
SDL ADJUSTMENT PROJECTS | SUPPLY MEASURE

Enhanced Environmental Water Delivery

May 2018

This document provides an overview of the *Enhanced Environmental Water Delivery* supply measure proposal being jointly proposed by South Australia, Victoria and New South Wales.

Background

In the past, the development of river operations in the Southern Basin have been focused on the supply of water for consumption. However, under the Basin Plan we now actively manage water for environmental use as well as consumptive use (e.g. irrigators and town water supplies).

This change in approach means we need to think about how we operate the rivers differently.

To meet this challenge South Australia, Victoria and New South Wales have developed a proposal that seeks to deliver a suite of enhancements to how rivers are operated, to maximise environmental benefits without impacting on existing water users.

The proposal

The Enhanced Environmental Water Delivery proposal is a water delivery strategy that involves a suite of changes to how we operate the river to deliver environmental water more effectively in the southern connected basin. Specifically, the proposal seeks to improve the forecasting, planning and coordination of environmental water by increasing the ability of environmental water holders to synchronise the delivery of environmental water with natural flows caused by rainfall use. This would maximise downstream and system-wide connectivity and enhance environmental outcomes.

The key elements of the proposal include:

- Aligning the release of held environmental water with natural or operational flows to influence the peak and or duration of a flow event. This aims to create a stronger biological response that is more synchronised with natural climate signals and to water more of the floodplain with the same volume of release.
- Making use of increased channel capacity (resulting from complementary projects to relax physical constraints to water delivery) to allow increased managed flows. This should improve in-channel, floodplain, wetland and end-of-system environmental outcomes.
- Coordinating environmental water releases across tributaries of the Southern Basin to maximise downstream and system-wide connectivity outcomes.

Benefits of the proposal include improved in-channel, floodplain and wetland ecological condition as a result of:

- releasing of environmental water to align with unregulated flows (triggered by rainfall) to create a stronger biological response that is more synchronised with environmental water requirements ,
- creating desired flow regimes using smaller volumes of environmental water than would otherwise be possible if releases were not well aligned with natural inflow events; and,
- increased coordination and capacity to release environmental water in response to natural flow events.

Contribution to SDL adjustment package

To achieve the maximum possible supply offset under the proposed Sustainable Diversion Limit adjustment package, the proposed project needs to be delivered in conjunction with projects to relax physical constraints to water delivery.

An important component of the project will include measures to develop improved processes, tools, and understanding of hydrological and ecological responses to support the Enhanced Environmental Water Delivery strategy.

Focus areas include:

- Understanding and defining ecological objectives (e.g. understanding which ecological outcomes can be targeted through hydrology; identifying target sites and years; understanding ecosystem processes and how the flow moves across floodplains)
- Developing decision support tools (e.g. river flow and weather forecasting; managing unregulated flow conditions; governance frameworks that enable swift action)
- Risk management (minimising and mitigating any negative impacts)
- Updating and integrating existing river operations and water delivery processes (water management strategies need to evolve to more efficiently and effectively use water for the environment and consumers)
- Managing the logistics of water delivery (e.g. timing releases from multiple sources; allowing for different flow travel times over large distances).
- Applying an adaptive management practice to continually improve the outcomes for all water users

Consultation

This project will involve a significant change in river operation requiring new approaches to environmental water planning and delivery. As the proponents South Australia, Victoria and New South Wales will work closely with environmental water holders and managers, catchment management organisations, and scientists, water authorities and river operators to identify innovative approaches and improvements to current processes, policies, legislative and governance structures for managing environmental water. Affected communities, including land holders and managers, water entitlement holders, Traditional Owners, management agencies and local governments will also be involved from the beginning to identify potential opportunities and impacts and to implement solutions.

More information

Background on the Basin Plan implementation and the SDL adjustment process can be obtained from: www.mdba.gov.au

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