

Pest Plant Control for Future Wetlands

A recent controlled burn undertaken by volunteer CFA crew and DSE, Parks Victoria and G-MW staff, initiated trials aimed at understanding how to best control the spread of phalaris, and foster wetland rehabilitation works scheduled to kick off in 2009. The Mokoan Project Team would like to thank all involved for their united and professional efforts on the day.



FAQs

Q. Why is Lake Mokoan being returned to a natural wetland?

A. Lake Mokoan is highly inefficient. It loses 50,000 ML of water, or 20,000 Olympic swimming pools, annually. This is enough water to supply a city with a population in excess of 200,000 people. Returning it to its natural state will help save 44,000 ML of water to improve the health of the Broken, Goulburn, Snowy and Murray Rivers.

Q. What will you be able to do at Lake Mokoan when it is returned to a wetland?

A. The future use of the Lake Mokoan site is the current focus of a major study. When completed the Lake Mokoan Future Land Use Strategy will recommend what types of activities will be suitable to occur at the site.

Q. Will it be locked up and closed from the community?

A. A key focus of the project is to ensure that the future wetland is a significant asset for the regional community. Opportunities for tourism, recreation, monitoring and research are currently being investigated.

Q. Will local farmers who rely on the lake be left without water?

A. The Victorian Government made a commitment to water users that their existing reliability of water supply will not be affected. A new system, which will provide improved water quality, is being developed by Goulburn Murray Water.

Q. How will the wetland system be rehabilitated?

A. The vision for the future wetland is currently being developed as part of the Lake Mokoan Future Land Use Strategy. The project team, through consultation with the community, will develop a rehabilitation program.

Q. Without Lake Mokoan, will Benalla be at increased risk of flooding?

A. Lake Mokoan plays a very minor role in reducing floods on the Broken River in Benalla. A number of studies are currently being completed to investigate any potential impacts. Findings will be presented to the community when they are complete.

Q. Will firefighting be affected when the lake is returned to a wetland?

A. The wetlands will remain a source of water for firefighting requirements in the future.

Q. When will the lake be drained?

A. Draw-down of Lake Mokoan is not scheduled to take place until 2008/2009 after which the rehabilitation of the wetland system will commence.

Q. Why is rehabilitating the Mokoan wetlands so important?

A. Water savings from the lake will help improve the health of the Broken, Goulburn, Snowy and Murray Rivers. Healthy rivers are the lifeblood of our community, providing vital water for homes, towns, farms and businesses. Healthy rivers also support habitats for native animals and fish. The wetland itself will also play an important role in improving the local habitat for a number of endangered flora and fauna species.

Q. What is Our Water Our Future?

A. Our Water Our Future White Paper is a Victorian Government action plan to secure water for Victoria's future. The Mokoan - Return to Wetland project is an important element of initiatives for improvement in river health and to meeting Federal and other inter-governmental commitments to the River Murray and Snowy River.

Q. How can I find out more information about the Mokoan - Return to Wetland Project?

A. The project's website can be found at www.lakemokoan.com It is currently being redesigned to provide the community with greater access to information and news.

Fact sheets available on the website:

- Broken System Catchment Hydrology
- Broken System Water Supply Infrastructure
- Broken System Water Entitlements and Allocations
- Broken System Water Supply Management and Operation
- Modelling of Water Supply Systems and Reliability of Supply
- Mokoan Project - Reliability Offsets - Scorecard Summary
- Mokoan - Return to Wetland; Frequently Asked Questions

More Information:
www.lakemokoan.com

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MOKOAN

RETURN TO WETLANDS

Mokoan - Project Overview

Returning Lake Mokoan to a natural wetland system has enormous benefits for the environment, while protecting water user supplies.

The \$60 million project is an integral part of Victoria's water reform package, *Our Water Our Future*, which is driving new and better ways to secure water for the future.

Water is a precious resource for both water users and the environment, and we must look for more efficient ways to use it.

Rehabilitation of the Mokoan wetland system is scheduled to start in 2009 and will save 44,000 megalitres (ML) of water annually. These savings will be used for environmental flows in the Murray and Snowy Rivers.

Restoring the Broken River's natural flow will also help improve the system's overall health, promoting fish breeding and improved habitats for native wildlife as well as providing other regional benefits.

Before the rehabilitation of the wetlands can commence, a series of studies and programs need to be completed including

infrastructure design to provide alternative water supply to current users, supply reliability offset measures, the decommissioning of the lake's existing infrastructure and a final plan to guide future land use.

Returning Lake Mokoan to its natural state will provide significant challenges for the key agencies and the community. The Mokoan - Return to Wetlands project team is committed to the wide-ranging benefits of

this showcase environmental project being fully realised for future generations. In addition, the Goulburn Broken Catchment Management Authority are undertaking several river health projects that complement this project.

Survey team for the preliminary Indigenous archaeological survey conducted over summer at Lake Mokoan: David Rhodes, Russell Ellis, Kel Atkinson, Anthony Lee, Allan Murray and Ernie Innes.



TIME LINE

Mid 2006	Draft Lake Mokoan Future Land Use Strategy to be released with opportunity for community review
Mid 2006	Announcement of supply offset options and community consultation
Early 2007	Construction for offset measures and supply to lake diverters scheduled to start
Early 2009	Scheduled draw-down of Lake Mokoan and start wetland rehabilitation



The delivery of the Mokoan Project is being undertaken as a partnership between the Department of Sustainability and Environment, Goulburn Broken Catchment Management Authority and Goulburn-Murray Water. In recognition of the diverse and complex nature of this multi-agency project, the Project Control Board has recently appointed David Jeffery, G-MW, as the Project Director for the Mokoan - Return to Wetland Project. Mr Jeffery's role will be to coordinate all agency involvement to ensure the effective delivery of the Government's decision and commitments in relation to the Mokoan Project.

Lake Mokoan Future Land Use Strategy



Creating the vision and plan for the Mokoan wetlands and associated land is being managed by the Department of Sustainability and Environment (DSE) in conjunction with the Lake Mokoan Future Land Use Steering Committee. The steering committee consists of representatives of the local community, landholders, Benalla Rural City, as well as government agencies.

Beca Consultants are working with the steering committee to prepare a Lake Mokoan Future Land Use Strategy that will identify proposed uses for the 8000 hectare site.

Stage one of the study was finalised in September 2005 and included a series of community information sessions and workshops to identify potential opportunities for the site. The steering committee and consultants were then able to develop and assess a range of identified land use options.

Through a series of community feedback sessions, expert workshops and additional studies, the final land use strategy for the study area will be presented to government later this year recognising a major milestone for the project.

The final plan will revolve around the wetland system, recommending other opportunities for land uses such as agriculture, tourism, recreation and forestry.

As part of this work, two studies investigating flora and fauna and cultural heritage values have been undertaken to assist with development of the final strategy and future management of the wetlands. A soil study is also being undertaken at the site.

The community and other stakeholders will be given further opportunities to provide input to the planning process before the strategy is finalised.

Supporting Studies

1. Archaeological surveys were undertaken in February at Lake Mokoan to evaluate indigenous cultural heritage values within the site.

Field investigations were carried out to assess the potential for cultural heritage values as part of the Lake Mokoan Future Land Use Strategy. Local indigenous communities assisted in the survey, which identified significant cultural sites and archaeological values.

The survey findings are being taken into consideration during the development of the final options for land use at the site.

DSE and the Lake Mokoan Future Land Use Steering Committee are working closely with the indigenous community as future land-use options for the site are refined.

2. Development of the Lake Mokoan Future Land Use Strategy has included investigation of case studies from around Australia where wetland developments have occurred.

Banrock Station was one of these sites and representatives of the steering committee visited the property, which includes 3400 acres of bushland and extensive wetlands.

The visit highlighted the potential to create new opportunities for regional tourism through the major environmental project.

Water Supply to Lake Mokoan Diverters

A range of options for supplying water to the existing users of Lake Mokoan and the lake's inlet channel have been narrowed down to two options: supply from the Broken River near Casey's Weir or supply from Holland's Creek. Further assessment of these options is progressing. Both options involve a pipeline along the northern edge of the lake.

Dams, groundwater supply, storage tanks and other alternative supply options are being investigated for users remote from the supply line, with water users in these areas being consulted directly.

An investigation into the likely demand from the main pipeline is also underway to determine the infrastructure required for the scheme.

A preliminary water supply scheme design will be the outcome of the above studies. Input from the existing water users is being sought on the design, prior to seeking government approval towards the end of the year.

Water Supply and Reliability for the Broken Basin

Goulburn-Murray Water is developing a "package" of efficient water supply options that will deliver supply reliability for Broken system water users. A scorecard system is being used to rank various options and packages of options, and will lead to the development of a preferred final offset package.

The scorecard considers cost, reliability benefit, risks, environmental and social impacts, community acceptance and contribution to water savings.

The need for input of water users during the development of the final offset package is well recognised and Goulburn-Murray Water will continue to consult with stakeholders throughout the process, including the Victorian Farmers Federation.

Investigations to identify how water losses in the current water supply system can be reduced are on track. Measures such as

pipelining, remote monitoring, remote control of inlets and outlets and off stream storages for surplus flows are some of the measures being assessed. Once finalised, these measures will be included in the offset package.

Confirmed elements of the final offset package are pipelining supply to Tungamah water users (now under construction) and the purchase of a 1000 ML entitlement.

Other options being considered for the final offset package include supplying Broken River water diverters from pipelines off the East Goulburn Main Channel and a 5000 ML off-stream storage.

The next stage will be the announcement of draft alternative packages of offsets in late July. Water users, the local community and key stakeholders will be involved in the review of the proposed options.

River Health

Several projects being delivered by the Goulburn Broken Catchment Management Authority complement the Mokoan - Return to Wetland project.

Improving Flow and Habitat in the Broken River

Numerous river restoration works are being undertaken to help "Bring Back the Broken" and improve the river's health.

The project includes:

- Delivery of improved river flows for the Broken River.
- Increased fish access to the Upper Broken River by way of a fish ladder at Casey's Weir and works at other fish barriers.
- Development of gross pollutant traps in Shepparton and Benalla to improve stormwater quality entering the system.
- Protection and enhancement of land adjacent to the river.
- Use of large woody debris to improve in-stream habitat.

For further information visit <http://www.gbcma.vic.gov.au/thebrokenriver>

Flow Determination

The environmental values of Broken Creek are affected by vegetation clearing, nutrient run-off, intensive agriculture, but mostly by changes to its natural flow.

An environmental flow determination is in progress for Broken and Boosey Creeks and their tributaries upstream of Katamatite. Environmental flow requirements for the Broken River have already been determined.

A Community Advisory Committee is currently being established to provide local knowledge, assist with site selection and develop recommended flow objectives.

Monitoring the Impacts of the Tungamah Pipeline

To provide water users in the Tungamah district the Broken, Boosey and Major Creeks were turned from intermittent streams into waterways with permanent flow. Despite poor water quality and flow changes the streams still have high conservation value, particularly as fish habitat.

Following the pipeline construction for Tungamah, a more natural flow regime will be returned. The Goulburn Broken Catchment Management Authority will be monitoring the waterways to determine the potential impacts of the pipeline construction, the in-stream effects of the pipeline and measures to lessen any effects on the creeks and their flora and fauna.

Flooding

Returning Mokoan to its natural wetland system will not have a significant impact on flooding regimes and will have no impact in major flood events, such as that which occurred in 1993. A fact sheet is currently being developed that describes the findings from a number of existing flood studies. Once complete, the fact sheet will be available from the Lake Mokoan website as well as from Government Offices in Benalla.

Healthy rivers are important for the health of the whole catchment. The variations in river flow, including minor flooding, is the key in maintaining river and floodplain health and is recognised as an important benefit of the Mokoan - Return to Wetlands project.

Existing 11 Mile Creek Wetland at Lake Mokoan



Asset Decommissioning



Mokoan Outlet Tower

There are in excess of 300 assets operated to manage Lake Mokoan in its current state. These assets have been identified and assessed to determine whether they should be retained, removed or rendered inoperable. The assets have also been reviewed in terms of environmental impacts and occupational health and safety risks.

For example, the outlet channel will need to be retained in its current form to allow for future overflows from the wetland to pass into the Broken River.

A draft asset decommissioning package is under preparation and will include:

- Recommendations for the embankment opening and the outlet structures.
- Preliminary plans for embankment opening, concrete removal and the removal and protection of other structures.
- Identification of environmental, health and safety issues and actions to address any issues.
- An estimation of the cost of the works and an implementation program.

Future options for the inlet channel are being considered, these include possible use of some sections for temporary storage of surplus flows, and other sections partially filled and reshaped to provide drainage.

Discussions with key stakeholders including adjoining landholders will occur before the final draft asset decommissioning package is released for community review and comment.

The actual works associated with the decommissioning of assets are not expected to commence until after harvesting of water ceases in 2008/09.