

GHCMA Newsletter Environmental Water update: February 2025

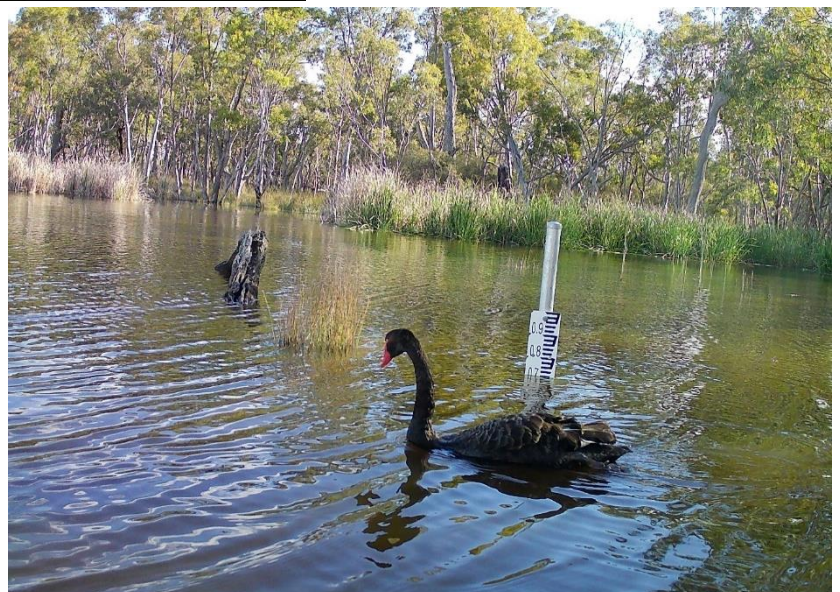
Welcome to the Glenelg River Environmental Water updates for February 2025. This is the first for 2025, with an overview of the Summer Environmental Water season so far. During Winter-Spring 2024, much of the Glenelg experienced drought conditions. As discussed in the previous issue, conditions have remained dry between December - January. A Summer fresh and compensation flows were released earlier than normal in late November 2024 on account of these dry conditions. These flows help to sustain connectivity and water quality in the Glenelg River. Look out for the Rocklands February Fresh will be released from February 11 – 26. Without any projected break from dry conditions, we continue to anticipate low rainfall in the catchment and will provide an update on this in the March newsletter.

Data obtained for this newsletter update is publicly accessible from Victoria's Water Measurement Information System (WMIS) website: <https://data.water.vic.gov.au/WMIS>



LEFT: Trail cameras at Frasers Swamp captured water levels prior to the release of Environmental Water showing a mostly muddy bank and reduced water quality (7/11/24)

RIGHT: Frasers Swamp, Balmoral, trail camera captures the water levels shortly after the release of Environmental Water, indicating improved streamflow and salinity levels (21/11/24).



Flows at Balmoral (Weavers), Reach 1a

Balmoral (Weavers), Reach 1a, met both Summer Fresh targets baseflow target for streamflow for the December – January period (Figure 1). Flows from the wall are typically smaller than other releases. This is due to a tributary junctions plug (where sand has blocked the flow of the river) at the bottom of Frasers Swamp. This is not new and is something we can avoid by releasing via the Toolondo Channel and the 5-mile and 12-mile outlets.) The amount of water released also avoids the potential for flooding private land.



Figure 1 Streamflow, releases and targets at Balmoral (Weavers), Reach 1a, between July 2024 – January 2025. Graph is relevant as of 03/02/2025.

Flows at Harrow, Reach 1b

Due to an issue with the Harrow gauge we are not including data in this month's newsletter update.

Flows at Dergholm, Reach 2

Both Summer Fresh targets baseflow target for streamflow were met in Dergholm for the December – January period. However, the dryness of the catchment can be indicated in the Dergholm flow graph (Figure 2). The dark blue line represents streamflow and shows a steep pulse of water that arrived at Dergholm 12 days after it was gradually released from the wall at Rocklands (green line). Despite efforts to gradually increase flows, vegetation and refuge holes absorbed this water along the way, which led to the more sudden arrival of water at Dergholm.

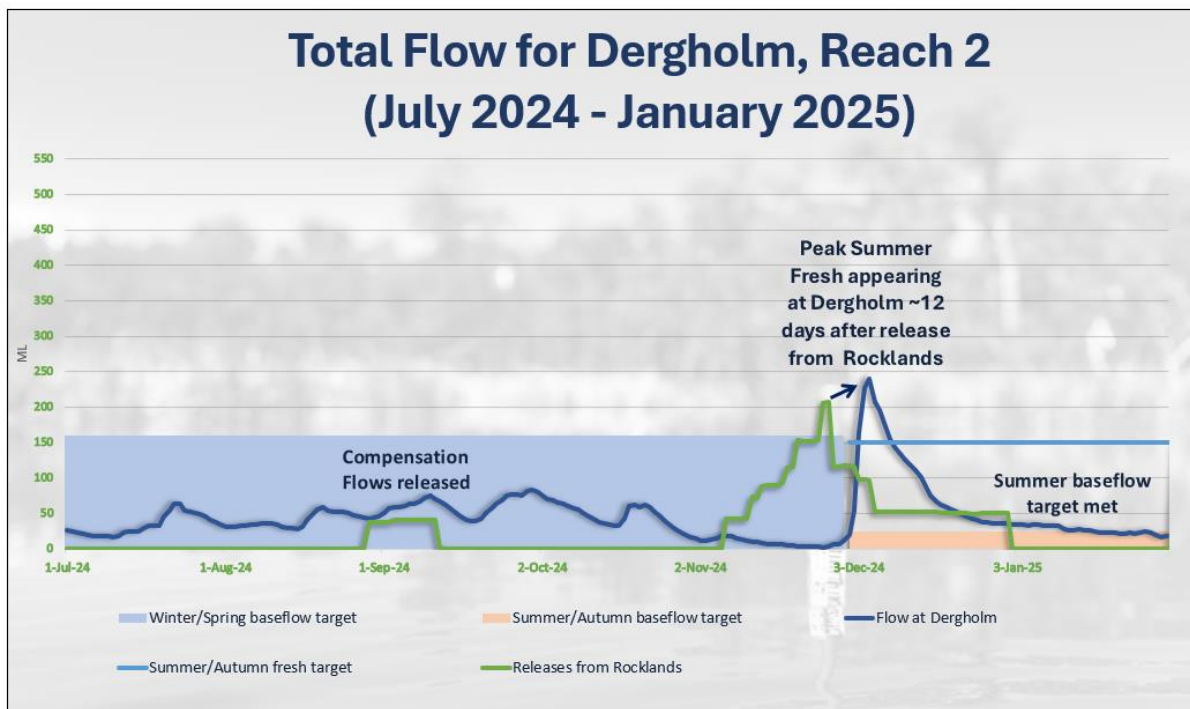


Figure 2 Streamflow, releases and targets at Dergholm, Reach 2, between July 2024 – January 2025. Graph is relevant as of 03/02/2025.

Flows at Dartmoor, Reach 3

The Autumn Summer fresh target was met by Summer Environmental Flow releases. Similar to Dergholm, water arrived from Rocklands as a steep pulse compared to how it was gradually released. Baseflow targets for Dartmoor were missed (Figure 3), although this is not an uncommon situation. The volume of water required to meet these targets are often unmet due to the distance from Rocklands. Regardless of these targets, Dartmoor has continued to receive natural flows, some of this water could be attributed to water that was released from Rocklands.

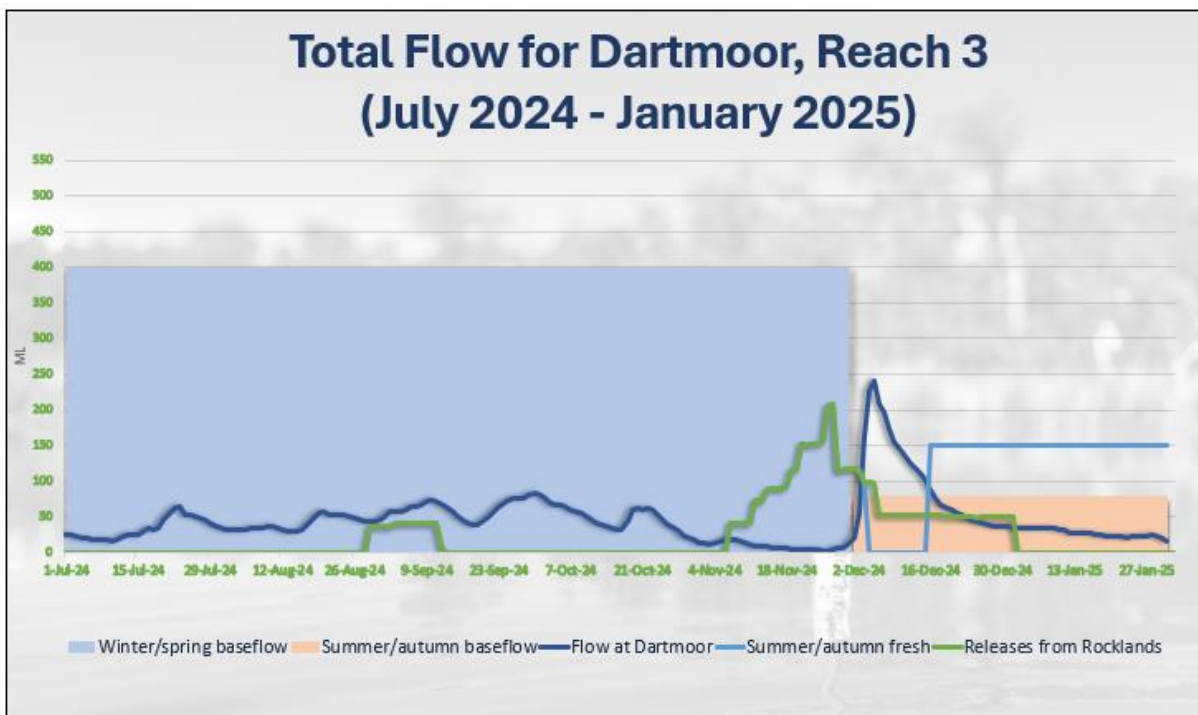


Figure 3 Streamflow, releases and targets at Dartmoor, Reach 3, between July 2024 - January 2025. Graph is relevant as of 03/02/2025.

Salinity in the Glenelg

With reduced rainfall and lower inflows to the Glenelg River catchment, salinity levels have been noticeably impacted. Higher levels of salinity, or Electrical conductivity (EC) measured in $\mu\text{S}/\text{cm}$, had been increasing at several sites. For example, Balmoral (Reach 1a) registered upwards of 7000 $\mu\text{S}/\text{cm}$. Freshwater systems are considered to have an EC of less than 2000 $\mu\text{S}/\text{cm}$, indicating that water quality at Balmoral could potentially impact water in the river users and native habitat.

In early October, Passing Flows and Compensation Flows were released to relieve the impact of raised salinity in the river. These releases led to a sudden drop in salinity levels down to within the 1000 -2000 $\mu\text{S}/\text{cm}$ range. This can be seen in Balmoral (Reach 1a) and Harrow (Reach 1b) gauge in September and again in November 2024 (Figures 4 and 5). This is an example of how Environmental Water can be used as an asset to improve the health of the river systems, especially during dry conditions, such as those we have experienced over the past year.

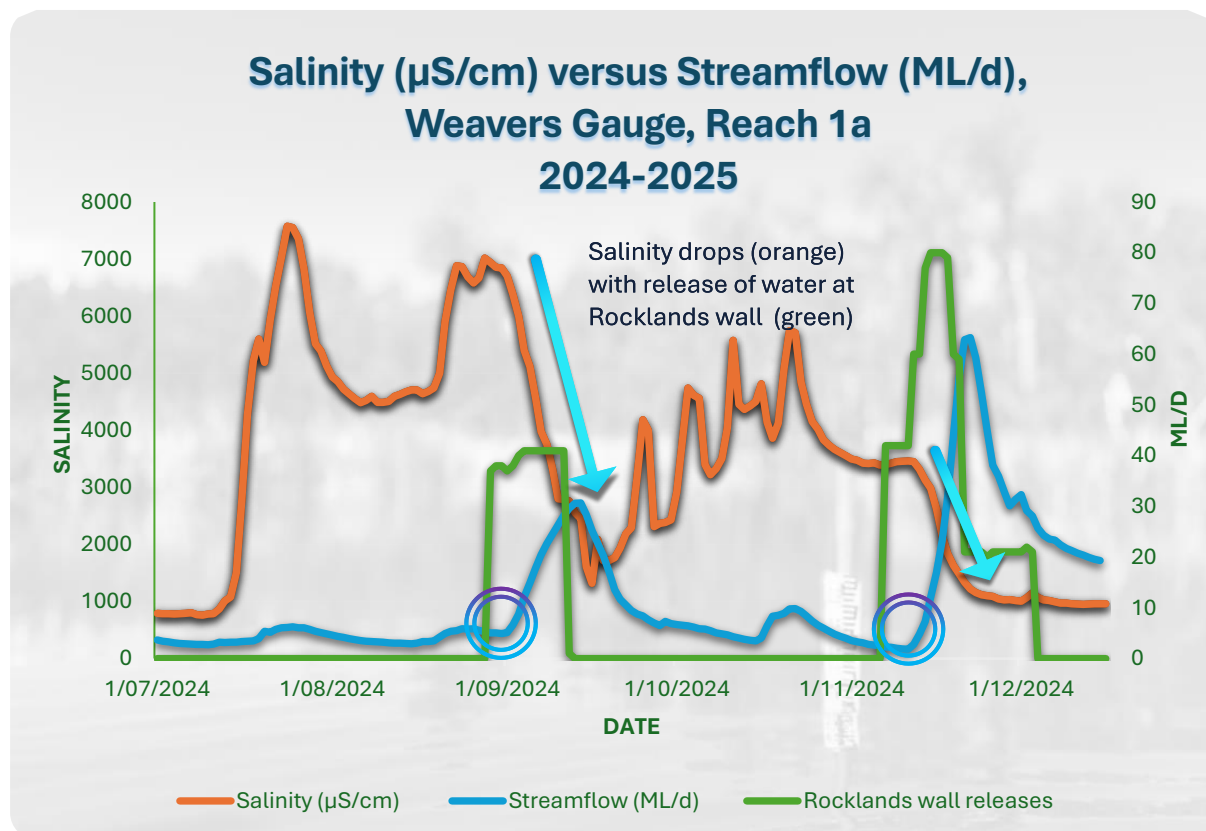


Figure 4 Salinity dropped with passing flows, environmental water and compensation flows at Reach 1a, Weavers Gauge.

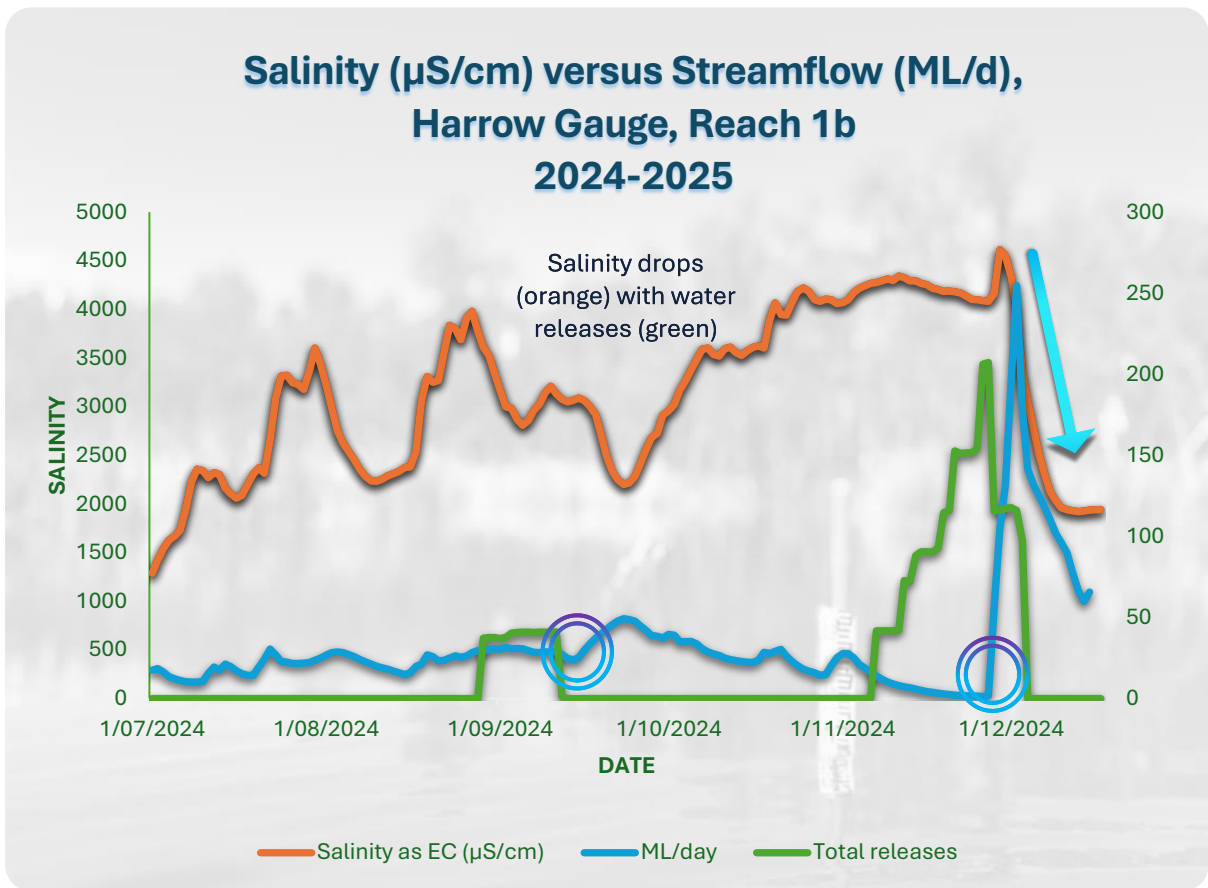


Figure 5 Salinity reduced with increased streamflow because of environmental watering at Harrow, 2024.