with local communities, but the recommendations should not result in any reduction in access for these purposes.

RECOMMENDATIONS

Warby Range–Ovens River National Park

A8 That:

- (a) the area of 15,889 hectares (4367 hectares inside the investigation area and 11,522 outside of the investigation area) shown on Map A as the Warby Range–Ovens River National Park be used in accordance with the general recommendations for national parks
- (b) camping (in particular dispersed camping) continue in accordance with recommendations R32–R34
- (c) campfires and collection of wood for campfires continue outside the high fire danger period in accordance with recommendations R35–R36
- (d) an appropriate environmental water regime be implemented as outlined in R13, and
- (e) existing water diversion licences be allowed to continue where no other water sources are available to adjoining landholders.

Notes:

1. All campers at Parolas Bend must have a chemical toilet which must be emptied at an approved disposal point such as a caravan park.
2. Car rallying will continue to be permitted in Killawarra forest (currently part of Warby Range State Park), by arrangement with the land manager.
3. VEAC notes that certain areas of public land managed by Goulburn–Murray Water are included in the park.

A9 Mount Buffalo National Park

A small area (9.6 hectares) of public land water frontage reserve and unused road reserve along the Buckland River and stone reserve at Nug Nug is recommended to be added to the Mount Buffalo National Park. This area contains Herb-rich Foothill Forest Ecological Vegetation Class and the addition of this area consolidates the boundary of the park which is outside the investigation area.

RECOMMENDATIONS

Mount Buffalo National Park

A9

That the area of 22.1 hectares shown on Map A be used in accordance with the general recommendations for national parks.

B Regional parks and other parks

A regional park is an area of public land set aside primarily to provide informal recreation for large numbers of people in natural or semi-natural surroundings. Such parks provide an area of natural vegetation often close to towns and visitors enjoy a wide range of recreational activities.

The parks generally give recreation objectives priority over conservation objectives. Regional parks are usually readily accessible from urban centres or major tourist routes.

Typically, they provide an environment where residents can walk their dog and visitors can stop for a picnic in a natural bush setting.

The more intensively developed recreation areas on public land, such as sportsgrounds, are generally categorised as community use areas and are described later in this chapter. VEAC is recommending two new regional parks: Kerang Regional Park and Shepparton Regional Park.

There are many contiguous areas of public land along the River Murray with similar levels of recreational intensity and activity to regional parks and which are generally accessible from major towns and tourist routes. This regional park area, which extends from Wodonga to beyond Mildura, is recommended to be known simply as the Murray River Park.

There are other places in the investigation area that currently have a comparable intensity of recreational use and similar activities (e.g. dog walking) to a regional park, in combination with a high level of natural values. In such cases, conservation objectives require a higher priority than apportioned in regional parks. These four recommended parks—Murray–Kulkyne, Kings Billabong, Gadsen Bend, and Nyah–Vinifera—will be included on Schedule Three of the *National Parks Act 1975* and are described below. Schedule Three currently includes similar categories of parks (e.g. coastal parks) where both conservation and recreation are considered a high priority. Establishing these parks in this way means that they are considered protected areas and contribute towards achieving a comprehensive, adequate and representative reserve system, while at the same time allowing for a broader range of uses and activities such as dogwalking and camping with dogs, that are not usually allowed in national, state and wilderness parks.

Regional parks have high levels of visitor use, and it is important for land managers to have effective tools to manage and regulate visitor activities. Development of appropriate regulations is a high priority. For areas abutting the New South Wales border on the River Murray, it is also important to ensure a seamless regulatory regime across the border, which is difficult to define on the ground.

RECOMMENDATIONS

General recommendations for regional parks and other parks

B That:

- (a) regional parks and other parks shown on Map A (numbered B1 to B7) and described below be used to:
 - (i) provide for informal recreation associated with enjoyment of natural surroundings by large numbers of people
 - (ii) conserve and protect natural landscapes and scenic values
 - (iii) conserve and protect biodiversity to the extent that is consistent with (i) above, and
 - (iv) protect significant cultural and historic sites and places, including Aboriginal cultural sites and places;
- (b) the following activities generally be permitted:
 - (i) bushwalking, nature observation, heritage appreciation, picnicking, recreational fishing
 - (ii) camping including dispersed camping in accordance with recommendation R32–R34
 - (iii) dogwalking and camping with dogs (see notes below)
 - (iv) car touring, including four wheel driving, on formed roads and tracks
 - (v) mountain bike and trailbike riding on formed roads and tracks
 - (vi) horseriding on formed roads and tracks and overnight camping with horses
 - (vii) apiculture
 - (viii) metal detecting, prospecting, and
 - (ix) research, subject to permit;
- (c) the following activities not be permitted:
 - (i) harvesting of forest products, except where domestic firewood collection zones are specifically identified (see recommendations B2, B3 and R40)
 - (ii) grazing by domestic stock
 - (iii) hunting and use of firearms, and
 - (iv) burning solid fuel fires during the high fire danger period;
- (d) subject to clearly defined, transparent and scientifically supported ecological objectives, park managers may undertake adaptive management to restore ecosystems or to return them to a condition more closely resembling their natural condition (refer chapter two – see also notes 3 and 4 below);
- (e) unused road reserves be added to adjoining parks where appropriate; and
- (f) a management plan be prepared for each park in partnership with key user groups, local authorities and the community.

Notes:

1. Dogs must be on a leash in some areas as zoned in management plans.
2. Collection of firewood for campfires is permitted outside the designated high fire danger period.
3. Ecological thinning may be permitted where required for ecological management purposes.
4. Short term grazing may be contracted for ecological or management purposes such as targeted weed control.
5. Hunting and use of firearms may be allowed as part of a pest animal control program.
6. Implementation of recommendations and land management should allow flexibility for minor boundary adjustments.

B1 Kerang Regional Park

The recommended Kerang Regional Park (1138 hectares) encompasses a variety of public land parcels containing riverine and wetland environments encircling the township of Kerang. This land includes Town and Back Swamps, Cemetery Forest Wildlife Reserve (and adjoining uncategorised Crown land), Fosters Swamp and areas of public land water frontage along the Loddon River and Pyramid Creek which link these swamps.

The majority of the recommended park is part of the Kerang Wetlands Ramsar Site, which is of international significance because of the types of wetlands represented and the ecological and genetic diversity they support, particularly for waterbirds. The wetlands within the recommended Kerang Regional Park support habitat for a range of significant fauna species, including Intermediate Egret, Royal Spoonbill and Golden Perch and flora species such as Swamp Buttercup, Umbrella Wattle, Twin-leaf Bedstraw, Spreading Emu-bush and Waterbush. Lignum Swampy Woodland and Lignum Swamp are the dominant ecological vegetation classes (EVCs) and the sections of the Loddon River and Pyramid Creek contain River Red Gum and Black Box riparian woodlands. Fosters Swamp, in particular, has high waterbird carrying capacity and species diversity. The Brick Kilns (Tragedy) Bridge, constructed in 1927, on Lower Loddon Road over Pyramid Creek, is of state historical significance.

Fosters Swamp is currently used by Lower Murray Water for directing tertiary sewage outfall and drainage water for evaporation, and it can continue to be used for this purpose, as required, in consultation with the land manager. Access to the western section of the swamp (where the ponds are located) may need to be restricted. The sewage lagoon system and associated infrastructure is not included in the recommended regional park.

Town and Back Swamps are currently used for passive recreation such as dogwalking. Parts of Cemetery Swamp are currently designated as a Wildlife Reserve available for hunting, and hunting is also permitted in the other wetlands surrounding Kerang. Due to the proximity to the township of Kerang and the objective to encourage use of these areas for a range of recreational activities, hunting would not be permitted in the recommended regional park.

The grazing licences on parts of the recommended regional park would not be continued.

Community views

A relatively small number of submissions were received and these were mostly in support of the park proposal. Some called for the establishment of a Kerang Lakes State Park, while others sought better protection of individual wetlands as new nature conservation reserves. Some other submissions opposed the creation of the park because hunting would not be allowed.

Response

VEAC has retained the proposal for the Kerang Regional Park. Because of its proximity to Kerang, hunting is considered not to be appropriate. The recommended Kerang Regional Park would unify and enhance the management of these important wetlands, both for their recreation and biodiversity values.

RECOMMENDATIONS

Kerang Regional Park

B1 That:

(a) the area of 1138 hectares shown on Map A as the Kerang Regional Park be used in accordance with general recommendations B for regional parks and other parks

(b) the use of Fosters Swamp as an outfall for tertiary sewage and drainage be permitted in consultation with the land manager, and

(c) the area be reserved under section 4 of the *Crown Land (Reserves) Act 1978*.

B2 Shepparton Regional Park

The Shepparton Regional Park (2786 hectares) is centred on the River Red Gum forests of the Goulburn River between Shepparton and Mooroopna. It incorporates part of the Lower Goulburn State Forest, the Shepparton Flora and Fauna Reserve, Mooroopna Recreation Reserve and public land water frontage. This area continues upstream from the recommended Lower Goulburn River National Park to the north and offers a number of recreational activities including walking, fishing, canoeing, bikeriding, horseriding, trailbike riding and nature observation. The recommended Shepparton Regional Park provides increased opportunities for recreation activities that would not be available in the recommended Lower Goulburn River National Park, such as dogwalking, camping with dogs and (in designated zones) domestic firewood collection.

The natural values of this park are similar to those of the adjoining recommended Lower Goulburn River National Park, with Sedgy Riverine Forest, Riverine Grassy Woodland and Riverine Swamp Forest EVCs which provide habitat for significant species such as the endangered Squirrel Glider.

Community views

Many submissions supported the park, highlighting its importance for residents and visitors. Submissions that opposed the park expressed a desire to retain access to traditional pursuits such as access for camping with dogs, hunting and fishing, and firewood collection.

Response

VEAC has retained the recommendation for the park and increased its size to provide for additional areas for traditional uses close to Shepparton, including walking dogs, and reduced the size of the proposed Lower Goulburn River National Park. The enlarged regional park provides for camping with dogs and collection of domestic firewood in defined zones. The adjacent Reedy Swamp has been returned to its former category as a wildlife reserve to allow waterfowl hunting to continue and Gemmill Swamp has been returned to its former category as a nature conservation reserve with dog walking on lead. An area used by the Scouts Association has been categorised as a Community Use Area. Fishing is not affected under previous or current proposals.

RECOMMENDATIONS

Shepparton Regional Park

B2 That:

(a) the area of 2786 hectares shown on Map A as the Shepparton Regional Park be used in accordance with general recommendations B for regional parks and other parks

(b) domestic firewood collection generally not be permitted, other than in zones to be designated in accordance with recommendation R40, and

(c) the area be reserved under section 4 of the *Crown Land (Reserves) Act 1978*.

B3 Murray River Park

The Murray River Park is the major land use category along the River Murray in the investigation area, and extends from Wodonga to west of Mildura. It builds on the Land Conservation Council's 1985 approved recommendations for the River Murray Reserve. This park will help conserve and protect the many values and uses of public land along the Murray River and maintain a continuous vegetated corridor along the river. The Murray River Park (34,685 hectares) incorporates most of the existing River Murray Reserve, adjoining areas of state forest, existing regional parks at Wodonga, Yarrawonga, Cobram, Tocumwal and Echuca, public land water frontages, and small areas of land in various other public land use categories.

As outlined by the Land Conservation Council in 1985, these lands in association with the river, provide a significant natural attraction for people wishing to engage in river-based recreation in an essentially natural environment and provide an outstanding scenic landscape. Many recreational activities are pursued along the river. Camping on or near the sandy beaches of the Yarrawonga–Ulupna Island reach is very popular, as is fishing, walking, nature study or just relaxing by the river. Swimming, houseboating, canoeing, rafting, and waterskiing are also popular pastimes. The Southern 80 water ski race is a very well-attended event that takes place on the River Murray between Echuca and Torrumbarry, with much of the land-based activity taking place in the recommended Murray River Park.

The enjoyment derived from various activities depends in large measure on maintaining and protecting the river and treescape adjacent to it. In addition, the river's heritage values need to be protected, including old sawmill sites, punt landings, and localities associated with the riverboat era. Archaeological sites of significance—such as Aboriginal fish weirs, middens, and canoe trees—also need to be protected.

Management of the Murray River Park should be directed toward enhancing the scenic, recreation, and nature conservation values, protecting historical and archaeological features and providing opportunities for a diversity of informal recreation activities in an essentially natural riverine

environment. Consolidating the various land use categories that comprise the recommended Murray River Park will integrate management of these riverlands, enhancing and broadening recreational opportunities and emphasising connectivity. Developing a strategy for dispersed camping (and associated firewood collection in accordance with recommendations R33 and R36) in consultation with users will ensure the riverine environment is maintained even with increasing numbers of campers along the River Murray.

Due to the importance of fallen timber for fauna in the riverine forests, commercial and domestic firewood collection would not be permitted in the Murray River Park, other than in zones to be designated by the land manager in consultation with the community for domestic firewood collection around Mildura, Robinvale, Boundary Bend, Swan Hill, Barmah, Cobram and Rutherglen. As a general rule, an average of 50 tonnes per hectare of coarse woody debris across each frontage block should be maintained. Due to fire risk, solid fuel fires will be prohibited during the high fire danger period (as determined by the Department of Sustainability and Environment in conjunction with the Country Fire Authority) on all public land adjoining the River Murray (see recommendations R35–R36) consistent with comparable areas in New South Wales and South Australia.

Given that there are high level natural and scenic values and intense recreation pressures, some activities previously permitted in the former land use categories will be incompatible with the objectives and direction sought through the Murray River Park. For example, due to the numerous campers using areas in the recommended Murray River Park, hunting and grazing are not appropriate.

A number of licensed pump sites, pumpline sites, and regulators associated with water management and use occur within the recommended park and the use of these facilities would continue. A number of large new installations consisting of pumpsites, pipelines and power supplies have been approved in recent years and it is clear that these have had an impact on the environmental, cultural, scenic and recreation values of the River Murray frontage. The process to determine new applications is complex, as approvals are required under many pieces of legislation, such as the *Water Act 1989*, *Crown Land (Reserves) Act 1978*, and *National Parks Act 1975*, and involve a number of separate agencies. This can result not only in delays, but in lack of clarity as to which legislation and agency has primary responsibility. A new streamlined approach is required on applications for new installations that also meets the governance requirements of the respective legislation. As a result of VEAC's recommendations for new parks, amendment to existing processes, and approvals and some legislation will be required. The approach needs to:

- develop a revised approval process that meets the legislated objectives of the new land categories and adopts a whole of government approach to dealing with applications
- develop guidelines to minimise the impact on the environmental, cultural, scenic and recreation values of the River Murray frontage and on the overall appearance of these structures, particularly at pump sites

- direct the location of structures to private land where possible or, failing that, consolidate frontage sites.

The land in New South Wales abutting the River Murray shares similar characteristics, values and uses with the recommended Murray River Park. Compatible management of at least the public land component of the New South Wales river frontage with the Murray River Park is highly desirable. As the Victorian–New South Wales border is the top of the southern bank of the River Murray, activities occurring on the River Murray itself or on sandbanks on the southern side of the River Murray are within the jurisdiction of New South Wales. Nonetheless a number of activities that occur on the river or the sandbars have a direct impact on areas within the recommended Murray River Park, including watersports, the construction of jetties connected to the Victorian side of the river and activities associated with camping on sandbars. A coordinated management approach with New South Wales authorities, preferably including a seamless regulatory regime, would resolve a number of these anomalies and provide a more integrated approach to planning along the River Murray (see recommendation R37).

Community views

Many submissions were received from local and regional residents and local organisations regarding the Murray River Park. Submissions supporting the park highlighted the importance of a habitat corridor along the length of the river. Submissions that opposed the park expressed a desire for continued access to traditional pursuits such as access for camping with dogs, hunting and fishing, and firewood collection. Some opposition to the park was based on fears that the cessation of grazing would increase fire risk, weeds and fencing costs and also reduce income for licensees. Some submissions raised concerns about the cessation of domestic firewood collection.

Response

VEAC has retained the proposal for the Murray River Park as it can accommodate most of the existing recreation uses while protecting its biodiversity and habitat connectivity values. The draft proposals have been varied to provide for campfires and collection of firewood for campfires outside the high fire danger period. VEAC has also emphasised that dispersed camping will continue to be the predominant form of camping in the park and camping with dogs is permitted. Domestic firewood collection is permitted around Mildura, Robinvale, Boundary Bend, Swan Hill, Barmah, Cobram and Rutherglen. VEAC has added to the Murray River Park in three areas totalling some 2680 hectares to provide for camping with dogs. These additions are along the eastern part of Wallpolla Island near Mildura; from Brereton Road upstream to Horseshoe Bend north of Torrumberry township; and the area between Barmah township to The Gap. While domestic stock grazing is to cease, VEAC has noted that land managers may utilise domestic stock grazing on public land under contract for ecological or management purposes such as targeted weed control. Fishing is not affected under these proposals.

RECOMMENDATIONS

Murray River Park

B3 That:

- (a) the area of 34,685 hectares shown on Map A as the Murray River Park be used in accordance with general recommendations B for regional parks and other parks
- (b) a management plan for the Murray River Park be developed in consultation with the community within three years of the acceptance of this recommendation
- (c) an appropriate environmental water regime be established for this park as outlined in recommendation R13
- (d) use of existing and licensed pump and pumpline sites be permitted to continue
- (e) a streamlined multi-agency approach be developed for dealing with applications for new pump and pumpline sites that provides protection for the environmental, cultural, scenic and recreation values of the River Murray frontage whilst recognising rights of diverters, and locates structures on private land where possible or, failing that, on consolidated frontage sites
- (f) domestic firewood collection generally not be permitted, other than in zones to be designated by the land manager in consultation with the community around Mildura, Robinvale, Boundary Bend, Swan Hill, Barmah, Cobram and Rutherglen in accordance with recommendation R40
- (g) broadly, other existing uses in the area of the recommended Murray River Park be permitted at the discretion of the land manager and subject to the management plan
- (h) the recommended Murray River Park be considered "restricted" Crown land under the *Mineral Resources (Sustainable Development) Act 1990*
- (i) the park be zoned in order to provide for the range of uses outlined above and be permanently reserved under section 4 of the *Crown Land (Reserves) Act 1978*
- (j) regulations be developed to be in place as soon as practicable after the park is established, and
- (k) a coordinated approach to management across the border with New South Wales be developed, including a co-ordinated regulatory regime.

Notes:

1. A firewood strategy for campers should be developed in accordance with recommendation R36.
2. Goulburn-Murray Water has an ongoing role to operate, maintain and monitor outfall and drainage systems within the park.
3. Parklands Albury Wodonga manages part of the park near Wodonga.

B4 Kings Billabong Park

The recommended Kings Billabong Park incorporates the existing Kings Billabong Wildlife Reserve, Karadoc State Forest, Red Cliffs Scenic Reserve, water supply and drainage basin, Mildura Bushland Reserve and linking areas of River Murray Reserve. Kings Billabong Wildlife Reserve (where hunting is not currently permitted) is a 2135 hectare nature conservation reserve 8 kilometres southeast of Mildura within the Robinvale Plains bioregion.

A 17 hectare recreation reserve at Bruces Bend, containing a houseboat marina, occurs to north of Kings Billabong and is not part of the recommended Kings Billabong Park.

A total of 393 species of native flora and 179 species of native fauna have been recorded in the recommended Kings Billabong Park, including 82 significant flora and 31 significant fauna species. The fauna includes the nationally vulnerable Regent Parrot and Growling Grass Frog. Many of the threatened plant species have very restricted distributions in Victoria, such as the Curly Flat-sedge which is known from only three sites between Boundary Bend and Mildura.

There are 22 Ecological Vegetation Classes mapped within Kings Billabong and Bottle Bend, including Lignum Shrubland, Lignum Swampy Woodland, Intermittent Swampy Woodland, Riverine Chenopod Woodland and Spike-sedge Wetland. Areas of Semi-arid Woodland, Chenopod Mallee, Woorinen Mallee with Woorinen Sands Mallee occur elsewhere in the recommended park. The wetlands in Kings Billabong were ephemeral prior to European settlement but have since been used as a water storage basin from which water is pumped for irrigation. Permanent inundation has resulted in the death of many River Red Gums.

The Kings Billabong Wildlife Reserve has high river health and biodiversity values, and is identified as a high value section of river by the Mallee River Health Strategy. The Kings Billabong wetlands are listed on the Directory of Important Wetlands, however parts of the southern section of Kings Billabong are affected by secondary salination caused by rising groundwater and disposal of irrigation drainage. This has caused the death of vegetation and changed the understorey composition.

Many sites in Kings Billabong are important for Aboriginal cultural heritage. Kings Billabong and the adjacent Psyche Bend Pumps Historic and Cultural Features Reserve (Recommendation E1) are an important part of the irrigated horticulture heritage of the region. The Psyche Bend Pumps area should be managed in conjunction with the Kings Billabong Park to protect the historic values of the site.

There are five apiary sites in the recommended Kings Billabong Park while Bottle Bend (currently River Murray Reserve) and the existing Karadoc State Forest are crossed by a small number of water supply licences. These licensed activities will continue to be permitted. A 290 hectare grazing licence covers the eastern section of Karadoc State Forest and a 75 hectare licence covers part of the western area. Grazing will not be permitted in the park.

Kings Billabong and Bottle Bend provide highly accessible, low cost camping destinations in a bush setting close to Mildura and Red Cliffs. These areas are particularly popular as vantage points for the Mildura water ski race

held annually at Easter. Annual visitor numbers in Kings Billabong have been estimated to be in the vicinity of 75,000–100,000, with highest visitation occurring during Easter and on public holidays. Kings Billabong and Bottle Bend provide opportunities for many recreational activities including dogwalking, camping, horseriding, fishing, walking, bicycle riding, canoeing, birdwatching, waterskiing (not on the Billabong), sightseeing and picnicking.

Community views

A small number of submissions were received regarding Kings Billabong Park, both in support and opposition to the park.

Response

VEAC has retained the proposed park. The draft proposals have been varied to provide for campfires and collection of firewood for campfires outside the high fire danger period. VEAC has also emphasised that dispersed camping will continue to be the main form of camping in the park and camping with dogs is permitted.

RECOMMENDATIONS

Kings Billabong Park

B4 That:

(a) the area of 3535 hectares shown on Map A as the Kings Billabong Park be used in accordance with general recommendations B for regional parks and other parks, and

(b) the park be established under Schedule Three to the *National Parks Act 1975*.

B5 Murray–Kulkyne Park

This enlarged park includes the existing Murray–Kulkyne Park (3999 hectares) which occurs in two distinct blocks on the River Murray either side of the Hattah–Kulkyne National Park, as well as the Tarpaulin Island Reference Area (436 hectares) and a narrow section of River Murray Reserve (165 hectares), between the existing northern boundary of the park and Colignan. The existing Murray–Kulkyne Park is currently reserved under Schedule Three of the *National Parks Act 1975*.

The existing Murray–Kulkyne Park contains large areas of depleted ecological vegetation classes including Grassy Riverine Forest and Riverine Grassy Woodland in the northern section and Lignum Swampy Woodland in the southern section, and smaller areas of other threatened EVCs. One hundred and eleven species of native fauna including 14 threatened species have been recorded in the northern section and 124 species of native fauna including 12 threatened species have been recorded in the southern sections of Murray–Kulkyne Park. The threatened species include Bush Stone-curlew, Regent Parrot, Painted Honeyeater and Curl Snake. Ninety-two species of native flora including 11 threatened species have been recorded in the northern section and 81 species of native flora including eight threatened species have been recorded in the southern part of Murray–Kulkyne Park.

The narrow section of the existing River Murray Reserve, between the existing northern boundary of the existing Murray–Kulkyne Park and the Colignan township has many natural values, including threatened flora species such as Woolly Scurf-pea, Silky Glycine, Desert Lantern, Tall Kerosene Grass, Silky Umbrella-grass and Sand Sida. The predominant EVCs in the area are Shrubby Riverine Woodland, Grassy Riverine Forest, Floodway Pond Herbland and Intermittent Swampy Woodland in the tight bends with smaller areas of Shallow Freshwater Marsh, Riverine Chenopod Woodland and Riverine Grassy Woodland.

The primary use of the recommended Murray–Kulkyne Park is recreation and conservation. The park's location on the River Murray and its reservation status allows a different recreational opportunity from the experience in the adjoining Hattah–Kulkyne National Park. For example, campers can bring their dogs in Murray–Kulkyne Park.

There are a small number of licences in the area recommended for addition to the Murray–Kulkyne Park, including three apiary licences. These licences will be allowed to continue.

Community views

A small number of submissions were received regarding the park, both in support and opposition to the park. Some suggested it be added to Hattah–Kulkyne National Park and that the forests around Nangiloc and Colignan be added to the conservation reserve system.

Response

VEAC has retained the small additions to the existing park. Adding the area near Colignan to the existing Murray–Kulkyne Park will give the area a higher profile with both land managers and the public and lead to better conservation outcomes as recreational pressure increases in the future. The Tarpaulin Island Reference Area will continue to be managed under the *Reference Areas Act 1978* but, as it is separated from the rest of the park by the River Murray, it will require fencing to prevent access by domestic stock from New South Wales (see recommendation F1(c)). The draft proposals have been varied to provide for campfires and collection of firewood for campfires outside the high fire danger period. VEAC has also emphasised that dispersed camping will continue to be the main form of camping in the park and camping with dogs is permitted.

RECOMMENDATIONS

Murray–Kulkyne Park

B5 That:

(a) the area of 4604 hectares shown on Map A as the Murray–Kulkyne Park be used in accordance with general recommendation B for regional parks and other parks

(b) fencing be undertaken of the Tarpaulin Island Reference Area to prohibit wandering stock from New South Wales entering the site, and

(c) the park be established under Schedule Three to the *National Parks Act 1975*.

B6 Gadsen Bend Park

The recommended Gadsen Bend Park (1618 hectares) incorporates the Gadsen Bend State Forest and River Murray Reserve upstream of the existing Murray–Kulkyne Park near Robinvale. The varying ecological vegetation classes (EVCs) found here contribute to reserve system representation of the Robinvale Plains bioregion. The southern section contains the vulnerable Semi-arid Chenopod Woodland and Semi-arid Parilla Woodland while the northern section has larger areas of more riverine vegetation such as Lignum Swampy Woodland, Lignum Shrubland and Riverine Grassy Woodland. Shrubby Riverine Woodland and Intermittent Swampy Woodland EVCs which occupy the insides of the river bends.

Significant fauna species known to occur in the recommended Gadsen Bend Park include the endangered Inland Carpet Python and vulnerable Regent Parrot. One hundred and nine species of native flora have been recorded including 16 threatened or near-threatened species. Of particular importance are the endangered Silver Tails (the only known site in Victoria) and Woolly Scurf-pea (the only populations in Victoria are between Boundary Bend and Mildura).

Grazing of stock is not permitted in the recommended park. Grazing on the main area of forest was removed many years ago. There are seven grazing licences (mostly less than 10 hectares) on blocks on the boundary of the forest. The vegetation on these blocks is currently in poor condition and requires restoration. There are four apiary licences in the northern section of the forest, and a licence for a rifle range over most of the downstream section (~140 hectares). The apiary licences will continue to be permitted. The rifle range itself is not part of the recommended park, but is recommended as a separate community use area (recommendation I2), where the licence can continue. Most of the existing buffers around the shooting ranges are recommended to be included in the park, with existing restrictions on access maintained by zoning. Other recreational activities are similar to other parts of the River Murray and include camping, fishing and four wheel driving but visitation is not as high as in areas that are closer to major population centres.

Community views

A small number of submissions were received both in favour and opposed to this park proposal. No specific issues were raised.

Response

VEAC has retained the proposed park. The draft proposals have been varied to provide for campfires and collection of firewood for campfires outside the high fire danger period. VEAC has also emphasised that dispersed camping will continue to be the main form of camping in the park and camping with dogs is permitted.

RECOMMENDATIONS

Gadsen Bend Park

B6 That:

(a) the area of 1618 hectares shown on Map A as the Gadsen Bend Park be used in accordance with general recommendations B for regional parks and other parks, and

(b) the park be established under Schedule Three to the *National Parks Act 1975*.

B7 Nyah–Vinifera Park

The recommended Nyah–Vinifera Park (1375 hectares) incorporates the Nyah State Forest (808 hectares) and the Vinifera forest section of the River Murray Reserve (547 hectares) at Nyah, between Swan Hill and Piangil.

There are 19 ecological vegetation classes (EVCs) in the Nyah and Vinifera forests including large areas of Riverine Swamp Forest and Sedgy Riverine Forest and smaller areas of threatened EVCs such as Riverine Grassy Woodland, Spike-sedge Wetland and Riverine Chenopod Woodland.

Riverine habitat is essential for Inland Carpet Pythons and they have recently been recorded in Nyah State Forest and near Vinifera forest. In riverine environments, thick ground cover and hollow-bearing trees and logs are essential for Inland Carpet Pythons. The endangered Grey-crowned Babbler occurs at the Wood Wood end of the Nyah State Forest. Other threatened fauna species recorded in Nyah State Forest and Vinifera forest include the Australian Shoveler, Intermediate Egret, Hardhead, Musk Duck, Royal Spoonbill and Diamond Firetail. Two significant flora species, Riverina Bitter-cress and Native Couch are recorded in these forests.

Nyah and Vinifera forests are important cultural sites for the Wadi Wadi Aboriginal people and there are numerous burial sites, middens, and scarred trees. Some of the mounds created by burial sites attract trail bike riders who use the sites as jumps. The earthen ovens and middens are listed under the Register of the National Estate. European heritage reflects the pioneering history of the area. The Takasuka Bank (levee) shows an early example of water diversion to grow rice.

In recent years, Wood Utilisation Plans have allocated a firewood coupe in Nyah State Forest; however due to community opposition no coupe has been cut and domestic firewood has been sourced from elsewhere. Cattle grazing (agistment) was previously removed from Nyah and Vinifera State Forests because the cattle were damaging Aboriginal cultural sites. Domestic firewood collection and grazing are not permitted uses in the recommended park. There is an apiary site in each of Nyah and Vinifera forests that can be continued.

An earthen weir across the Parnee Malloo Creek ponds water along almost the full length of the creek. The Nyah District Golf Club pumps water out of the Creek to irrigate its greens and fairways during wet years and during dry years pumps directly from the River Murray. Drains from adjoining freehold land enter the southern end of Nyah State Forest.

The region is popular for dispersed camping, fishing, boating, four wheel driving, trailbike riding and walking and these uses will continue in the park. Vinifera forest is popular for duck hunting when the creek is running but this activity will not continue in the recommended Nyah–Vinifera Park. The Nyah District Pony Club is currently licensed to use 13 hectares of Vinifera forest for equestrian activities and this activity will be allowed to continue.

Community views

A large number of submissions were received in support of this park. A consistent theme was the support for Aboriginal involvement in park management, particularly in the form of handback. Others opposed the park based on concerns that camping and campfires would not be permitted and that the forest was a significant fire risk.

Response

VEAC has retained its proposal for the park and the co-management arrangements between the government and the Traditional Owner group. The draft proposals have been varied to provide for campfires and collection of firewood for campfires outside the high fire danger period. VEAC has also emphasised that dispersed camping will continue to be the main form of camping in the park and camping with dogs is permitted. Fire protection and suppression will remain a key priority for fire management agencies.

RECOMMENDATIONS

Nyah–Vinifera Park

B7 That:

(a) the area of 1354 hectares shown on Map A as the Nyah–Vinifera Park be used in accordance with general recommendations B for regional parks and other parks

(b) Indigenous co-management arrangements be established in accordance with recommendation R26(a)

(c) the area currently licensed for equestrian activities be zoned for this purpose in management planning, and

(d) the park be established under Schedule Three to the *National Parks Act 1975*.

C State forests

The River Red Gum forests of the Murray Valley have been a major source of durable timbers and firewood in southeastern Australia since the early days of European settlement. State forests are a major source of timber products on public land, as well as supporting biodiversity and providing for a broad range of recreational activities including camping, horseriding, four wheel driving and car touring, hunting and fishing. These forests are also used for a variety of other purposes such as earth resource extraction and apiculture.

State forests in the investigation area contain sites of great cultural and spiritual importance to Aboriginal people. Many sites provide opportunities for the continuation of traditional practices on Country. State forests also contain areas of European cultural significance. With careful management, especially adequate flooding, the state forests of the investigation area can continue to produce timber whilst also catering for a wide range of other uses and values into the future, albeit in the reduced area recommended here.

Timber

Seasoned River Red Gum timber is relatively hard and moderately dense and often used for structural timber. Its vibrant red colour and decorative grain when polished give it great appeal for furniture and appearance products such as flooring. It is also durable and resistant to white ants and borers, making it well suited for use as railway sleepers and wharf timber. Its density also makes it sought after for firewood.

The net gain to the economy from the timber industry is approximately \$2.6 million per annum. The industry employs approximately 74 people (full time equivalents) directly and another 28 people indirectly in or near the investigation area (see appendix 1 for details).

The recommendations in this report significantly reduce the area of state forest—from 106,910 hectares to 12,292 hectares. However, only a small proportion of the current total state forest area is actually available for timber harvesting because some state forests do not contain River Red Gums, timber harvesting is not economically viable in other forests, timber harvesting is prohibited in special protection zones, and the Code of Forest Practices also places limits on harvesting. Most of the current commercial timber harvesting is from Barmah, Gunbower and the Lower Goulburn forests.

In the three major commercial forests the area available for harvesting from General Management Zone and Special Management Zone would reduce from 37,391 hectares to 9884 hectares, or 26 percent of the current available area, under VEAC's recommendations. All of the remaining available area would be in Gunbower forest and the nearby Benwell and Guttrum forests. See Chapter 4 for a discussion of the implications of these recommendations on the River Red Gum timber industry.

Estimating the long term sustainable harvest volumes available from these areas, and thus the size of the industry, is particularly difficult because growth rates vary with site quality and flood regime. Because rainfall in the investigation area is insufficient to sustain River Red

Gum forests, the health, growth and indeed existence of these forests is dependent on water supplied by regular winter–spring flooding from the River Murray and its tributaries. River regulation and increased extraction of water for agriculture and urban use coupled with the ongoing drought has severely reduced the extent of this flooding and altered its timing. These changed flood regimes have reduced tree growth rates substantially and placed large areas of River Red Gum forest under severe stress. For example, Continuous Forest Inventory (CFI) plot measurements in Barmah and Gunbower forests, obtained from DSE, indicate that growth rates between 1998 and 2005 were only 60 percent of rates recorded in previous periods. This decrease is almost certainly due to the recent drought and lack of flooding over the last ten years.

Estimates of sustainable yield have been made using the areas from the current recommendations, CFI data to predict growth and DSE's methods for calculating timber growth in uneven aged forests. A summary of the results is provided in appendix 6.

Appendix 6 shows that with frequent flooding and the current available area, an average of 5462 cubic metres of sawlogs could be harvested sustainably each year. The volumes in appendix 6 differ from the estimates in VEAC's Draft Proposals Paper because they include new Continuous Forest Inventory data from DSE for Gunbower, Benwell and Guttrum Forests, and special management zones (SMZs) as well as general management zones (GMZs). The estimates also include revised DSE data for the Lower Goulburn and reductions to account for code of forest practices and other exclusions in GMZs, and also harvest difficulties in SMZs. With the present reduced tree growth rates, an estimated 3497 cubic metres could be harvested sustainably from the currently available forests.

VEAC's recommendations for a reduced state forest area with adequate environmental flows are estimated to result in a sustainable harvest equivalent to 25 percent of the yield (5462 cubic metres) from the current area with adequate environmental watering (see recommendation R13 on environmental water). Failure to deliver flooding will reduce this to 15 percent. Some timber businesses are unlikely to be viable with such volumes. Without VEAC's recommendations (without any reductions in area), the sustainable harvest is likely to drop to 64 percent of 5462 cubic metres if nothing is done to increase environmental watering (appendix 6).

An additional factor is that while DSE's timber resource estimates indicate the sustainable volume available from the remaining area of state forest, Gunbower Forest has extensive areas of relatively young River Red Gum trees not yet at commercial size, which will not provide harvestable timber for several years.

Commercial and domestic firewood

The implementation of the Environment Conservation Council (ECC) Box–Ironbark Forests and Woodland Investigation recommendations (2002) has increased pressure on other forests to supply firewood. Much of this pressure has been on the River Red Gum forests because of their accessibility, availability and the suitability for firewood. The effects of changes in available forest and flooding regimes on sustainable firewood volumes are even more

poorly known than the corresponding effects on timber volumes. However, firewood and timber volumes are both primarily a function of forest productivity. Therefore, the percentage reductions in timber availability resulting from VEAC's recommendations for public land categories and environmental water (see appendix 6) are likely to apply with reasonable reliability to firewood, especially waste timber following commercial sawlog harvesting activities and thinning operations.

The supply of domestic firewood needs to be planned and carefully managed, particularly to cater for neighbouring regional centres with few affordable alternatives (especially reticulated gas). Domestic firewood will continue to be available from Gunbower State Forest and VEAC has recommended that land managers consider extending forest thinning programs into Benwell and Guttram State Forests thereby generating additional firewood (see recommendation R42). Where little state forest remains, zones for domestic firewood collection are recommended in the Murray River Park: in the Mildura, Robinvale, Boundary Bend, Swan Hill, Barmah, Cobram and Rutherglen areas and parts of the Shepparton Regional Park (recommendation R40). As part of the implementation of the ECC Box–Ironbark recommendations, local firewood strategies were developed to guide the transition to the new arrangements for firewood for particularly affected areas. VEAC is recommending that similar strategies be adopted in the River Red Gum Forests Investigation area (recommendations R41, R43–R44).

Other uses and values

The issues associated with key thematic recommendations in Chapter 2 such as environmental water, Aboriginal involvement, recreation and tourism, domestic stock grazing and nature conservation, are applicable in state forests as they are in other larger public land use categories. Notably:

- for adequate floodplain watering and other aspects of environmental water management (recommendations R13–R20)
- for increased Aboriginal involvement in public land management and continuation of traditional practices (recommendations R21–R30)
- for improved management of recreation in riverine forests, including controls on campfires and collection of wood for campfires (recommendations R31–R36)
- to remove domestic stock grazing (recommendation R38)
- for protection of biodiversity values, including important vegetation communities, wetlands listed under the Ramsar Convention, coarse woody debris and threatened species.

Community views

State forests were mentioned generally in many submissions; issues raised were typically focussed on recreation access and timber harvesting in specific state forest areas (Gunbower, Barmah, Lower Goulburn, Wallpolla Island state forests). Often people who favoured the status quo promoted 'working forests' and the need for active management practices to retain forest health. Industry access was critical for many submitters, particularly the economic contributions to small towns from the timber

industry. The need for domestic firewood supplies within the investigation area and the pressure associated with reduced opportunities for commercial timber harvesting were also highlighted. Timber industry comments largely debated at a broad level sustainable yield, growth rates and extent of resource calculations utilised by VEAC and the economic impacts on businesses and communities. The likelihood of recommended floodplain flooding and restoration of tree growth rates to previous levels was also questioned.

For many people, particularly those living near areas of state forest, the feeling of relatively unrestricted recreation access to natural forest was seen as essential for their quality of life. Continuation of family traditions in state forests—be it timber harvesting or recreation pursuits—were also important to some people. Many submissions opposed expansion of national parks at the expense of state forest because of (perceived and actual) changes to recreational use. Many others proposed that state forests be changed to national or other parks, particularly Barmah and Gunbower State Forests, in order to protect threatened species.

Good land management such as fire protection and pest plant or animal control, and resource use were promoted as reasons for retaining the status quo. Others argued that current state forest activities such as timber harvesting and domestic stock grazing present an ongoing danger to biodiversity values, particularly threatened species. Plantations were proposed as a way of providing future firewood and timber needs. The ecological value of forested corridors along major rivers was important to many people.

Response

VEAC is aware of the likely consequences of its recommendations on the timber industry (see chapter 4 — Social, economic and environmental implications). Nevertheless, inadequate representation of riverine ecosystems in protected areas and the importance of these as a buffer against climate change cannot be disregarded. In accordance with its Terms of Reference, VEAC has looked for options to establish a comprehensive, adequate and representative (CAR) reserve system while maintaining a viable timber industry. The high level of riverine environment depletion limits scope for change and so, although there is an increase in state forest (and Murray River Park), the public land use configuration remains largely unchanged since the Draft Proposals Paper.

VEAC's floodplain watering recommendations provide benefits for biodiversity conservation as well as enhancing timber growth rates in state forest; mainly over the long term as climate change reduces water availability. The current extended dry period has impacted upon River Red Gum growth rates and hence the level of sustainable harvest. VEAC has endeavoured to retain areas of state forest where environmental watering can be readily achieved.

Domestic firewood will continue to be available from Gunbower State Forest. In regions where little state forest remains, zones for domestic firewood collection are recommended in the Murray River Park. In addition domestic firewood strategies can guide the transition to new arrangements, particularly in regional centres with few affordable alternatives (especially reticulated gas).

Many recreation activities have been, and continue to be, provided for across public land in the investigation area. Recommendations relating to campfires, dog walking, horseriding, camping, and recreational hunting are described in more detail in chapter 2—Recreation and tourism.

RECOMMENDATIONS

General recommendations for state forests

C

That the state forests (numbered C1 to C3) shown on Map A be used to:

- (a) produce hardwood timber and other forest products, including domestic firewood
- (b) conserve and protect biodiversity, natural landscapes and natural processes
- (c) protect significant cultural and historic sites and places, including Aboriginal cultural sites and places
- (d) provide opportunities for recreation (including hunting) and education
- (e) provide for flood mitigation;

and that:

- (f) the following activities be generally permitted:
 - (i) bushwalking, nature observation, heritage appreciation, picnicking, recreational fishing
 - (ii) camping, in particular dispersed camping and overnight camping with horses
 - (iii) dogwalking and camping with dogs
 - (iv) hunting
 - (v) car touring, including four wheel driving, on formed roads and tracks
 - (vi) mountainbike and trailbike riding on formed roads and tracks
 - (vii) horseriding on formed roads and tracks
 - (viii) apiculture
 - (ix) exploration and mining
 - (x) research, subject to permit;

and that:

- (g) the following activities not be permitted:
 - (i) domestic stock grazing
 - (ii) solid fuel fires during the high fire danger period

and that:

- (h) DSE review the forest management zoning within the state forests of the Mid-Murray Forest Management Area
- (i) DSE give consideration to increasing silvicultural thinning programs to enhance the development of sawlogs and produce additional volumes of firewood.

C1–C2 Benwell and Guttram State Forests

Benwell (551 hectares) and Guttram (1179 hectares) State Forests both adjoin the River Murray between Koondrook and Murrabit. These state forests will be managed by DSE and continue to be available for timber harvesting, dispersed camping, horseriding and firewood collection.

The ecological vegetation classes (EVCs) in Benwell and Guttram State Forests are typical of these floodplains. At Benwell they include Riverine Swamp Forest, Grassy Riverine Forest, Floodway Pond Herbland/Riverine Swamp Forest Complex and small areas of Spike-sedge wetland. The EVCs at Guttram State Forest include Riverine Swamp Forest, Floodway Pond Herbland/Riverine Swamp Forest Complex and Sedgy Riverine Forest along the river.

Community views

VEAC received very few community comments specifically about Benwell and Guttram forests. However, many community sectors wanted to retain access to all state forests, mainly for recreational activities and timber harvesting.

Response

VEAC has retained the proposed state forest areas.

RECOMMENDATIONS

Benwell State Forest

C1 That:

- (a) the area of 551 hectares shown on Map A as the Benwell State Forest be used in accordance with the general recommendations for state forests C.

Guttram State Forest

C2 That:

- (a) the area of 1179 hectares shown on Map A as the Guttram State Forest be used in accordance with the general recommendations for state forests C.

C3 Gunbower State Forest

Gunbower State Forest (10,563 hectares) is situated along the River Murray between Torrumbarry and Koondrook. Two sections of the current Gunbower State Forest have been recommended for inclusion into the Gunbower National Park. The southern section consists of predominantly Black Box woodland and sections of the current Murray River Reserve. The western part includes the wetlands along the Gunbower Creek. Gunbower State Forest will be managed by DSE and continues to be available for timber harvesting, dispersed camping, horseriding and firewood collection.

The main ecological vegetation classes in the recommended Gunbower State Forest are Riverine Swamp Forest, Floodway Pond Herbland/Riverine Swamp Forest Complex, Riverine Grassy Forest with small areas of Sedgy Riverine Forest along the river and Spike-sedge Wetland lining the internal depressions.

Gunbower Forest is an important wetland under the Ramsar international convention. It contains significant wetlands that are currently managed as Special Management Zones under the Mid-Murray Forest Management Plan. These sites are significant breeding areas for colonial waterbirds. The most recent breeding event was in 2005/06 when egrets bred along Little Gunbower Creek after environmental water flooded parts of the forest. The current level of protective management in place for this area will continue.

Community views

A significant number of comments were made about Gunbower forest in submissions. These largely focussed on proposals including or excluding the entire area in national park while relatively few cited specific locations or new public land use configurations. Access for recreation activities and timber harvesting were promoted as a basis for retaining the entire area as state forest. Some people focussed on natural values such as colonial waterbird breeding sites and threatened species and argued for the entire area to be included in the new Gunbower National Park.

Response

The popularity of a broad range of recreation activities that occur within Gunbower forests was an important matter considered by VEAC. Boundary re-configurations have focussed on expansion of the Murray River Park and retention of state forest at McNab Bend to accommodate such activities. Other recommendations provide greater clarity around access for camping, fishing, horseriding and four wheel driving across the investigation area. Inadequate representation of riverine ecosystems in conservation reserves limits VEAC's flexibility to provide larger areas of state forest for timber harvesting and at the same time achieve conservation reserve targets.

RECOMMENDATIONS

Gunbower State Forest

C3 That:

- (a) the area of 10,563 hectares shown on Map A as the Gunbower State Forest be used in accordance with the general recommendations for state forests C, and
- (b) areas currently zoned for the protection of colonial waterbird breeding sites under the Mid-Murray Forest Management Plan continue to be managed for this purpose.

D Nature conservation reserves

Some areas of public land are highly significant for their ecosystems, plant or animal habitats, or both but have limited recreation use. Nature conservation reserves are set aside to conserve rare or threatened species, significant plant associations or communities, or valuable habitat for populations of significant fauna. The primary land use objective is nature conservation, although education, scientific research and passive recreation are permitted subject to the maintenance of the particular values of the reserve. Nature conservation reserves differ from parks in that they are generally smaller, and that recreation is not a primary use. Together with national parks and some regional parks, nature conservation reserves make up the major part of the protected area system.

Many of the new nature conservation reserves in the River Red Gum Forests Investigation area protect native grasslands and grassy woodlands in the Victorian Riverina bioregion. These ecosystems have been severely depleted by intensive irrigated and dryland agriculture and domestic stock grazing. The quality of the remaining grasslands can vary from very small, but high quality, sites to larger sites containing less floristic species diversity, but important fauna habitat. Indeed several of the threatening processes that have reduced the diversity of some of the larger sites continue today. Overgrazing and, in some instances, cropping (legal and illegal) of grasslands have occurred on a number of public land blocks in the investigation area. Since this region was last studied by the Land Conservation Council in 1985, our knowledge of grassy ecosystem ecology and distribution has improved considerably. There has been significant investment in the conservation of these ecosystems through state and commonwealth government land purchase programs and private land conservation programs. The recommendations for establishment of a series of new nature conservation reserves, will complement these efforts. A description of the location and values of the 21 existing and expanded, and 29 substantially new nature conservation reserves are provided here. Some areas included as existing nature conservation reserves were wildlife areas that do not permit hunting, and are in effect already managed—and in some cases reserved— as nature conservation reserves.

Community views

Few submissions commented specifically on nature conservation reserves, but some suggested minor changes or inclusion of specific areas in other public land use categories or offered more general comments. Some stakeholders proposed that either the number of nature conservation reserves be reduced or expanded. Other submissions suggested some nature conservation reserves be included in nearby national parks. Detailed comments, such as allowing dog walking, hunting, horseriding in specific areas, were considered by VEAC in formulating the final recommendations presented below.

Many of the nature conservation reserves in the River Red Gum Forests Investigation area are wetlands. There were a large number of submissions that opposed the loss of hunting opportunities by inclusion of wetlands in nature conservation reserves and other protected areas such as national parks. These comments are discussed in more detail in chapter 1 (Response to main issues in submissions).

Response

VEAC has endeavoured to retain popular hunting areas as state game reserves (see recommendation G82-G104) whilst achieving a comprehensive, adequate and representative reserve system as described in both the investigation terms of reference and the VEAC Act.

The following management objectives and summary land use recommendations are those that generally apply for the land use category, however exceptions to these may apply to specific reserves in special circumstances.

RECOMMENDATIONS

General recommendations for nature conservation reserves

D

That the nature conservation reserves shown on Map A (numbered D1 to D50):

(a) be used to:

- (i) conserve and protect species, communities or habitats of indigenous animals and plants
- (ii) provide for educational and scientific study if consistent with (i) above
- (iii) provide for recreation by small numbers of people, if consistent with (i) above;

and that:

(b) the following activities generally be permitted:

- (i) bushwalking, nature observation, heritage appreciation, picnicking
- (ii) car touring, including four wheel driving, on formed roads and tracks
- (iii) apiculture on existing licensed sites, subject to the outcome of scientific research into the ecological impacts of this industry, and management requirements
- (iv) exploration and mining for minerals and searching for and extraction of stone resources subject to the consent of the Crown land Minister under the relevant legislation;

and that:

(c) the following activities not be permitted:

- (i) grazing of domestic stock (see note 1 below)
- (ii) harvesting of forest products
- (iii) hunting and use of firearms (see note 2 below)
- (iv) solid fuel fires at any time of year (see note 7 below)
- (v) dogwalking (see note 3 below)
- (vi) horseriding;

and that:

(d) they be permanently reserved under the *Crown Land (Reserves) Act 1978* for the purpose of 'preservation of an area of ecological significance'.

Notes

1. Grazing contracted for ecological purposes or for short-term management purposes such as targeted weed control may be permitted.
2. Hunting and the use of firearms may be authorised as part of a pest animal control program.
3. Dog walking on lead be permitted in D46 Gemmill Swamp Nature Conservation Reserve.
4. The above management objectives and summary land use recommendations are those that generally apply for the land use category. Exceptions to these may apply to specific reserves in special circumstances.
5. A number of areas containing native grasslands have been planted with non-indigenous trees or shrubs. They have the potential to degrade grassland values and should be removed unless considered important for native fauna habitat.
6. A small but significant area of Buloke-dominated Plains Woodland occurs on the border of the investigation area (Crown Allotment 11B, Section C, Parish of Charlton East, Parcel No. P121341). This was not subject to a recommendation in the Environment Conservation Council's Box-Ironbark Forests and Woodlands Investigation and VEAC considers it warrants reservation as a new nature conservation reserve (the Aristida Nature Conservation Reserve).
7. Solid fuel fires may be permitted outside the high fire danger period at the land manager's discretion and in accordance with recommendations R35–R36 in the large nature conservation reserves at Lambert Island (D1) and Murrumbidgee Junction (D4).

D1 Lambert Island Nature Conservation Reserve

This 1222 hectare site incorporates the Lambert Island Flora Reserve, adjoining state forest and River Murray Reserve south of Mildura. It includes a diverse range of EVCs including Lignum Swampy Woodland, Riverine Grassy Woodland, Riverine Chenopod Woodland and Lignum Shrubland. In particular, it contributes to the representation of two under-reserved EVCs (Floodway Pond Herbland and Shallow Freshwater Marsh) in the Robinvale Plains bioregion. The endangered Tough Scurf-pea and Yellow Tails have been recorded at the site.

D2 Karadoc Nature Conservation Reserve

The existing Karadoc Flora Reserve (111 hectares), on the Murray River south of Mildura, includes a diverse range of EVCs including Lignum Shrubland, Shrubby Riverine Woodland, Grassy Riverine Forest, Grassy Riverine Forest/Floodway Pond Herbland Complex, Riverine Chenopod Woodland, Semi-arid Chenopod Woodland and Floodway Pond Herbland.

D3 Lakes Powell and Carpul Nature Conservation Reserve

This 725 hectare site includes the Lakes Powell and Carpul Wildlife Reserve (where hunting is currently excluded) and adjoining uncategorised Crown land to the south east of Robinvale. It contains at least 35 flora species of conservation significance, including the endangered Hoary Scurf-pea and Woolly Scurf-pea, as well as providing habitat for a number of threatened waterfowl species. A diverse range of EVCs including Lake Bed Herbland, Intermittent Swampy Woodland, Riverine Chenopod Woodland, Lignum Swampy Woodland, Lignum Shrubland, Chenopod Mallee and Woorinen Mallee are represented on this site.

D4 Murrumbidgee Junction Nature Conservation Reserve

Between Boundary Bend and Robinvale, the recommended Murrumbidgee Junction Nature Conservation Reserve (1223 hectares) comprises 916 hectares of the existing Murrumbidgee State Forest, 286 hectares of River Murray Reserve and the Passage Camp Flora Reserve (21 hectares). This area includes the junction of three bioregions (Robinvale Plains to the west, Murray Mallee to the south and Murray Fans to the east) as well as the confluence of the Murrumbidgee and Murray Rivers. Inland Carpet Pythons and Regent Parrots have been recorded on the site, as have 10 threatened flora species, including the endangered Grey Scurf-pea and the Dwarf Swainson-pea. The Murrumbidgee Junction Nature Conservation Reserve will contribute significantly to representation of Lignum Swampy Woodland, Lignum Shrubland, Riverine Chenopod Woodland, Shallow Freshwater Marsh and Riverine Grassy Woodland Ecological Vegetation Classes.

D5 Towaninny Nature Conservation Reserve

This 81 hectare site is the existing Towaninny Flora Reserve. Black Box wetland occupies a well-developed example of a gilgai soil—a feature that was common on Quaternary sedimentary land surfaces before ploughing became widespread. Chenopod Grassland EVC is also represented.

D6 Ninyeunook–Lalbert Creek Nature Conservation Reserve

This eight hectares site is the existing Ninyeunook I205 Bushland Reserve. It is a high quality example of Riverine Swampy Woodland/Lignum Wetland Mosaic and provides habitat for the endangered Hoary Scurf-pea. This block of Crown land is part of the Bunguluke Wetlands, Tyrell Creek and Lalbert Creek Floodplain system, which is listed on the Directory of Important Wetlands in Australia.

D7 Ninyeunook Township Nature Conservation Reserve

This five hectare site of uncategorised Crown land is located at the old Ninyeunook township site. It is an important remnant of Savannah Grassland EVC connected to larger grasslands in the district by vegetated roadsides. The reserve is likely to contain sites of some historical significance, with a plaque on the site indicating the various buildings and uses that previously occurred in the Ninyeunook village.

D8 Towaninny South Nature Conservation Reserve

This 35 hectare site incorporates the Towaninny South Flora Reserve and adjoining township land. The high quality remnant Plains Savannah has a number of significant flora species including Buloke, Bluish Raspwort, Pale Spike-sedge, Long Eryngium, Leafless Bluebush and Bush Minuria.

D9 Towaninny North Nature Conservation Reserve

This 40 hectare Lignum Swampy Woodland is the existing Towaninny I203 Bushland Reserve and is linked via a vegetated creekline to the Towaninny Nature Conservation Reserve to the south.

D10 Cannie Nature Conservation Reserve

This 16 hectare site is the existing Cannie Flora Reserve and protects relatively undisturbed Buloke woodland and associated grassland growing on calcareous clays. The vulnerable Umbrella Wattle and Buloke Mistletoe have been recorded on the site.

D11 Griffith Lagoon Nature Conservation Reserve

This 69 hectare site is the existing Quambatook Flora and Fauna Reserve, a Lignum Swampy Woodland. However the recommended name change is intended to more accurately reflect the area protected.

D12 Terrappee Nature Conservation Reserve

This new reserve totalling 18 hectares includes the Terrappee Water Supply Purpose Reserve, an unused recreation reserve and uncategorised public land. It is a significant Plains Grassland and Plains Woodland remnant, with threatened flora including the vulnerable Riverine Flax-lily, Wedderburn Wattle, Inland Pomaderris and Northern Golden Moths. Hairy Tails and Buloke also occur on the site, part of which has been subject to unauthorised cropping.

D13 Buckrabanyule Nature Conservation Reserve

This 40 hectare site is the existing Buckrabanyule Water Conservation Reserve to the north of Wychitella. It contains an area of Plains Woodland and Plains Grassland EVCs with scattered Bulokes.

D14 Wychitella North Nature Conservation Reserve

This 40 hectare site is a Water Supply Reserve to the south west of Boort. It is an important Buloke-dominated Plains Woodland, with the vulnerable Buloke Mistletoe present. Parts of the western section of this site have been illegally cropped and are now recovering.

D15 Korrak Korrak Nature Conservation Reserve

This 273 hectare site incorporates the existing Korrak Korrak Nature Conservation Reserve and Back Creek Water Frontage Reserve. The Korrak Korrak block is a high quality Chenopod Grassland and Riverine Chenopod Woodland, recently purchased for conservation. It contains a number of significant flora species, including Chariot Wheels, Cane Grass, Leafless Bluebush and Smooth Minuria. The grasslands provide likely habitat for the Plains-wanderer which has been recorded nearby. The Black Box-dominated Back Creek provides an important ecological link between the grasslands in this reserve with the Trust for Nature's Korrak Korrak Grassland Reserve and the grasslands at Yassom Swamp (now part of the recommended Leaghur-Koorangie National Park) to the north.

D16 Boort Nature Conservation Reserve

The 43 hectare site is the existing Boort Flora Reserve, north west of Boort. It contains Semi-arid Woodland, Plains Woodland and Low Rises Woodland EVCs and habitat for the Tree Goanna.

D17 Woolshed Swamp Nature Conservation Reserve

This 497 hectare site incorporates the Woolshed Swamp Wildlife Reserve, Woolshed Swamp Sheepwash Historic Reserve and disused quarry south of Boort. Listed on the Directory of Important Wetlands in Australia, Woolshed Swamp is a high value wetland for its large size, habitat diversity and lack of disturbance. The wetland is an intermittent shallow freshwater swamp fringed by River Red Gum and Yellow Box. It supports a diversity of fauna species and is a valuable waterbird breeding habitat when it contains water. Significant numbers of Pink-eared Duck and Australian Shelduck have bred here in the past. This is also the location of significant Aboriginal heritage sites.

D18 Mysia Nature Conservation Reserve

These two blocks totalling 42 hectares at Mysia are recommended to be added to the existing Mysia Nature Conservation Reserve (just outside of the investigation area). They contain significant areas of Plains Grassland and Plains Woodland, including scattered Bulokes. The inter-tussock spaces, soil cracks, natural undulations and moss and lichen cover over much of the area provide good potential habitat for grassland fauna.

D19 Lake Yando Nature Conservation Reserve

This 87 hectare site is the existing Lake Yando Wildlife Reserve to the north of Boort. It is a freshwater marsh surrounded by woodland dominated by River Red Gum and Black Box, with a herbaceous layer dominated by Southern Cane-grass.

D20 Duck Lake South Nature Conservation Reserve

This 116 hectare reserve is the southern section of the Duck Lake Wildlife Reserve, north west of Kerang. A saline wetland, the muddy edges of this lake provide habitat for wading birds. Small areas of fringing vegetation include Plains Woodland and Semi-arid Woodland EVCs. The lake and associated lunette area are sites of local geomorphological significance. The northern section of Duck Lake will continue to be available for duck hunting (recommendation G86).

D21 Winlaton Nature Conservation Reserve

This important 86 hectare Chenopod Shrubland is the existing Winlaton Nature Conservation Reserve, most of which was recently purchased by the state government. It contains the first record of Paddle Saltbush for Victoria, and other significant flora species such as Winged New Holland Daisy, Leafless Bluebush, Yakka Grass, Mealy Saltbush, Bladder Saltbush and Spiny Lignum. It adjoins high quality grassland and woodland areas protected on private land by conservation covenants.

D22 Benjeroop-Dartagook Nature Conservation Reserve

This large nature conservation reserve (totalling 1179 hectares) combines the Dartagook Wildlife Reserve (where hunting is currently excluded) (728 hectares), Benjeroop State Forest (Special Protection Zone) (336 hectares), and adjoining water frontage reserves along the Barr Creek and Loddon River. The Dartagook section is Black Box-River Red Gum forest and lignum swamp at the junction of the Loddon River and Sheepwash Creek. The Benjeroop section is an open woodland dominated by Black Box with a Tangled Lignum and Rounded Noon-flower understorey. The new reserve contributes to the representation of Riverine Chenopod Woodland and Lignum Swampy Woodland in the Murray Fans bioregion. It provides habitat for a number of significant fish species including the critically endangered Silver Perch, the endangered Murray Cod and Freshwater Catfish and the vulnerable Golden Perch. It also provides important habitat for declining woodland birds such as the Hooded Robin and Brown Treecreeper while the Grey-crowned Babbler occurs on adjoining private land. A number of rare flora species are present including Branching Groundsel, Three-wing Bluebush, Shining Glasswort, Spreading Emu-bush and Spotted Emu-bush.

D23 Tragowel Swamp Nature Conservation Reserve

The 274 hectare existing Tragowel Swamp Wildlife Reserve (where hunting is currently excluded), to the south of Kerang, contains Lignum Swampy Woodland and Lignum Swamp EVCs. Listed on the Directory of Important Wetlands in Australia, the swamp supports an ibis rookery and a number of threatened waterbird species.

D24 Plumpton's Nature Conservation Reserve

This 160 hectare block of uncategorised Crown land to the north of Kerang (locally known as Plumpton's Forest) contains a relatively large area of Riverine Chenopod Woodland EVC, with small areas of Chenopod Grassland. It provides known habitat for Curl Snake, Bush Stone-curlew and Grey-crowned Babbler. Restoration activities by local community groups have been undertaken in the past.

D25 Pyramid Creek Nature Conservation Reserve

This reserve is a 50 hectare block of uncategorised public land adjoining Pyramid Creek to the southeast of Kerang. It contains Lignum Swamp and Lignum Swampy Woodland EVCs and complements the recommended Kerang Regional Park to the north.

D26 Gladfield Nature Conservation Reserve

The 28 hectare block of uncategorised Crown land contains Chenopod Grassland EVC around a Lignum Swamp in a region with very little native vegetation remaining. The wetland area contains the rare Spiny Lignum, and the new reserve adjoins a roadside with good quality native grassland.

D27 Yarrowalla Nature Conservation Reserve

This reserve comprises a 15 hectare area of remnant ephemeral wetland area surrounding the Calivil Creek in an area where little native vegetation remains. The vulnerable Cane Grass and rare Spiny Lignum are present on the site and the wetland provides known habitat for Brolga. Some revegetation is required.

D28 Johnson Swamp Nature Conservation Reserve

This 555 hectare site is the existing Johnson Swamp Wildlife Reserve and contains Lignum Swampy Woodland and Riverine Chenopod Woodland EVCs. It is part of the internationally significant Kerang Wetlands Ramsar site and supports the endangered Freckled Duck and Inland Carpet Python and provides potential habitat for the Australian Painted Snipe. Johnson and Hird Swamps (recommendation G96) receive a guaranteed 2600 megalitres of environmental water annually provided through the Victorian flora and fauna entitlement.

D29 Gannawarra Red Gum Swamp Nature Conservation Reserve

This 148 hectare site is the existing Red Gum Swamp Wildlife Reserve (where hunting is currently excluded), to the south west of Koondrook. The wetland, which is currently dry, contains saltbush, lignum, and numerous dead River Red Gums with Lignum Swampy Woodland EVC.

D30 Rowland Nature Conservation Reserve

This 143 hectare site is the existing Rowland Wildlife Reserve (where hunting is currently excluded) on Pyramid Creek. Predominantly a wetland with saltbush and lignum, it contains areas with Black Box.

D31 Flannery Nature Conservation Reserve

This 56 hectare site is the existing Flannery Wildlife Reserve (where hunting is currently excluded), on the junction of Pyramid and Box Creeks. A Lignum Swamp with some Black Box, the endangered Grey-crowned Babbler has been recorded here.

D32 Prairie Nature Conservation Reserve

This 35 hectare site is an existing timber and public purpose reserve south of Mitiamo. It is a significant and relatively large block containing Plains Grassland, and Lignum Swamp EVCs. Connected to Bendigo Creek via Myers Creek, it provides suitable habitat for a range

of threatened flora and fauna species found on similar habitat nearby, such as Brolga and threatened grassland plant species.

D33 Tang Tang Swamp Nature Conservation Reserve

The existing 129 hectare Tang Tang Swamp Wildlife Reserve to the east of Dingee is recommended as a new nature conservation reserve. This significant River Red Gum Swamp and Plains Grassland reserve is listed on the Directory of Important Wetlands in Australia. The swamp is a known breeding site of Brolgas and nomadic waterbirds. The Plains Grassland area protects the endangered Red Swainson-pea and vulnerable Silky Swainson-pea.

D34 Thunder Swamp Nature Conservation Reserve

The existing 90 hectare Thunder Swamp Wildlife Reserve to the south east of Dingee is recommended as a nature conservation reserve. It contains part of a significant River Red Gum Swamp and a relatively large surrounding area of Plains Grassland. The nationally vulnerable River Swamp Wallaby-grass has been recorded on the site and Eastern Great Egret and Royal Spoonbill are known to use the wetland.

D35 Milloo Nature Conservation Reserve

This 61 hectare site incorporates the Milloo Bushland Reserve and adjoining uncategorised Crown land to the west of Tennyson. It contains a relatively large grassland/grassy woodland block on public land for this part of the landscape.

D36 Mount Terrick Road Nature Conservation Reserve

This site contains three small parcels of Plains Grassland totalling eight hectares linked by grasslands on the Mount Terrick Road, near Mitiamo, including a water reserve, uncategorised Crown land and unused road reserve. The rare Club-hair New Holland Daisy is found on one of these blocks.

D37 Pannoobamawm Nature Conservation Reserve

This eight hectare site is uncategorised Crown land next to the Pannoobamawm Cemetery. It contains Northern Plains Grassland with significant flora species such as Red Swainson-pea, Leafless Bluebush and Buloke.

D38 Patho Plains Railway Nature Conservation Reserve

This 92 hectare section of disused railway between Kotta and Patho is part of the Elmore–Cohuna line. It contains significant areas of Plains Grassland and provides an ecological link through the Patho Plains. Significant flora species include Red Swainson-pea, Pale Flax-lily, Umbrella Wattle and Spiny Rice-flower.

D39 Little Kotta Nature Conservation Reserve

This 19 hectare site is the existing Kotta (Torrumbarry) Bushland Reserve. It is a significant area of Plains Grassland and Plains Woodland with River Red Gum and Buloke in the overstorey.

D40 Welton Nature Conservation Reserve

This 162 hectare area of Riverine Chenopod Woodland includes the Patho Wildlife Reserve (where hunting is currently excluded) and adjoining public land water frontage reserve. It protects known habitat of the nationally endangered Winged Peppercreep and is linked to the new Gunbower National Park (Recommendation A4).

D41 Pipit Nature Conservation Reserve

This important area of Plains Grassland (33 hectares) to the west of Echuca includes the Roslynmead Natural Features Reserve and adjoining uncategorised public land and unused road reserve. It contains red soils grassland and *Juncus* grassland subcommunities.

D42 Cantwell Nature Conservation Reserve

The 30 hectare existing Millewa Nature Conservation Reserve protects an important area of Plains Grassland to the south west of Echuca. This reserve has been re-named to avoid confusion with Millewa state forest (NSW).

D43 Strathallan Nature Conservation Reserve

This small area (one hectare) of uncommitted public land contains Northern Plains Grassland with a population of the endangered Red Swainson-pea and potential habitat for the endangered Small Scurf-pea. It adjoins larger areas of grassland along the Bendigo–Echuca Railway line.

D44 Wallenjoie Swamp Nature Conservation Reserve

This 425 hectare site is the existing Wallenjoie Swamp Wildlife Reserve. The Wallenjoie wetlands are of national significance and valued for their size, rarity of wetland type, species diversity and habitat value. Wallenjoie Swamp is primarily a River Red Gum Wetland containing a variety of other EVCs, including Red Gum Swamp/Plains Grassy Wetland Mosaic, Plains Grassy Wetland, and small areas of Plains Grassland/Plains Grassy Woodland/Gilgai Wetland Mosaic. It is a known egret nesting site and has previously been a nesting area for Blue-billed Ducks.

D45 One Tree Swamp and Two Tree Swamp Nature Conservation Reserve

This new reserve combines the existing One Tree Swamp Nature Conservation Reserve, the Two Tree Swamp Wildlife Reserve (where hunting is currently excluded) and small areas of adjoining public land (totalling 856 hectares). One Tree, Two Tree and Wallenjoie Swamps are part of the Wallenjoie Wetlands complex, a closely interlinked system of deep and shallow freshwater marshes north of Colbinabbin. The wetlands are of national significance and valued for their size, rarity of wetland type, species diversity and habitat value. In particular One Tree and Two Tree Swamps provide valuable breeding habitat for Brolga. One Tree Swamp was recently purchased through the National Reserve System Program and is one of the largest Southern Cane-grass dominated wetlands in the district.

D46 Gemmill Swamp Nature Conservation Reserve

The existing Gemmill Swamp Wildlife Area (216 hectares), also known as 'Youngs Bend', is a semi-permanent freshwater wetland comprising rushes and reeds with a River Red Gum forest and some Yellow Box woodland to the north. Although the general recommendations for

nature conservation reserves exclude dogs, continued 'onleash' walking of dogs at Gemmill Swamp Nature Conservation Reserve will be permitted due to its proximity to Shepparton and the current popularity of dog walking on the walking tracks.

D47 East Wangaratta Nature Conservation Reserve

The addition of this 177 hectares of state forest, public land water frontage reserve and uncategorised Crown land to the reserve system contributes to meeting reservation targets for the endangered Riverine Grassy Woodland/ Riverine Swampy Woodland Mosaic and vulnerable Floodplain Riparian Woodland EVCs in the Victorian Riverina bioregion. Vulnerable waterbirds such as Australasian Shoveler, Hardhead, Musk Duck and Eastern Great Egret have been recorded in this reserve.

D48 Moodemere Nature Conservation Reserve

This 12 hectare site is the existing Moodemere Nature Conservation Reserve and an unused road reserve, west of Rutherglen. This recently purchased reserve contains a high quality Grey Box–Buloke Grassy Woodland community, which is threatened at the state and national levels. The Moodemere Nature Conservation Reserve provides important habitat for a number of declining woodland bird species, and the site supports the vulnerable Buloke Mistletoe. It adjoins Lake Moodemere, recommended to become part of the Murray River Park (Recommendation B3).

D49 Ryans Lagoon Nature Conservation Reserve

This 151 hectare site is the existing Ryans Lagoon Wildlife Reserve (where hunting is currently excluded) to the east of Wodonga. Listed on the Directory of Important Wetlands in Australia, Ryans Lagoon is a River Red Gum-dominated deep freshwater marsh with a rush-dominated understorey consisting of two billabongs and a small anabranch off Ryans Creek. It is a particularly good example of riverine billabongs in the upper parts of the River Murray.

D50 Bonegilla Nature Conservation Reserve

Three small bushland reserves totalling 12 hectares to the east of Wodonga are recommended to form a new nature conservation reserve. They contain examples of Grassy White Box Woodland community, part of the 'White Box–Yellow Box–Blakely's Red Gum Grassy Woodlands and Derived Native Grasslands' community, considered critically endangered at a national level. Plant populations of endangered Wedge Diuris, and vulnerable Purple Diuris and Western Silver Wattle occur on these blocks. The land manager will need to restrict inappropriate access to this site from the abutting recreation rail trail community use area.

RECOMMENDATIONS

Nature conservation reserves

D1–D50

That new and existing nature conservation reserves, indicated on Map A and listed above, be used as such and managed in accordance with general recommendations D.

E Historic and cultural features reserves

Throughout the investigation area there are many sites associated with many thousands of years of Aboriginal history and more recent non-indigenous exploration, settlement, agriculture, timber production and mining.

Many surveys have located and recorded Aboriginal sites and places revealing an extensive array of Aboriginal cultural heritage values across a rich cultural landscape. For example River Red Gum 'scarred trees' are an important reminder of this cultural connection. Other tree species in these forests were also used, with their heritage values similarly seen through scars caused by the removal of bark—in particular Grey and Black Box. One of the most significant clusters of scarred trees occurs at Bumbang Island near Robinvale (see recommendation E2). In many areas important Aboriginal cultural heritage sites co-occur with other outstanding values: for example, the fish traps and Aboriginal mounds in Barmah forest where important biodiversity values are also known. While the new *Aboriginal Heritage Act 2006* acknowledges the central decision-making role of relevant Aboriginal groups in protecting and managing Aboriginal cultural heritage values, identifying and protecting these values is the role of all land managers.

Some 1100 sites of non-indigenous historic significance have been identified on public land in the investigation area. Many of these are buildings and transport infrastructure that remain in use today (e.g. Echuca Court house, Koondrook road bridge). There are many other sites that have not been identified in the investigation area, notably the often extensive Aboriginal cultural heritage places and landscapes. For some sites, identification places them at risk of destruction or progressive deterioration. Specific legislation exists to protect all sites from destruction and vandalism both on public and private land.

Historic and cultural features reserves are established primarily to protect places with highly significant historical or cultural values, including remnant historical features such as buildings, structures, relics or other artefacts. These reserves may also include places with no tangible onground features, such as meeting places or areas of spiritual or mythological importance. The historic and cultural heritage reserves listed below are identified for specific management that not only protects the physical elements of the place, but also enhances values through provision of visitor experiences and interpretations associated with cultural heritage. These sites have been recommended as, or to continue as, historic and cultural features reserves, historic areas or historic reserves reflecting these important values.

Many features of historic or cultural significance are included within other public land use categories such as national parks and state forest. VEAC considers that these sites can be managed to protect the historic and cultural heritage values and also provide opportunities for enhanced visitor experiences. In some places these values may form key visitor attractions to the area. For other sites, mechanisms such as zoning, listing on heritage registers and identification through planning schemes provide adequate protection and guide management practices.

Several existing historic and cultural features or historic reserves have been recommended to be included within new public land use categories. These are:

- Lock Nine Pump historic site is included in the expanded Murray-Sunset National Park (A1)
- Woolshed Swamp Sheepwash Historic Reserve (12.8 hectares) is now included in the recommended Woolshed Swamp Nature Conservation Reserve (D17)
- Major Mitchell Lagoon Historic Area (12.7 hectares) is now included in the recommended Murray River Park (B3).

Community views

Relatively few comments were made about historic and cultural features reserves during public consultation. In general, those comments were supportive of the draft proposals, with the exception of Echuca Historic and Cultural Features Reserve. Of concern to a few stakeholders was the inclusion of the area east of the Echuca–Moama bridge known as Banyula forest—an area which is seen as having relatively few historic values—with the highly visible attractions of the historic port precinct. The recommendation below retains the earlier proposal for this new reserve and provides a more detailed description of the historic values present on the site.

RECOMMENDATIONS

General recommendations for historic and cultural features reserves

E

That historic and cultural features reserves, according to their specific characteristics, be used to:

- (a) protect historic and cultural heritage values, features and sites (Aboriginal and non-indigenous)
- (b) provide opportunities for:
 - (i) education and passive recreation such as picnicking, walking and, where relevant, fishing, and
 - (ii) more intensive recreation such as camping where specified by the land manager and compatible with (a)
- (c) protect areas with remnant natural vegetation or habitat value

and that:

- (d) timber harvesting not be permitted
- (e) low impact exploration for minerals be permitted, and mining, subject to consideration of the impact on values in (a) for each application or case
- (f) prospecting and apiculture generally be permitted
- (g) grazing not be permitted, except where required for short periods as a land management tool at the discretion of the land manager, and
- (h) the areas be permanently reserved under the *Crown Land (Reserves) Act 1978*.

RECOMMENDATIONS

Existing historic and cultural features reserves

E1–E10

That existing historic and cultural features reserves, historic areas or historic reserves indicated on Map A and listed below continue to be used as such and be managed in accordance with general recommendations E:

- E1 Psyche Bend, Kings Billabong (11 hectares)
- E2 Bumbang Island, Robinvale (570 hectares)
- E3 Boort (Old Courthouse) (0.05 hectares)
- E4 Kinypanial Creek (40 hectares)
- E5 Serpentine Creek Weir (0.04 hectares)
- E6 Cohuna (Old Courthouse) (0.1 hectares)
- E7 Days Mill, south of Murchison (4 hectares)
- E8 Echuca & Waranga Trust Irrigation Pump and Channel, Murchison (17 hectares)
- E9 Murchison Police Paddocks (9 hectares)
- E10 Happy Valley Creek, Myrtleford (1 hectare)

Notes:

1. Management of the existing Bumbang Island Historic Area (E2) should be conducted in consultation with an Aboriginal Advisory Committee established as described in recommendation R28.
2. Where appropriate, a committee of management may be appointed to manage, or continue to manage, historic and cultural features reserves in accordance with general recommendations E.

E11–E13 New historic and cultural features reserves

E11 Koondrook Historic and Cultural Features Reserve (14.6 hectares)

This new historic area encompasses significant sites and cultural heritage themes such as transport (tramway, bridges, wharf, moving goods, bridging waterways), industry (timber harvesting and water management) and unique engineering constructions (Condidorios bridge, tramway). Remnants of the former Koondrook Tramway Complex (Victorian Heritage Register H1570) run parallel to the Kerang–Koondrook Road and terminate in Koondrook. The largest intact features are the station building and Y-shaped yard, situated in the main street. Two historic bridges connect the town to the north and east: Condidorios Bridge (VHR H1799) (1906) across Gunbower Creek, and Barham–Koondrook Bridge (1904) spanning the Murray River. Other features include a pumphouse, an operational timber mill (Arbuthnot Sawmill), shipping shed and barge slipway. Together these form a historically important precinct containing many rare and possibly unique features and design.

E12 Echuca Historic and Cultural Features Reserve (115 hectares)

The Echuca Historic and Cultural Features Reserve highlights the very significant role Echuca played in the development of Victoria. It includes historical features representing several themes—goods and people, natural resources exploitation and building settlements. The reserve focuses on Echuca Wharf, a major River Red Gum timber structure and a hub of nineteenth century paddlesteamer commerce. The associated railhead—the terminus of the Murray Valley (Melbourne to Echuca) Railway—transported Murray River and Riverina produce to the Port of Melbourne. The reserve also includes the cargo shed and a functioning sawmill on the wharf, the old police station (VHR H377 currently occupied by the Echuca Historical Society museum), the railway pumping station (VHR H1053) as well as approaches to the Murray road and rail bridge.

The forested eastern portion of this new reserve consists of Macintosh's sawmill site, Shin Bone Alley and Southern Cross Village Settlement sites (HV Heritage Inventory H7825-0002, HV Database No.10233). These late 19th century settlements along the Murray River were *ad hoc*, low cost housing for timber mill and other town workers, abandoned after the 1906 floods. Today very little material evidence remains. In places timber slip rails and portions of a broad gauge railway to Macintosh's mill are present. Pepper trees, ceramic fragments and handmade brick fragments indicate the Southern Cross settlement. A footbridge near Pakenham Street and the Maidens Punt slipway (Tannery Bend) are more tangible evidence of past use. This area, known locally as Banyula forest, offers potential for interpretive nature and historic walking trails that will provide a different visitor experience to the established Echuca Wharf precinct.

Other nearby historical features, not in the recommended reserve but open to the public, include Shackells Bond Store (VHR H558), the former Star Hotel and the Port Dioramas, on Campaspe Shire land.

E13 Bonegilla Historic and Cultural Features Reserve (15.7 hectares)

Bonegilla migrant camp or reception centre (Block 19) is of both historical and social significance (VHR 1835). The original army camp was constructed in 1940 as 24 separate blocks comprising more than 800 buildings. Block 19 was converted to a reception centre for migrants of non-British origin with about 320,000 immigrants received from 1947 until it ceased operation in 1971. This site is of national significance and has important values related to the expansion of defence building activities and operations for the Second World War and later, the Vietnam War.

The majority of the area is currently reserved as a museum and for the promotion of tourism. The recommended historic and cultural features reserve includes an abutting parcel of unreserved Crown land (one hectare) and the change of reserve purpose allows the land manager to more appropriately manage and conserve the site's historical values as the primary objective. The current management body has received funding for visitor and interpretative facilities. A conservation management plan was completed prior to transfer to the Victorian Government from the Commonwealth in 1996. VEAC considers that the new

reservation purpose will not specifically alter the current management arrangements, but more closely align the reservation purpose with the key site values.

RECOMMENDATIONS

New historic and cultural features reserves

E11–E13

That the following areas, indicated on Map A be managed in accordance with the general recommendation E:

E11 Koondrook (15 hectares)

E12 Echuca (115 hectares)

E13 Bonegilla (16 hectares)

Notes:

1. Currently two authorised uses exist in the area recommended as Koondrook Historic and Cultural Features Reserve (reserve for sawmill, and a licence for residence and gardens). VEAC recommends that provision be made for continued use and management of the features on these sites where sympathetic to the reserve purpose. Should these uses no longer be required, the features of historic and cultural value on the site are to be retained and managed in accordance with the reserve purpose.
2. Where appropriate, a committee of management may be appointed to manage historic and cultural features reserves in accordance with general recommendations E. VEAC notes that there are existing committees of management over some of these reserves.

F Reference areas and heritage rivers

Three categories of land use overlay are defined by legislation: reference areas, heritage rivers and declared water supply catchments (see H: Water production, drainage and distribution areas). Recommendations are presented below for the continuation of existing reference areas and heritage rivers in the investigation area. For some of these areas, there are changes recommended for the underlying public land use category.

Reference areas

Reference areas are relatively small areas of public land containing viable samples of one or more land types that are relatively undisturbed and that are proclaimed under the *Reference Areas Act 1978*. Reference areas are generally located away from access tracks and not used by the public. Such areas are set aside as a reference for the comparative study of land, particularly in relation to problems arising from land uses. The primary management objective of reference areas is that natural processes should be allowed to continue undisturbed and that areas should remain in as natural a state as possible.

Within reference areas, only activities associated with protecting the natural processes of the area, emergency operations or approved research are permitted. Grazing, mineral exploration, mining, harvesting of forest produce, apiculture, quarrying, educational activities and recreational activities are specifically prohibited in reference areas. Access is restricted to authorised researchers and people undertaking management tasks or emergency operations, as well as those with Ministerial approval. Reference area management plans typically define a surrounding buffer area on public land which restricts land uses that may have a detrimental effect on the reference area. Buffer widths vary depending upon the specific activity.

There are six existing reference areas in the investigation area. All but one of these currently overlay national or state parks. Tarpaulin Bend Reference Area is at present within state forest. In the recommendations above, the area of state forest encompassing Tarpaulin Bend is an addition to Murray–Kulkyne Park (recommendation B5), and the two reference areas within Barmah State Park are included in the new Barmah National Park (recommendation A7). Therefore all reference areas in the investigation area are recommended as overlays to either national or other parks under the *National Parks Act 1975*. A brief description of the land values in each reference area is provided below.

The two largest reference areas, Toupnein Creek (1659 hectares) and Lake Wallawalla (996 hectares), are within the existing Murray–Sunset National Park in the Murray Scroll Belt bioregion. Toupnein Creek Reference Area is located on a floodplain and higher alluvial plain adjoining the Murray River and vegetated with largely depleted ecological vegetation communities (EVCs) dominated by Riverine Chenopod Woodland with a Black Box overstorey, Low Chenopod Shrubland, Alluvial Plains Semi-arid Grassland and some areas of Lignum Shrubland or Lignum Swampy Woodland. Grassy Riverine Forest, Floodway Pond Herbland and Shrubby Riverine Woodland, form areas of River Red Gum forest, swampy woodlands and ephemeral wetlands. This area uniquely supports floodplain vegetation in a semi-

arid environment. Lake Wallawalla Reference Area is located on red-brown duplex soils of the higher alluvial plains, but includes both a lunette and a portion of the River Murray floodplain. Depleted EVCs Riverine and Semi-arid Chenopod Woodlands, with either a Black Box or Belah/Buloke or native pine overstorey, and alluvial rise Low Chenopod Shrubland are represented here.

Tarpaulin Bend Reference Area is located on the grey clays of the present floodplain of the River Murray in the Robinvale Plains bioregion. Tarpaulin Bend is unique amongst reference areas being located on a meander of the River Murray. The area was isolated as an inlier within New South Wales when the river cut a new course to the south of the meander. It is predominantly River Red Gum forest and Black Box Riverine Chenopod Woodland, and is a good representation of the mid-mallee vegetation communities of the River Murray floodplain. Other EVCs include Shrubby Riverine Woodland, Lignum Shrubland, Floodway Pond Herbland, Grassy Riverine Forest, and Intermittent Swampy Woodland.

VEAC acknowledges that there are some difficulties associated with management of unauthorised access (recreation and pest animals) in this area. Council considers that although there are some issues specific to this reference area, particularly access from New South Wales, it is likely that there are other reference areas across the state that require comparable management effort. The range of values provided by Tarpaulin Bend Reference Area should be retained. Any revision of reference area values and management would be best undertaken within a broader context. Additional resourcing and innovative solutions may be required to ensure that this unusual land feature, located along the River Murray, is managed in accordance with the existing reference area overlay as part of Murray–Kulkyne Park.

Chalka Creek Reference Area is on a flat floodplain consisting of clay, sand and sandy clay with shallow channels within the existing Hattah–Kulkyne National Park (recommendation A2). Vegetation is River Red Gum and Black Box woodland, and the area is flooded by overflow from the River Murray along Chalka Creek although this has not occurred since the early 1990s. The dominant ecological vegetation classes in this reference area—Riverine Chenopod Woodland and Riverine Grassy Woodland—are both depleted in the Robinvale Plains bioregion.

Top Island and Top End Reference Areas are within the existing Barmah State Park. Inclusion in the recommended Barmah National Park and removal of domestic stock grazing will provide greater security for these reference areas. Both reference areas are located on floodplains subject to relatively frequent flooding by the River Murray and contain vegetation communities that are depleted or vulnerable in the Murray Fans bioregion. Top Island Reference Area vegetation consists of an open River Red Gum forest with an understorey of Moira Grass, Warrego Summer-grass, Swamp Wallaby-grass and Common Spike Rush. The area consists largely of Riverine Swamp Forest/Tall Marsh Mosaic, Tall Marsh and Grassy Riverine Forest EVCs. A number of other EVCs, including Riverine Grassy Woodland and Rushy Riverine Swamp comprise about a fifth of this reference area and are of limited extent outside Barmah Forest. Also present are tall closed grasslands of

Giant Rush and grasslands dominated by Moira Grass. Top End Reference Area is dominated by River Red Gum open forest with an understorey of Terete Culm-sedge and Warrego Summer-grass. Sedgy Riverine Forest, Riverine Swamp Forest and a mosaic of these EVCs comprise most of this reference area. Some areas have Terete Culm-sedge in association with Warengo Summer-grass and Swamp Wallaby-grass or Grey Box in the endangered Plains Woodland EVC.

Community views

Relatively few comments were made about reference areas during public consultation. Those few comments were supportive of existing reference areas and restated the need for improved management arrangements to retain the integrity of these areas. As such, inclusion in national or other parks was seen as an appropriate and effective approach to improving and assisting future management of reference areas.

RECOMMENDATIONS

Reference areas

F1

That the following areas, totalling 3721 hectares, shown on Map A, continue to be used as reference areas proclaimed under the *Reference Areas Act 1978*:

- (a) Toupnein Creek (1659 hectares)
- (b) Lake Wallawalla (996 hectares)
- (c) Tarpaulin Bend (436 hectares)
- (d) Chalka Creek (329 hectares)
- (e) Top Island (177 hectares)
- (f) Top End (124 hectares)

Notes:

1. VEAC notes that fencing and management actions are required to restrict stock access to Tarpaulin Bend Reference Area from New South Wales.

Heritage rivers

Victoria's 18 heritage river areas were established under the *Heritage Rivers Act 1992* to protect those river corridors with outstanding values for current and future generations. The areas identified have at least four values of state or greater significance focussed on the biodiversity, recreational, cultural heritage and scenic values. New and extended impoundments, barriers and impeding structures are prohibited in all heritage river areas to retain their free-flowing condition and protect native fish habitat, recreational canoeing or scenic values. Other recommended uses must also be appropriate to protect the rivers' heritage values. The Goulburn and Ovens Rivers are the only designated heritage river areas in the investigation area.

Both heritage river areas contain significant River Red Gum vegetation communities providing habitat for threatened

flora and fauna species and a high native fish diversity including Murray Cod. These rivers are also very scenic, popular for recreational fishing and have significant cultural heritage sites within a substantially cleared landscape.

The Goulburn River Heritage Area extends 430 kilometres downstream from Lake Eildon to the River Murray near Echuca. The Goulburn is a highly regulated river, with water stored at Lake Eildon and Goulburn weir and then diverted downstream for irrigation. By contrast the Ovens River Heritage Area—extending from Killawarra to the River Murray confluence with Lake Mulwala—is the only unregulated large river in the investigation area. The vegetation along this corridor is highly significant, especially because of the intact understorey of Silver Wattle and River Bottlebrush. In 2002 the Victorian River Health Strategy highlighted the Ovens River—together with the Mitchell River in Gippsland—as very high value, relatively intact, large, natural and entire river systems and recognised that these areas need to be managed in order to protect these values.

VEAC's recommendations include these heritage river areas largely in new national parks. This reflects the significant ecological importance of these corridors, particularly in the face of climate change, and ensures future management retains a high standard of river health. Draft management plans for these rivers were released for comment in 1997, but were not finalised. In 2006 changes to the heritage rivers legislation updated the management plan provisions and acknowledged the role of other public land plans or strategies in managing heritage river areas. Regional river health strategies have been prepared by catchment management authorities for the Goulburn and Ovens Rivers, which establish regional priorities for river protection and restoration of heritage river values.

Community views

Relatively few comments were made about heritage river areas during public consultation. The inclusion of these areas in national parks was viewed as a way of ensuring protection by retaining the free flowing condition of the rivers and providing native fish habitat, recreational and scenic values. Retaining access to these river corridors for recreation was also important, particularly for recreational fishers. Some adjoining land owners and licensees—particularly along the Ovens River where environmental management plans have been established in partnership with the North East Catchment Management Authority—were supportive of improved heritage river management although some did not support inclusion of these areas in national parks because of perceived management or resourcing inadequacies.

RECOMMENDATIONS

Heritage rivers

F2

That the following areas, as described on Schedule One of the *Heritage Rivers Act 1992* and totalling 20,410 hectares, continue to be used as heritage river areas proclaimed under the *Heritage Rivers Act 1992*:

(a) the Goulburn River Heritage Area
(16,660 hectares)

(b) the Ovens River Heritage Area
(3750 hectares)

Notes:

1. Some 2650 hectares of the Goulburn Heritage River, outside the investigation area, should be managed in a manner consistent to that area described above.

G Natural features reserves

Natural features reserves include public land use categories with a variety of natural features worthy of protection, including scenic areas, bushland, lakes, rivers and streams, geological and geomorphological features. Protection of these particular natural features is the primary focus of the reserve, however a variety of opportunities for recreation and other uses may also be provided, including duck hunting in selected reserves such as wildlife areas (state game reserves).

Although the values present on these reserves are worthy of protection, they are typically not as significant as those within national or state parks and nature conservation reserves and may be more resilient to a higher level of recreation activity or minor resource use. Many of these areas are relatively small parcels of vegetated public land or in linear strips along waterways.

Some 27,161 hectares of public land are recommended to be included in this grouping in the investigation area, within the following subcategories:

- bushland areas
- streamside areas
- wildlife areas (seasonally available for hunting and sometimes known locally as state game reserves)
- public land water frontages
- stream beds and banks.

Those areas previously in River Murray Reserve, highway park and lake reserve categories are incorporated into various other public land use categories in this investigation area. VEAC recognises the importance of the River Murray corridor and recommends that the majority of public land river frontage be added to either the new Murray River Park (recommendation B3), or national parks.

Smaller strips and areas of bushland are also important habitat links across a fragmented landscape. Some reserves are small pockets of remnant vegetation in largely cleared agricultural land. In particular, public land water frontages and streamside areas provide important corridors for the movement of native plants and animals both seasonally and during changing climatic conditions. The general recommendations for natural features reserves present a strategic shift in the use of these areas by removing or phasing out domestic stock grazing (see recommendation R38) and excluding timber harvesting in all natural features reserves. Degradation of wetlands and lakes through salinisation and unnatural water regimes is a major land management issue throughout the investigation area, and particularly in the Kerang lakes area. With water production requirements also dictating the management of these areas, it is important for the environmental needs of wetlands and natural lakes to be taken into consideration. These wetlands should receive a sufficient water regime to enhance the ecological, aesthetic and recreational potential of these sites (see environmental water recommendations R13–R20).

Community views

Few submissions commented on bushland areas, or stream beds and banks. Issues relating to the detail of these categories or specific proposals were considered by VEAC in formulating the recommendations presented below.

The issue of wetlands, and specifically access for duck hunting, drew a large number of submissions, some calling for further protection of wetlands, but the majority opposing loss of access to hunting opportunities. The opposition was mainly at a broad level and rarely specified which wetlands were more important. Many such submissions erroneously represented the number of wildlife areas (including state game reserves) being lost to hunting under the draft proposals. These comments are discussed in more detail in Part A Chapter 1 (Response to main issues in submissions).

The practicality of removing grazing from riparian public land water frontages including the length of a phase out period, implementation costs and ongoing management, especially related to flood damage, were highlighted in public consultations as an area for consideration. Additionally the desirability of adjoining landowner licensees maintaining a 'stewardship' relationship with the licence area, even in the absence of grazing, and ongoing management responsibilities including resourcing was raised.

Response

VEAC acknowledges the role of hunting groups in conservation and management, particularly state game reserves (wildlife areas). Improved environmental watering will improve environmental values and increase hunting opportunities in wetlands that are available for hunting but that would otherwise likely be dry.

VEAC is required under s.18(d) of the VEAC Act to have regard for 'the need to provide for the creation and preservation of a comprehensive, adequate and representative system of parks and reserves within the State of Victoria'. Despite a large proportion of wetlands in the investigation area being included in the Ramsar Convention and listed on the Directory of Important Wetlands, these provisions afford no specific legislative protection in Victoria. In addressing the under-representation of wetlands in parks and reserves, a 'paired approach' has been adopted to spread geographically both the impact on, and opportunities for, recreational hunting. This approach allows for a 'wildlife refuge' conservation reserve to be located in close proximity to a wildlife area (state game reserve) and seeks to ensure that environmental water is allocated to both conservation and wildlife areas located within a single hydrological system. VEAC believes that the provision of environmental water to the investigation area will significantly enhance recreational hunting opportunities and outweigh any reduction in area available for such activities.

The economic costs and benefits of removal of stock grazing from streamside and public land water frontages is discussed in more detail in Part C and appendix 1. Fencing costs may be considered as part of the implementation of recommendations (see general recommendation R2), although a significant length of fencing is currently in place along licensed frontages. Current programs conducted by CMAs can readily achieve stock exclusion given appropriate resources. Costs associated with survey of the Crown-freehold land boundary (along which any fencing should be installed) are likely to be mitigated by the provision of digital cadastral mapping and survey-corrected digital imagery.

RECOMMENDATIONS

General recommendation for natural features reserves

G

That the natural features reserves, according to their specific characteristics:

(a) be used to:

- (i) protect natural features and values
- (ii) protect and restore areas with remnant vegetation or habitat value and conserve native flora and fauna
- (iii) protect water quality where appropriate,
- (iv) provide protection for historic and Aboriginal cultural heritage features, values and sites
- (v) provide opportunities for education and recreation, including hunting where specified below, at levels consistent with (i) to (iv) above
- (vi) maintain scenic features and the character and quality of the local landscapes, and
- (vii) preserve features of geological or geomorphological interest;

and that:

- (b) timber harvesting not be permitted
- (c) exploration for minerals be permitted, and mining, subject to decisions on particular cases
- (d) prospecting and apiculture generally be permitted
- (e) domestic stock grazing not be permitted as specified in general recommendation R38
- (f) unused road reserves adjoining natural features reserves be added to those reserves where appropriate ecological or recreational values are identified, and
- (g) they be permanently reserved under the *Crown Land (Reserves) Act 1978*.

Notes:

1. The above management objectives and summary land use recommendations are those that generally apply for the land use category. Exceptions to these may apply to specific reserves in special circumstances.
2. Stock grazing contracted for ecological purposes or for short-term management purposes such as targeted weed control may be permitted by the land manager where required.
3. Apiculture sites should be located away from picnic areas, car parks, walking tracks and other focal points for recreation.
4. On-ground management may be assigned or delegated to organisations or institutions other than DSE, such as committees of management, under licence or other arrangement subject to review of management effectiveness.
5. Several natural features reserves have values other than those related to their primary use, that are worthy of specific protection.

Bushland areas

Many bushland areas are typically small Crown land reserves often containing remnant native vegetation in a largely cleared landscape. In the past these areas may have provided camping and watering points for travelling stock, and opportunities for passive recreation in relatively natural surroundings. Many of the new and existing bushland areas reflect a history of past land use (e.g. stock watering or disused railways). Although these areas typically do not have highly significant values, remnant native vegetation and wetlands are of increasing importance for nature conservation. This is particularly the case in areas of intensive agriculture and broadscale land clearing.

The 59 new and retained bushland areas comprising some 3396 hectares are shown on Map A and listed in appendix 8.

RECOMMENDATIONS

Bushland areas

G1–G59

That existing and new bushland reserves, shown on Map A and listed in appendix 8, be used in accordance with the natural features reserves general recommendations G.

Streamside areas

Streamside areas are typically scenic and accessible reserves adjoining rivers and streams. Often these areas are located where a wider section of public land is intersected by a road or stream crossing. Originally set aside for passive recreation such as picnicking and camping, these areas are also ecologically important protecting riparian vegetation along watercourses. The ecosystem services provided by streamside areas and riparian public land more generally will have greater significance in the future under the predicted climate change impacts of less rainfall leading to reduced runoff, more erratic rainfall and average higher temperatures. The streamside areas recommended in this investigation area encompass those existing streamside areas, and new areas comprising existing state forest, public land water frontage and stream beds and banks. Domestic stock grazing is recommended to cease in streamside areas (see general recommendation R38).

The 22 retained and new streamside areas comprise some 2145 hectares and are shown on Map A and listed in appendix 8.

RECOMMENDATIONS

Streamside areas

G60–81

That existing and new streamside areas, shown on Map A and listed in appendix 8, be used in accordance with the natural features reserves general recommendations G, and:

(a) where appropriate, be used for more intensive recreation such as camping, at the discretion of the land manager and where this does not conflict with the maintenance of the water quality in the adjacent stream.

Wildlife areas

Wildlife areas within the investigation area are typically wetlands (often known as ‘state game reserves’) which are seasonally available for hunting. These areas protect the habitat of wetland plants and animals. There are currently 32 wildlife reserves in the investigation area, the majority in the Kerang area, in which seasonal hunting is permitted. Those wildlife areas in which hunting is not permitted are reclassified as nature conservation reserves (if they have not been added to other land categories) (see recommendations D1–D50).

VEAC has endeavoured to retain access to numerous wildlife areas (including those previously designated as state game reserves) for recreational hunters. Accordingly, 23 wetlands are recommended as wildlife areas including high value recreational hunting sites such as Cullens Lake, Hird Swamp, Lake Murphy, Mansfield Swamp, Gaynor Swamp and Reedy Swamp (Shepparton). The 23 retained and new wildlife areas comprising some 5738 hectares are shown on Map A and listed in appendix 8.

RECOMMENDATIONS

Wildlife areas

G82–G104

That existing and new wildlife areas, shown on Map A and listed in appendix 8, be used in accordance with the natural features reserve general recommendations G, and:

(a) to conserve and protect species, communities or habitats of indigenous animals and plants

(b) for public recreation (including hunting in season as specified by the land manager) and education, where this does not conflict with the primary objective, and

(c) be reserved under the *Wildlife Act 1975* as state game reserves for the purpose of hunting.

Public land water frontages

Public land water frontages comprise long, narrow corridors of Crown land along major streams and rivers. Many of these areas were set aside in 1881, although some streams have a discontinuous Crown frontage. On the Northern Plains, these linear reserves—along with vegetated road reserves—provide much of the remaining habitat for many threatened species. Water frontage reserves are also an important recreation resource, particularly for bushwalking, fishing and hunting. Public land water frontages and riparian land more generally play an important role in maintaining stream health and water quality. This service will be particularly important in areas where climate change affects rainfall and reduces runoff. Retention of riparian vegetation, strengthens habitat corridors, improves water quality and river ecology and reduces water pollution. These environmental and economic effects are likely to be most beneficial in lower catchment areas, but all adjoining landowners are likely to gain from a reduction in bank erosion, improved soil structure and enhanced stream health, water quality and ecosystem services.

Many public land water frontages are currently licensed to adjoining land holders, mostly for grazing and stock watering. It has long been the practice of river health managers to recommend the exclusion of stock from near-riparian areas. VEAC recommends a significant shift in the management priorities for public land water frontages in keeping with the process established by catchment management authorities to fence off and revegetate these areas. As described in the general recommendations, domestic stock grazing is to be phased out of all public land water frontages over the next five years (general recommendation R38). Licence holders should be encouraged with an incentive scheme structured to advantage those who complete fencing and stock exclusion early in the phase out period, particularly for those along high value riparian corridor ‘river reserves’, and high priority reaches identified by catchment management authorities. Costs and benefits associated with this shift in management are described in more detail in chapter 4 and appendix 1.

The public land water frontages recommended in this investigation area encompass adjoining stream beds and banks. Recommended public land water frontages along the Avoca, Loddon, Campaspe, Goulburn, Ovens, King and Kiewa Rivers are high value riparian corridors to be known as ‘river reserves’ (appendix 8).

RECOMMENDATIONS

Public land water frontages

G105–G112

That public land water frontages including those to be known as 'river reserves', where not otherwise recommended for a specific use, be used in accordance with the natural features reserves general recommendations G, and to:

- (a) conserve native flora and fauna as part of an integrated system of habitat networks or corridors
- (b) protect adjoining land from erosion, and provide for flood passage
- (c) provide access for recreation (including hunting where appropriate) at levels of use consistent with (a) to (b) above and that:
- (d) catchment management authorities, in cooperation with adjoining landholders, implement programs to gradually restore frontages on currently grazed, degraded, eroded or salt-affected streambanks, where frontage vegetation is degraded or not regenerating and to protect natural, cultural, recreational and scenic values or water quality
- (e) programs to restore frontages be implemented according to local priorities and a practical timetable, with particular emphasis on the Victorian Riverina bioregion
- (f) where frontages adjoin farmland, fencing and offstream stock watering points be encouraged by appropriate support
- (g) where stream frontage vegetation is to be restored, particularly in cleared or degraded areas, native trees, shrubs and ground species be planted, using stock of local provenance
- (h) where appropriate, suitable areas for more intensive recreational use be identified and facilities established
- (i) where land exchanges are recommended that involve frontage land that is no longer adjacent to rivers, efforts be made to prevent loss of any nature conservation or other values of this land from the public land estate
- (j) no new licences for domestic stock grazing be issued, and that existing licences be systematically reviewed, with a view to completing the phasing out of domestic stock grazing within five years in accordance with recommendation R38
- (k) where a Riparian Conservation Licence has been issued for a public land water frontage (see recommendation R39), recreation use by the public for activities such as walking, nature observation or fishing be permitted, while motorised forms of recreation not be permitted (except for launching of boats)
- (l) licensees be required to provide stiles in any fences erected across their licence area if requested to do so by the land manager
- (m) no new cultivation of stream frontages for agriculture be permitted in accordance with recommendation R38, and areas currently cultivated be revegetated
- (n) sand and gravel extraction may be permitted by the land managers where this is consistent with the above uses, and where necessary for bed and bank stability, and
- (o) public land water frontages be managed by the relevant catchment management authority and the Department of Sustainability and Environment, and in accordance with general recommendation R39 for Riparian Conservation Licences where applicable.

Note:

1. Short-term grazing may be contracted for ecological or management purposes such as targeted weed control.

Stream beds and banks

The beds and banks of many watercourses are deemed to have remained Crown land under the *Water Act 1905* and subsequent Acts. Stream bed and bank recommendations apply to watercourses outside other major public land use categories, whether or not there is an adjoining public land water frontage, where the watercourse forms the boundary between allotments. In many cases, current stream beds and banks have been recommended as part of an adjoining public land use category.

RECOMMENDATIONS

Stream beds and banks

G113

That stream beds and banks, subject to other relevant recommendations, guidelines and statutory requirements, be used in accordance with the natural features reserves general recommendations G, and to:

- (a) conserve or restore habitat for native flora and fauna
- (b) provide for appropriate recreational activities (including hunting where appropriate) at levels of use consistent with (a)
- (c) provide for flood passage and drainage requirements of adjacent land
- (d) provide, where necessary, for the passage of artificial flows of water stored within the catchment or transferred from other catchments
- (e) maintain streams in a stable condition using environmentally sound techniques, and
- (f) provide a source of sand and gravel where this does not conflict with the above.

H Water production, drainage and distribution areas

From a water industry perspective, water production includes harvesting, storing and distributing water from local catchments. However, from a public land use perspective this category also includes water storage areas, bores, off takes, diversion weirs, pump intakes and associated buffer areas that obtain their supply from catchment flows. The River Red Gum Forests Investigation area includes few areas that are solely used for collection of water or water production. Many of the large water bodies in the investigation area serve as holding basins for distribution and storage of water derived from a distant catchment source or as salinity disposal basins. These distribution or holding facilities and channels, storage tanks, and most drainage or flood protection channels are described here as the water distribution and drainage public land use category (see J Services and Utilities Areas).

Many of the Kerang lakes are utilised for water distribution via a linked series of channels and lakes that include areas reserved as wildlife and nature conservation reserves. In this area water is moved through a series of previously natural lakes connected by both natural and constructed waterways or channels. Water is also pumped directly from the River Murray into some of these storage basins. Management of water is important in this region, most notably for primary industry and the environment. The role of water for environmental purposes is described in greater detail in general recommendations for environmental water (chapter 1).

The precise boundaries of the water production areas and, in particular, the buffer strips surrounding the defined facilities, are normally defined in detailed plans called special area plans (or pre-existing 'land use determinations') following the declaration of 'special water supply catchment areas' under the *Catchment and Land Protection Act 1994*. Parts of two declared water supply catchments currently exist and are recommended to continue in the investigation area—Lake Hume and Ovens River (upstream of Wangaratta). Access to domestic water supply storages should generally be restricted to protect and retain high water quality and yield.

There are significant areas of public land currently used to support irrigation industries in the Murray and Goulburn Valleys. Many of these areas also support significant biodiversity, historic, recreational and other values and are managed by water authorities. VEAC believes that the relevant water authorities should continue to manage such areas in a way that is sympathetic to these other secondary values.

Community views

Relatively few comments were made about water production, drainage and distribution areas during public consultation. In general, those comments received were supportive of the draft proposals, with additional detailed information provided proposing minor boundary adjustments considered. Of concern to some stakeholders was their ability to retain access to commercial water use, water supply, flood mitigation or recreation activities in areas that had a new primary use recommended such as nature conservation reserve or national park.

The importance of nature conservation, protection of ecological values and cultural heritage in water production, drainage and distribution areas was raised by some stakeholders.

RECOMMENDATIONS

General recommendations for water production areas

H1

That water production areas; storage areas, diversion works and associated facilities; protective buffer zones around diversion works and storages where defined in a special area plan; and any other public land considered necessary, as shown on Map A be used for:

- (a) water supply purposes
- (b) other activities permitted by the water supply authority after consultation with the Department of Sustainability and Environment, and other agencies, as appropriate
- (c) the protection of natural and cultural heritage values, and
- (d) unless otherwise securely reserved, these areas be permanently reserved under the *Crown Land (Reserves) Act 1978* for water supply purposes and be managed by the water supply authority.

General recommendations for water distribution and drainage areas

H2

That water distribution and drainage areas and associated facilities; and any other public land considered necessary, as shown on Map A be used for:

- (a) storage and distribution of water for irrigation and domestic supply purposes
- (b) flood mitigation purposes
- (c) salt drainage or disposal purposes
- (d) other activities permitted by the water supply authority after consultation with the Department of Sustainability and Environment, and other agencies, as appropriate
- (e) the protection of natural and cultural heritage values, and
- (f) unless otherwise securely reserved, these areas be permanently reserved under the *Crown Land (Reserves) Act 1978* for water distribution and drainage purposes and be managed by the water supply authority.

Notes:

1. Several large water storage areas not primarily used for domestic water supply are also used for water-based recreation. This may continue except where it results in deteriorating water quality.

I Community use areas

Community use areas are primarily used for education, recreation or other specific community purposes. Many are within towns and are used for purposes such as sporting ovals, public gardens, playgrounds and camping areas. The majority of these reserves are managed by local committees of management providing a focus for community activities (in accordance with the general recommendations I). Some contain small areas of remnant vegetation that contribute to local habitat and landscape values. Community use areas include:

- Recreation areas—mostly small reserves close to townships with facilities for organised sports and informal recreation, e.g. sports ovals, shooting ranges, speedways, public golf courses
- Parklands and gardens—small intensively used community parklands, playgrounds and ornamental gardens
- Buildings in public use—such as schools, public halls, court houses, police stations, and
- Education areas—specifically set aside as reserves where students can study natural ecosystems, practice methods of environmental analysis or field techniques, and conduct simple natural science experiments. While nature study is permitted on most areas of public land, use is usually restricted to passive forms, mostly relying on observation.

There are many existing community use areas within the investigation area, the majority of which are within or nearby townships. VEAC recognises the value of these public open spaces and community facilities and recommends that those currently in use largely be retained. These areas are not individually listed but can be viewed in detail on the public land use maps of recommendations for major townships in the investigation area (see Map C in pocket at rear of this report). New community use areas and those for which there are substantial changes recommended are described below.

Community views

Relatively few submissions were received for community use areas. Specific comments were made about the inclusion, exclusion or exemption of locations from this public land use category. In particular there were a number of submissions supporting a reconfiguration of public land use adjoining Lake Cullulleraine, Swan Hill Pioneer Settlement Museum, Moira park scout camp south of Shepparton, and a few public golf courses. In general the Barmah Forest Community Use Area was supported, but some stakeholders called for the handback of this area to the Traditional Owners.

RECOMMENDATIONS

General recommendations for community use areas

I

That new and existing community use areas be used for recreation, parks and gardens, buildings for community purposes and education; and

(a) appropriate facilities be provided

(b) where relevant, and where compatible with the above, features of cultural significance, natural surroundings and the local character and quality of the landscape be maintained or restored

(c) harvesting of forest products, hunting and 'stone' extraction, as defined in the *Extractive Industries Development Act 1995*, not be permitted

(d) be reserved under the *Crown Land (Reserves) Act 1978*,

Note:

1. The Pine Grove Recreation Reserve contains significant Plains Grassland values which should be protected.
2. Where appropriate, a committee of management may be appointed or continue to manage community use areas in accordance with the general recommendations I.

riverine regions including the paddlesteamer Gem (VHR 1742). The Gem— one of the largest paddlesteamers on the Murray River— was once owned by the Chaffey brothers of Mildura and operated from 1876 until the early 1950s. It is technologically important as an example of an iron-framed River Red Gum planked vessel designed for river use and forms the focal point of the museum. The settlement area includes nature walks and various interpretative materials. The museum is currently operated under contract for Swan Hill Rural City Council and this arrangement should not be affected by the recommended change to a community use area.

I4 Spence Bridge Education Area

Education areas are specifically set aside as reserves where students can study natural ecosystems, learn environmental analysis and field techniques and conduct long term experiments. Environmental education is the long term primary land use. Education areas are usually selected to show both areas of undisturbed natural vegetation as well as areas which have been altered by activities such as timber production and agriculture. Appropriate facilities, including accommodation, may be established onsite or be located nearby.

Two of the three existing education areas are recommended for inclusion in other public land use categories. Spence Bridge Education Area is recommended as a smaller area with new boundaries encompassing the popular Treetops scout campsite and buildings. The smaller community use area will continue to provide for a range of recreation activities in a natural setting and opportunities for study of natural ecosystems or environmental education. Wemen Education Area is included in Hattah–Kulkyne National Park (recommendation A2) and Darling Junction Education Area is encompassed within Murray River Park (recommendation B3)

I5 Little Lake Boort Recreation Area

The area adjoining and including Little Lake Boort is currently used for recreation. Facilities on the site include buildings, caravan and camping areas, swimming pool, picnic facilities and tennis courts. Also within this precinct is a water treatment area. VEAC recommends that the area encompassing the water treatment plant be categorised for water production, while the remainder is allocated to a community use area primarily for recreation. A rifle and clay target shooting range with an associated clubhouse, are also recommended as part of Little Lake Boort Recreation Area.

I6 Barmah Forest Community Use Area

Approximately 22 hectares around the Dharnya Centre and muster yards is recommended as a new community use area to accommodate a broad range of activities and uses. The existing Barmah Forest Community Use Area comprises 5.7 hectares around the Dharnya Centre and associated buildings in Barmah forest, but excludes the muster yards. The area is reserved under the *Forests Act 1958* for 'special purposes'. The existing buildings and cultural heritage information and services at this 'gateway to Barmah Forest' have the potential to be further developed as a visitor information and cultural heritage node for the surrounding new Barmah National Park (recommendation A7). Such a node might also include some commercial activities.

I1–I7 Recommended new and modified community use areas

I1 Lake Cullulleraine Community Use Area

Lake Cullulleraine township is located on the southern shores of a large, artificially maintained water storage of the same name. Much of the existing community use area is cleared with many access tracks and intensive recreation use in some parts. VEAC recommends an expansion of the community use area to encompass most public land abutting the lake in keeping with recent detailed township planning undertaken by the local municipality and to retain existing community use.

I2 Gadsen Bend Rifle Range Community Use Area

Gadsen Bend Rifle Range is a licensed area within state forest, near Robinvale. The recommended Gadsen Bend Rifle Range Community Use Area is a long narrow, mostly cleared area (20.7 hectares) with many access tracks. It abuts the new Gadsen Bend Park (recommendation B6) to the west and south and is bounded by private land to the east. Community safety in the adjoining new park should be a priority and every effort should be made to revegetate land that is not directly used for the rifle range.

I3 Swan Hill Pioneer Settlement Museum Community Use Area

Swan Hill Pioneer Settlement Museum is located on public land fronting the Little River Murray in Swan Hill. This area is a major tourist attraction and displays a range of cultural heritage artefacts relating to the mallee and

17 Moira Park Community Use Area

Currently an area of the Goulburn River state forests known locally as Moira Park is utilised for a number of recreation activities based around a scout camp. An area encompassing the licensed scout camp is recommended as a community use area to provide for existing use to continue.

RECOMMENDATIONS

New or modified community use areas

11–17

That new or modified community use areas indicated on Map A and listed below be used as such and managed in accordance with general recommendations 1:

- 11 Lake Cullulleraine Recreation Area (355 hectares)
- 12 Gadsen Bend Rifle Range Community Use Area (21 hectares)
- 13 Swan Hill Pioneer Settlement Museum Community Use Area (35 hectares)
- 14 Spence Bridge Education Area (3.5 hectares)
- 15 Little Lake Boort Recreation Area (119 hectares)
- 16 Barmah Forest Community Use Area (22 hectares)
- 17 Moira Park Community Use Area (5.8 hectares)

J Services and utilities areas

Numerous utilities are located on public land, such as transport, communications, cemeteries, water, sewerage, waste disposal, electricity and gas and other services. Within townships there are hospitals, schools and municipal buildings, depots and other utilities on public land. Many of these areas are too small to be displayed on Map A or the detailed township maps.

Some of these reserves have other important values. This is particularly the case for roads and railways which, together with water frontages, provide a habitat network across the largely cleared or fragmented landscape of farmland and townships. Narrow avenues of large old trees have scenic appeal along many roadsides in the investigation area. These corridors may house small remnants of rare vegetation types and provide key habitat not only for species that live in large old trees, but also for understorey species in ungrazed areas. Additionally many important geological sites are exposed in road and railway cuttings.

Land managers and local municipal councils have put a great deal of effort into assessing and managing natural values on road and railway reserves. Public land managers should continue to protect these important biodiversity and other natural values. Where the area is no longer required for service and utilities, the primary management objective should be assessed and the capability for other public use considered.

Community views

No new proposals were made specifically for the services and utilities public land use category. A small number of stakeholders supported the general recommendations.

RECOMMENDATIONS

General recommendations for services and utilities areas

J

That reserves and easements for public services and utilities such as transport, electricity and gas, communications, cemeteries, water and sewerage be used for those purposes, and that

- (a) new services, or utility sites and easements or lines, not be sited in or across reference areas, and wherever possible not be sited in or across national or other parks or nature conservation reserves
- (b) railway lines and other service and utility sites be managed to protect natural values including remnant vegetation and habitat, as far as practical
- (c) organisations responsible for road reserve management conserve and protect indigenous flora and fauna communities and habitat occurring on roadsides, in accordance with the guidelines above and as part of roadside management plans
- (d) a review be conducted of unused road reserves and those identified as containing significant environmental values be conserved and protected, and
- (e) should a public land area or building and site used for service or utility purposes no longer be required for its primary designated use, it be assessed for its natural, recreational and cultural heritage values, and capability for other public uses including firewood plantations (recommendation R43).

Notes:

1. While DSE, VicRoads and municipalities are commonly responsible for road reserve management, many unused roads are licensed to adjoining landholders. Roads and unused road reserves may not be distinguishable on Map A.
2. There are numerous cemeteries across the investigation area that have remnant natural vegetation. These should be managed to protect this vegetation where it does not interfere with the primary aim of the cemetery.
3. The Pyramid Hill airstrip contains important areas of Plains Grassland EVC which should be managed for conservation purposes in conjunction with the airstrip. If this Crown land is no longer required for airstrip purposes in the future, the land should become a nature conservation reserve.

K Earth resources and extraction areas

Mineral and stone production contributes significantly to the future prosperity of the Victorian economy. Access to areas for exploration and production also need to be balanced against other values such as aesthetic, water or nature conservation. Although there are currently limited exploration, mining and extractive areas within the River Red Gum Forests Investigation area, there remains potential for currently uneconomic resources to be economically exploitable in the future or for new deposits to be discovered.

Currently there are ten earth resource extraction areas in the investigation area for gravel, stone and industrial minerals such as salt and gypsum. These currently operate under various arrangements including stone reserves, extractive material licences, work authorities and industrial leases. Earth resource extraction is administered under several Acts. Generally:

- quarrying for stone requires a work authority under the *Extractive Industries Development Act 1995* (EIDA Act)
- extraction of minerals including coal, mineral sands, gold and gypsum requires a mining licence under the *Mineral Resources (Sustainable Development) Act 1990*
- harvesting of salt requires an industrial lease (section 134) or extractive materials licence (section 138) under the *Land Act 1958*.

VEAC recommends that areas operating as earth resource extraction areas for some period of time, and have this as the primary land use, are categorised as extractive resource areas. Those areas that encompass a relatively small area of public land or have a short term use for earth resource areas will be assessed for other public land use values and categorised appropriately.

The standards of operation and rehabilitation for short term resource extraction such as stone, gypsum and sand mining should be similar to comparable scale mining operations. The following principles and guidelines for earth resource extraction are designed to minimise the impacts of these activities on natural values in surrounding areas.

Principles and guidelines

- Native vegetation should preferably not be removed for extraction, particularly where the same extractive resource is available on already cleared land or where the resource is shallow and extraction will be short term.
- If vegetation is to be removed, it should in accordance with the Native Vegetation Management Framework.
- An assessment of possible impacts on Aboriginal cultural heritage values should be carried out for new proposals.
- Reclamation of extraction sites needs to be of a high standard.
- Extraction sites should be rationalised to the smallest practical number of sites.
- Sites in use should be progressively rehabilitated.

- Disused extraction sites should be rehabilitated where possible, including removal of rubbish, measures taken to stabilise the surface and ensure public safety, and revegetation as required.
- Location of sites and conditions imposed should aim at minimising adverse effects on adjoining public land from noise, dust, unsightliness, and erosion.
- Particular care is necessary to avoid affecting water quality in runoff from extraction sites.
- Extraction should avoid sites susceptible to erosion. The potential for adverse impacts of extraction in streambeds and granitic sands is severe, and if no alternative source is available, specific protective measures should be applied.
- In large public land areas, the land manager may extract stone from appropriate sites as required for management needs and in accordance with regulatory requirements such as work authorities and planning permits.

Community views

Few submissions specifically commented on the earth resources extraction area public land use category. Comments from key industry groups focussed on clarification of wording of the principles and guidelines, while others did not support any use of public land for earth resources. Some stakeholders suggested that there is limited access to earth resources in the investigation area and restrictions to exploration and development should be lifted. An increase in exempted or restricted public land (not available for resource use under the MRSD Act) was opposed by industry groups.

RECOMMENDATIONS

General recommendations for earth resources and extraction areas

K

That existing earth resource areas shown on Map A continue to be used for the extraction of stone, sand, salt, gypsum and other mining resource use in accordance with current legislative and regulatory requirements, and the principles and guidelines described above, and that

(a) recommended new extraction sites be located and operated in accordance with the current legislation and regulations, and as appropriate the above principles and guidelines

(b) extraction sites preferably be located on already cleared land, and

(c) when no longer required for extraction, each site be considered uncategorised public land and assessed for public land values and uses, and where appropriate assigned to another public land use category or made surplus.

K1 Mining sites

Currently salt and gypsum mining are undertaken on public land in the investigation area. Although there is potential for precious mineral deposits and brown coal below the surface and a number of exploration licences are held over parts of the investigation area, there are currently no established mine sites for these resources. Three existing gypsum mining sites are recommended to continue operations as earth resource extraction areas (recommendation K1). Two gypsum mining licences operate over an area of the existing natural features reserve, the Duck Lake Wildlife Area. This area is recommended to be retained as a natural features reserve and be renamed the Duck Lake North Wildlife Area (G86) to distinguish this area from the adjoining Duck Lake South Nature Conservation Reserve (recommendation D20).

RECOMMENDATIONS

General recommendations for mining sites

K1

That existing mining sites shown on Map A and listed below continue to be used as such and in accordance with general recommendations K:

- (a) McDonald Road Salt Lake Mining Area (67 hectares)
- (b) Micks Lake Mining Area (119 hectares)
- (c) Copi Mining Area (3.8 hectares).

K2 Stone reserves

Specific small areas were recommended in previous Land Conservation Council studies as stone reserves. Typically local municipal councils use these areas as gravel and crushed rock resources for construction and road making materials. Extraction of material from stone reserves requires authorisation under the EIDA Act.

VEAC recommends that operating stone extraction sites continue, but encourages the industry to improve land management practices in line with the principles and guidelines recommended above.

The majority of existing stone reserves are no longer operational and are recommended as additions to other public land categories. Notably the Merbein Stone Reserve is recommended to be included in the new Wargan–Mallee Bushland Reserve (G1) and requires rehabilitation and revegetation works.

RECOMMENDATIONS

General recommendations for stone reserves

K2

That existing stone reserves shown on Map A and listed below continue to be used as such and in accordance with general recommendations K:

- (a) Hyem Gravel Reserve (0.3 hectares)
- (b) Milawa Gravel Reserve (0.7 hectares)
- (c) Boort Gravel Reserve (35 hectares).

L Plantations

Public land is used for both softwood (pine) and hardwood (eucalypt) plantations. The River Red Gum Forests Investigation area includes a small area (174 hectares) of softwood timber plantations located on public land along the Ovens River between Myrtleford and Porepunkah (Braithwaites and Junction plantations). The Victorian Plantations Corporation currently licence these areas to Hancock Victorian Plantations. VEAC is not recommending any changes to this arrangement and recommends these areas remain as plantation public land use category.

Community views

No submissions specifically proposed changes to the plantation public land use category. Many comments were received relating to the use of wood lots and plantation timbers to replace commercial forestry activities derived from native forests on public land. Access to plantations was raised as an issue by some recreation groups.

RECOMMENDATIONS

General recommendations for plantations

L

That existing plantations held under licence and shown on Map A continue under present use and management.

M Uncategorized public land

Uncategorised public land is a broad category for which no specific use is recommended. In some cases, this includes areas that are formally reserved and have a reservation purpose, but have not been categorised because they were excluded from previous Land Conservation Council investigations. This includes a number of townships in the River Red Gum Forests Investigation area (Echuca, Mildura, Swan Hill and parts of Shepparton and Wangaratta) and land acquired by government agencies or statutory authorities since the last systematic assessment. In many of these areas, new public land use recommendations simply formalise existing reservation or use.

In other cases, public land that has no clear primary use is recommended as uncategorised public land and, subject to assessment of any public land attributes present on the site, either assigned to an appropriate land manager or disposed of through sale. The Department of Sustainability and Environment carries out these assessments of Crown land parcels. Public land attributes are the resources (or natural, recreational, heritage or scenic values) present on a site that would generally require its retention as Crown land. Crown land that has minimal or no such values or resources is considered surplus to government needs and may be disposed of. In certain circumstances, and after native title assessments have been made, this may be undertaken as a land exchange for nearby freehold land that has high values.

A number of public land blocks have been recommended for revegetation or re-establishment of native vegetation, many of which are found in the Victorian Riverina bioregion (see appendix 8). Prior to any revegetation, these sites will require assessment for the presence of existing native vegetation, particularly native grasslands. In some circumstances, the removal of domestic stock grazing will allow the natural re-establishment of native grasslands or grassy woodlands. In other situations, revegetation should be undertaken with native seed local to the area and with species appropriate to the ecological vegetation class.

Community views

Few proposals or comments were made specifically on this public land use category. A number of submissions sought a reconfiguration of public land at Lake Cullulleraine to reflect recent township planning by the local municipality. A small number of stakeholders supported the general recommendations for uncategorised public land.

RECOMMENDATIONS

General recommendations for uncategorised public land

M

Public land other than that recommended for specific uses in this report, or subject to previous approved specific land use recommendations:

- (a) be uncategorised public land
- (b) existing legal use and tenure continue for the time being
- (c) when Crown land assessments are completed, the land be either:
 - (i) assigned to a Department of Sustainability and Environment land manager and treated as outlined above if it has public land values (i.e. native forest or native grasslands), or
 - (ii) disposed of if assessed as surplus, and
- (d) those parcels identified in appendix 8 and shown on Map A be revegetated with native species local to the area or be managed in a way which allows for the natural regeneration of native vegetation.