



Government
of South Australia

MURRAY FUTURE
Riverine Recovery

PIKE FLOODPLAIN

Major works under the *Riverine Recovery Project (RRP)* will build the environmental resilience of the Pike Floodplain near Renmark.

The *Riverine Recovery Project (RRP)* is a key component of South Australia's \$610 million *Murray Futures* program, which is funded by the Australian Government's *Water for the Future* initiative.

RRP aims to improve the river's health and the resilience of its wetlands and floodplains from the South Australian-Victorian border to Wellington.

The project will improve the long-term prospects of floodplains and wetlands by more efficient use of environmental water and aims to deliver 15 gigalitres of environmental water savings to the Commonwealth.

Building resilience of the Pike Floodplain environment

The \$100 million RRP, part of South Australia's \$610 million *Murray Futures* program, will take steps to improve the long-term ecological health and resilience of the river, floodplains and wetlands along the River Murray from the South Australian-Victorian border to Wellington.

The RRP includes funding for infrastructure works at the Pike Floodplain to enhance environmental flows, improve water quality and connectivity with the river channel, encourage native fish passage and support the recovery of valuable flora and fauna.

A high priority asset

The Pike Floodplain system, situated between Paringa and Lyrup near Renmark, covers a total of 6700 hectares. It comprises numerous ecological and cultural heritage assets, including a range of floodplain and aquatic habitats.

Floodplain habitats include river red gum (*Eucalyptus camaldulensis*) and black box (*E. largiflorens*) woodlands, lignum (*Muehlenbeckia florulenta*) shrublands, chenopod (*Atriplex spp.*) shrublands, herblands and dunes.

The aquatic habitats include permanent fast and slow flowing anabranches, permanent and temporary wetlands.

There are a number of processes that compromise the ecological integrity of the Pike Floodplain. The key threats to the site are altered flow regimes, elevated highly saline groundwater, obstructions to fish passage, as well as pest plants and animals.

Flow regulation in particular has reduced flooding frequencies and duration, and has resulted in saline groundwater levels increasing by up to three metres higher than would have occurred under natural, or pre-regulation, conditions.



Pike Floodplain.

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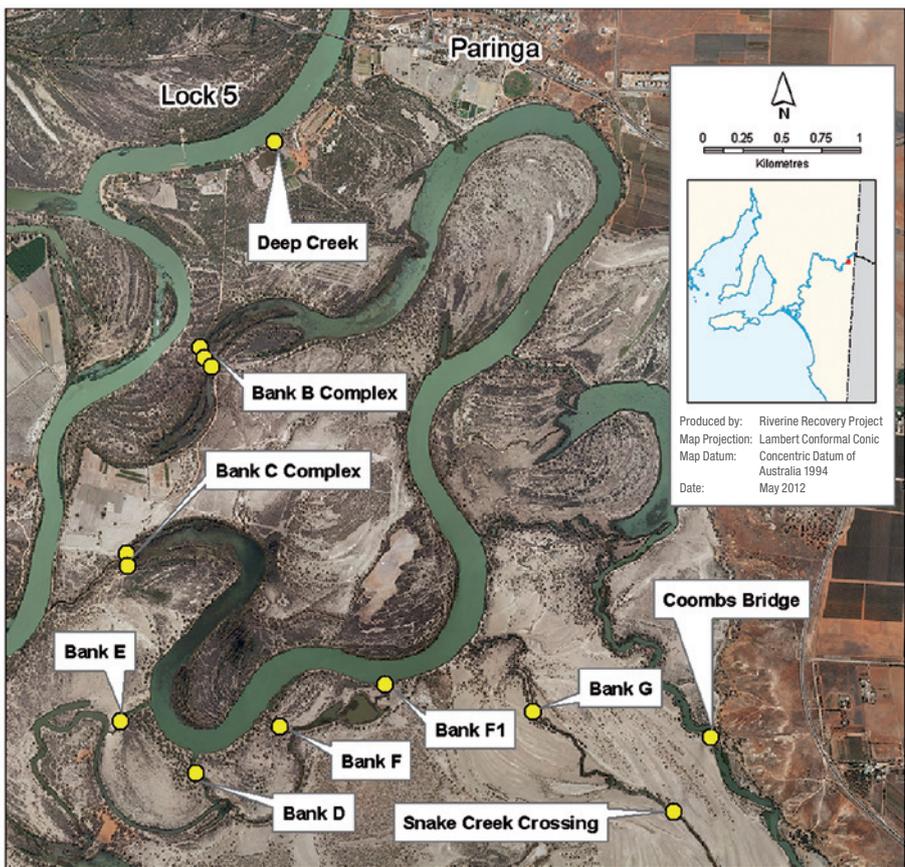
Actions to improve the health of the Pike Floodplain

Within the SA reach of the River Murray, three of the six major weirs provide a unique opportunity for broadscale floodplain inundation. The Pike system, which straddles Lock 5, is one of those opportunities.

In 2007 the Pike Implementation Program (PIP) was launched, in acknowledgement of the importance of all stakeholders working together to improve the ecological condition of the floodplain, sustain the Pike irrigation community, and continue to progress the proposed Salt Interception Scheme (outside the scope of RRP).

The main objectives of the RRP Pike Floodplain project are:

- the improvement of the environmental health of the Pike anabranch complex through increased flows, hydrological connectivity and fish passage
- the implementation of ecologically appropriate flow regimes
- the collection and storage of ecological and surface water monitoring data to inform operations.



Pike Floodplain: structures to be upgraded as part of the RRP.



Letton's Billabong.

Program stakeholders include the Pike community (represented by the Pike River Land Management Group, and the Renmark to the Border Local Action Planning Group), and SA Government agencies (represented by the Department of Environment, Water and Natural Resources, the SA Murray-Darling Basin Natural Resources Management Board and SA Water).

The commitment to an integrated approach to the rehabilitation of the Pike Floodplain, with all stakeholders working together on a high priority landscape scale project, is formally documented in a Memorandum of Understanding (MoU). The MoU was first signed in 2007 and was renewed in 2009 and 2012.

Initiatives such as the RRP and support from the local community have created opportunities to improve the resilience of this important complex of inter-related habitats.

RRP initiatives for the Pike Floodplain will complement Early On-ground Works actions to upgrade the Deep Creek inlet regulating structure and will include replacing culverts and banks with more ecologically appropriate regulators, which will have the capacity to deliver variable flow and water levels whilst also reinstating passage for small, medium and large bodied fish throughout the anabranh complex.

The upgraded structures will allow fish to migrate from downstream of Lock 5, through the Pike anabranh complex to upstream of Lock 5 for the first time since Lock 5 and the Pike mid-pool embankments were constructed in the 1930s.

The Riverine Recovery investment in the Pike Floodplain will also improve the scientific knowledge and understanding of the lower River Murray floodplains, wetlands and many water dependent species of significance.

New infrastructure will assist in reinstating variable flow and water levels and fish passage throughout the Pike anabranh complex.



Large bodied native fish species such as freshwater catfish (*Tandanus tandanus*) (pictured above) are expected to benefit as a result of the improved flow regime as part of the RRP.



Bank F: one of the crude earthen embankments identified to be upgraded as part of the RRP.

Completing the NatureLink Corridor

Another important part of this project was the acquisition of a large parcel of grazing land on the Pike Floodplain to complete a *NatureLink* corridor from above Lock 6 to Lock 3.

Progressive cessation of grazing licences on the Pike Floodplain commenced in 2009 and this land acquisition will permanently end

livestock grazing pressure on the landscape for the first time in 150 years. The land will be managed by the Department of Environment, Water and Natural Resources together with the Pike community for conservation purposes.

The Pike Floodplain project will continue to work with local communities to encourage ongoing participation in floodplain management activities.

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Chestnut teal (*Anas castanea*).



Western corridor of Pike Floodplain inundated.



Lace monitor (*Varanus varius*). Photo: Darren Schmitke

For further information contact:
 Department of Environment, Water and Natural Resources
 GPO Box 1047 Adelaide SA 5001
 Phone: 1800 751 970
 Email: RiverineRecovery@sa.gov.au
 Web: www.waterforgood.sa.gov.au
www.environment.sa.gov.au



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