



## SUBMISSION TO THE INQUIRY INTO THE MANAGEMENT, GOVERNANCE AND USE OF ENVIRONMENTAL WATER

### 1. Summary

This submission provides Parks Victoria's perspective on the third term of reference for the inquiry: *Consideration of what barriers exist to the more efficient use of environmental water and how these may be addressed* and does not address the other three terms of reference in which Parks Victoria does not have a role. Parks Victoria's interest lies in maximising the benefits from environmental water by ensuring it is applied on parks and reserves as part of a suite of complementary management actions.

The Victorian environmental watering program provides a key mechanism to address the flow related threats and stressors to water dependent biodiversity values in parks. It plays a critical role in protecting parts of Victoria's parks network and conserving the state's native flora and fauna values found within them. Parks Victoria is an active partner in the Victorian environmental watering program and supportive of the conservation outcomes it achieves, consistent with the strategic directions for Victoria's parks network.

An integrated and coordinated management response is required to achieve these conservation outcomes, of which the delivery of environmental water is a component. Other stressors, such as from invasive species, need to be addressed through complementary programs to ensure the benefits of these water deliveries are maximised.

The broader benefits from the rapid growth in the deployment of environmental water across the state over the last ten years could be further strengthened through complementary programs that:

- more fully realise the benefits of environmental watering on human well-being, for example through complementary visitor engagement programs that allow visitors to interact with flooded landscapes in an engaged, low impact and safe way; and
- more fully reduce the threat from pest plant and animal invasion on critical values environmental watering is designed to protect.

### 2. Introduction

Parks Victoria is responsible for managing a diverse network of parks from protected areas such as national, state and wilderness parks and nature conservation reserves to urban, historic and regional parks and waterways.

These parks have diverse objectives that include conserving natural and cultural heritage, connecting people with nature and ensuring community safety.

Parks Victoria manages 4.1 million hectares or 18% of Victoria. Victoria's parks play a critical role in conserving biodiversity<sup>1</sup>. There are more than 1,000 wetlands contained within Victoria's park network, including 75% of the area of Victoria's eleven Ramsar wetlands and an extensive network of high value waterways. Despite management efforts, the scale and impact of some key threats and stressors continue to impact on these values.

The Victorian environmental watering program provides a key mechanism to address the flow related threats and stressors to water dependent areas. The ecological outcomes sought by environmental watering align with park management and Ramsar objectives, particularly for the conservation and use of Victoria's special places identified in Parks Victoria's strategic plan, *Shaping Our Future*<sup>2</sup>.

The program is delivered as a collaboration between many public authorities (referred to as program partners). Public land managers (such as Parks Victoria, Department of Environment, Land, Water and Planning and Traditional Owner land management boards) are closely involved in environmental water planning and delivery for public land (such as national parks and state forests).

Parks Victoria collaborates with program partners through the environmental water planning and delivery phases and takes responsibility for management of risks, operation of some infrastructure (such as pumps, outlets, gates and channels) and public signage and communications.

The volume of environmental water deployed across Victoria has grown from less than 20 GL in 2007-08<sup>3</sup> to 839 GL in 2016-17<sup>4</sup>. Strengthening the program of complementary measures could help to more fully realise the benefits for parks and people and manage potential adverse outcomes from the application of this water. The scale at which these management activities can be undertaken is subject to funding and other priorities.

### 3. Complementary works to manage risks

The management of risks associated with environmental watering are shared between partner agencies in the Victorian environmental watering program. Parks Victoria is directly responsible for the management of numerous risks as determined by annual risk assessments conducted by the Victorian Environmental Water Holder.

Identified risks that Parks Victoria is responsible for managing include:

- potential injury to public and staff as a result of changed road conditions;
- impacts to public users, adjacent landholders and commercial operators because of park closures or restricted access; and
- improved conditions for non-native species leading to potentially adverse environmental impacts.

Managing risks of environmental watering includes communicating environmental watering activities to the broader public, managing road closures during and after flooding, and maintenance of saturated roads damaged by vehicle traffic. Maintaining a safe and useable road network within the parks and reserves system is important for connecting people with parks, a key pillar of Parks Victoria's strategic intent.

Parks Victoria is supportive of infrastructure projects (works and measures) that deliver similar benefits using less water than would otherwise be needed in an overbank flooding event - such as initiatives delivered through The Living Murray and that are currently being considered under the Basin Plan. Outside of these formal programs, numerous water regulating structures exist within the parks and reserves system that are used for the delivery of

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<sup>1</sup> Victoria's park network contains 92% of Victoria's recorded native flora species, 90% of listed rare and threatened flora, 78% of the state's recorded native terrestrial fauna and 91% of the listed rare and threatened fauna.

<sup>2</sup> Parks Victoria - <http://parkweb.vic.gov.au/about-us/who-we-are/vision>

<sup>3</sup> Environmental Watering in Victoria 2007/08 (Department of Sustainability and Environment, 2009)

<sup>4</sup> Environmental Water use in Victoria 2016-17 (<https://www.water.vic.gov.au/water-reporting/monthly-water-report>)

environmental water, and arrangements for ownership, operation, maintenance and renewal of these structures are shared between Parks Victoria and other agencies.

#### 4. Complementary works to realise cultural, social and recreational benefits

The efficient use of environmental water includes maximising the social, recreational and cultural benefits. It provides shared benefits for communities including anglers, hunters, fishers, traditional owners, educators, commercial operators and others. Environmental water connects people and places in water dependent environments, creating conditions needed to support community events such as the annual fishing competition on the Wimmera River at Dimboola. Such activities have flow on economic benefits for rural and regional communities<sup>5</sup>:

Parks Victoria aims to provide a world class parks network with a customer service focus. Consistent with this strategic direction, environmental water provides more opportunities for people to engage with parks and places. It enhances visitor experiences in water dependent environments such as attracting more diverse waterbird populations enjoyed by birdwatchers, providing boating opportunities and enhanced visual amenity for passive recreation.

The broader benefits of environmental watering have the potential to be better realised when a complementary visitor engagement program is delivered in parallel. Creating recreational opportunities by providing for visitors to engage with the flooded landscapes in a low impact and safe way enhances the flow on benefits of environmental watering to human wellbeing. Such opportunities include providing hides for viewing waterbirds, canoe launching ramps around structures where environmental water is managed, providing for sustainable hunting, and interpretive signage to explain environmental watering and redirect recreational activities.

##### Case study example: Enhancing recreational outcomes at Hird and Johnson Swamps

*Hird and Johnson Swamps are located within the Kerang Ramsar site in Northern Victoria and are popular sites for duck hunting. Past management of the irrigation network meant the swamps were regularly inundated in summer, drowning River Red Gum trees and creating conditions where cumbungi, a native bulrush, began to dominate. The loss of live trees and decline in open water habitat, resulting from cumbungi growth, diminished the waterbird values and subsequent hunting values of the swamps.*

*An environmental water management plan developed for the swamps outlined a watering regime to favour River Red Gum establishment and provide waterbird habitat, while recognising the threats to achieving these outcomes. Working in partnership with Parks Victoria, the North Central CMA secured external funding to address these threats and improve the outcomes of the environmental watering actions. Activities included revegetating the margins of the swamps to provide future shading for young chicks on nests and slashing cumbungi to recreate the open water habitat favoured by ducks. A rabbit control program was put in place to ensure the revegetation would be successful. Collectively, these activities contribute to long term sustainable hunting at Hird and Johnson Swamps enhancing their recreational values and potentially contributing economic benefits to nearby towns such as Cohuna and Pyramid Hill.*

With increasing knowledge of cultural objectives for the management of our waterways and wetlands, environmental water can help meet the aspirations of Traditional Owner communities. Parks Victoria works in partnership with Traditional Owner groups to help realise these goals, including nature based and cultural tourism opportunities that can provide a source of future revenue or direct visitor activities in a way that protects cultural heritage sites from damage.

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<sup>5</sup> Wimmera CMA (2017) Seasonal Watering Proposal for the Wimmera River System 2017-18

### Case study example: A shared management plan for Lake Boort

Lake Boort is part of a chain of Loddon River wetlands extending north from Boort to Kerang. The 502 hectare reserve is part of a rich cultural landscape, offering a window into cultural landscapes and traditions of the Dja Dja Wurrung peoples. The draft Lake Boort Management Plan (Parks Victoria, 2016) is a strategic guide to the management of the natural and cultural resources of the lake and provides for continuing and future uses for recreation, interpretation and education. Importantly, the plan recognises the enduring connection of the Traditional Owners of this landscape and includes the key elements of:

- Protecting and interpreting the cultural landscape and cultural sites of Lake Boort
- Revitalising it as a productive wetland through environmental watering, revegetation and habitat protection
- Enhancing recreational opportunities, including nature-based and cultural tourism that benefit Dja Dja Wurrung businesses
- Minimising the risk of damage to cultural and natural sites by ensuring appropriate recreational use and managing potential adverse impacts of environmental watering.

Providing environmental water will play a critical role in the recovery of Lake Boort, together with a complementary package of works to fully realise its natural, cultural, social and recreational benefits.

Scarred tree in the bed of Lake Boort surrounded by terrestrial weeds (photo courtesy of James Hackel, Parks Victoria)



## 5. Complementary works for environmental outcomes

One of the factors that the efficient use of environmental water can be measured by is whether the ecological outcomes sought by the use of that water have been achieved (i.e. was the intervention effective?).

Achieving ecological outcomes is reliant upon:

- (i) Providing the appropriate watering regimes, and
- (ii) Managing external threats to achieving those outcomes such as predation by foxes, invasion by weeds and physical disturbance by pigs.

Both elements need to be managed concurrently if the desired ecological outcomes are to be fully realised.

While providing beneficial outcomes for water dependent environments, environmental water can also create conditions suitable for pest plants and animals to flourish, which unmanaged can impact the success of environmental watering actions (e.g. the invasion of an aquatic weed that displaces wetland plants).

Land managers, such as Parks Victoria, play a critical role in achieving the efficient use of environmental water by ensuring the external threats to achieving ecological outcomes are monitored and managed. These external threats are generally well understood, and actions to mitigate them are identified through Parks Victoria's Conservation Action Planning processes, as well as site based environmental watering plans developed by the Catchment Management Authorities.

For the continued efficient use of environmental water, the growth in scale of environmental watering would likely benefit from a comparable increased focus on the management of:

- the spread of weed propagules;
- the growth in feral animal populations that take advantage of the increased food resources; and
- overabundant native grazers such as kangaroos when watering redistributes them.

#### Case study example: Maximising reproductive success at War Plains

*In the summer of 2014 a widespread waterbird breeding event was supported using environmental water at Barmah Forest. Time lapse photography was installed to monitor the progress of the event and bird counts were conducted. A localised colony of cormorants was found breeding at War Plains. As water levels receded over the summer period, the breeding site became more easily accessible for foxes. Young chicks, yet to leave their nests, became a ready food source with multiple fox tracks being observed in the muddy margins of the breeding site. Over the course of three to four weeks, an estimated 10% of the chicks were preyed upon. As the habitat needed for these birds to breed is not available every year, it is important to manage predators in breeding years to maximise reproductive success.*



*Receding water levels beneath cormorant nests in Barmah Forest (photo courtesy of Keith Ward, Goulburn Broken CMA)*