

# Water for the environment and high flows



***Restoring the River Murray's ecological health through improved delivery of water for the environment.***

## What is water for the environment?

Water for the environment is water allocated for environmental purposes and not for consumptive use. In South Australia, it can involve adding environmental water from upstream storages to the main river channel to boost flows and achieve greater environmental outcomes.

Water for the environment can also be in the river as part of entitlement flow, pumped to wetlands or go over the barrages as flow for environmental outcomes in the Coorong. Planning the delivery of water for the environment considers the timing, frequency, duration, and magnitude of water delivered in various flow ranges to achieve environmental outcomes.

Post-European settlement river regulation has heavily reduced the River Murray's seasonal overbank flows and the availability of water for the environment, which is required for river ecosystems to thrive. These changes to the River Murray system have resulted in the degradation of wetlands and floodplains, and the decline of flora and fauna species.

## Easing constraints

The Constraints Measure project is easing constraints to enable the availability and delivery of water for the environment throughout the system in South Australia.

Constraints refer to anything that reduces the flow of water from the main river channel to the floodplains and wetlands. Constraints can be anything from infrastructure (such as dams, water storage, roads or low bridges), to operational rules and practices. Easing or removing constraints is essential for restoring the health of the river system and is a key commitment for South Australia under the Murray-Darling Basin Plan.

## How are high flows delivered?

To enable water to flow freely to the River Murray's floodplains and wetlands, natural high flows can be 'topped-up' to increase the peak or extend the duration and reach of those flows. The 4 main river systems that provide flow to SA are the River Murray (the dominant contributor), the Goulburn, the Lower Darling and Murrumbidgee. To achieve enhanced environmental flows at the SA border, the River Murray at SA needs to be under unregulated flows.

## What to do during a high flow event?

During high flow events, where flows are between 40-100 gigalitres per day (GL/day) at the SA border, low-lying land and infrastructure may be impacted by inundation. The Department for Environment and Water (DEW) has identified and assessed these impacts and is supporting River Murray communities to better prepare for future high-flows by co-designing practical, on-ground measures, such as upgrades to bridges, roads, and culverts to maintain critical property access.

The [SA River Murray High Flow Advice](#) recommends the following precautions during high flow events:

- Don't drive, walk or ride through flood-affected causeways or roads.
- Be aware that significant debris may be carried downstream and can pose a hazard to water-based activities.
- When operating a boat on the floodplain, or near inundated riverbanks, be aware of submerged obstacles such as trees and fence lines.
- Landholders, especially those with shacks or other structures in low-lying areas, should consider securing their property from likely rising water levels.
- The hazards associated with riverbank collapse still exist in some areas, so be aware of the signs, such as cracked riverbanks and leaning trees, and keep away from fenced or sign-posted affected areas.
- Regularly monitor river levels in your local area and take care not to become isolated by rising water.
- Always wear a personal floatation device on the river.
- Do not jump or dive into the river when you do not know what is below the surface.
- Camp on higher ground away from the riverbank.
- Supervise children at all times and do not allow them to play in or near fast-flowing river water.
- If in doubt, stay out.
- Listen and take action on any instructions from the emergency services - the SES, SA Police and the CFS.
- Tune to ABC local radio for community safety information.

# High flows or flood? What is the difference?

## High flows

### What are high flows?

High flows occur when River Murray flows reach 40 GL/day at the South Australian border, with target high flows for environmental benefits being between 40 GL/day and 80 GL/day. These levels may cause water from the main river channel to flow over riverbanks, into surrounding creeks, lakes, wetlands and floodplains.

### What are the effects of high flows?

High flows generate system-wide environmental benefits, including keeping the Murray Mouth open, flushing salt, removing environmental debris, adjusting soil salinity levels, replenishing groundwater storage, creating breeding and feeding opportunities for water-dependant ecosystems, and providing additional water to precious wetlands and floodplains.

While the enhancement of high flows assists to maximise environmental impacts and outcomes, high flows and overbank flows can also improve cultural, social and economic benefits for river communities.

## Floods

### What are floods?

Floods occur when water levels at one of 15 locations along the River Murray in SA reach the specified minor, moderate or major flood level. See the Bureau of Meteorology for more information on [flood warnings in SA](#).

In the area between Cadell and Mannum this generally occurs between 40-80 GL/day and for the remainder of the River Murray in SA around 100 GL/day at the SA border. Flooding often results in an overflow of water beyond the normal limits of the watercourse, with water extending over what is usually dry land. The extent of water out of the watercourse will depend on the volume of flows occurring.

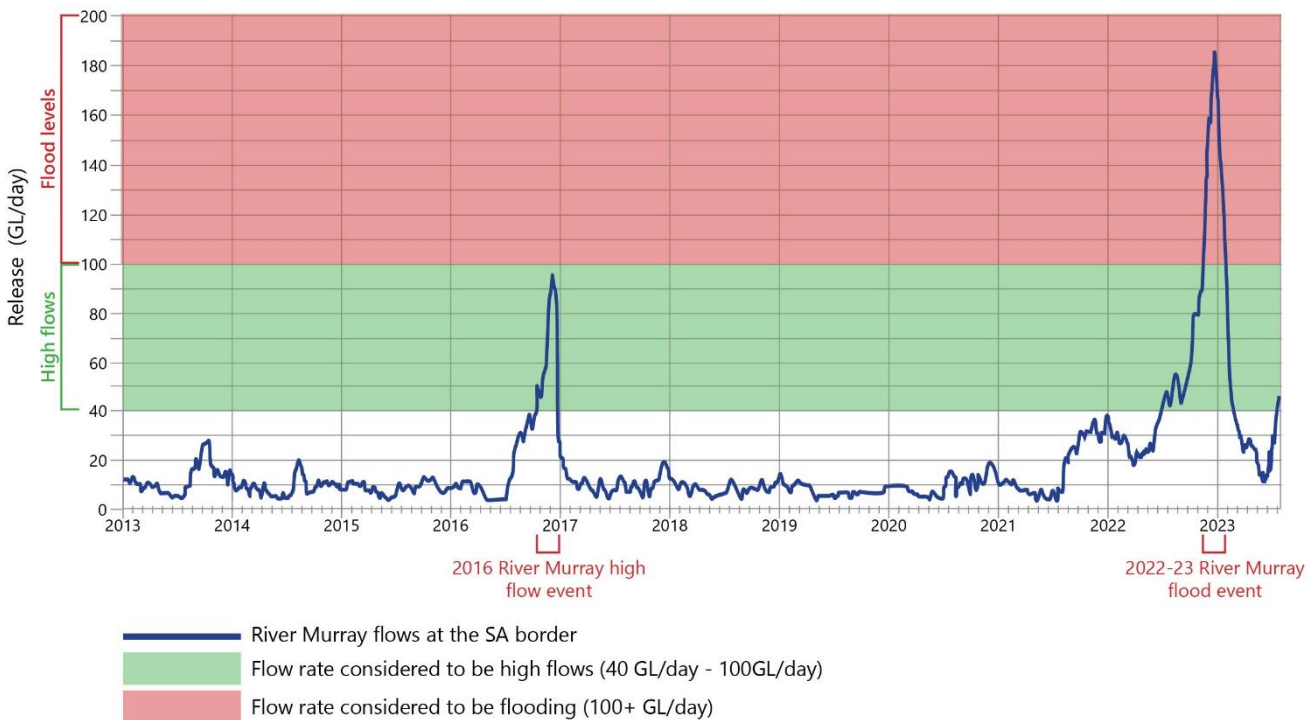
Minor flooding is categorised as causing inconvenience and may include the inundation of low-lying areas next to water courses, closure of minor roads, and submersion of low-level bridges. Minor flooding alerts are issued for the remaining River Murray in SA when flows exceed 100 GL/day.

### What are the effects of floods?

While providing similar positive environmental benefits as high flows, major flooding such as the 2022-23 River Murray flood event, can cause considerable damage to homes, businesses, and public infrastructure, with a lengthy and costly recovery process for river communities.

## River Murray flows

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