

# Seagrass snapshot: Leschenault Estuary 2023–24

Through the Healthy Estuaries WA program, the Department of Water and Environmental Regulation (the department) monitors the condition and area of seagrass in five estuaries in south-west Western Australia (WA), including the Leschenault Estuary.

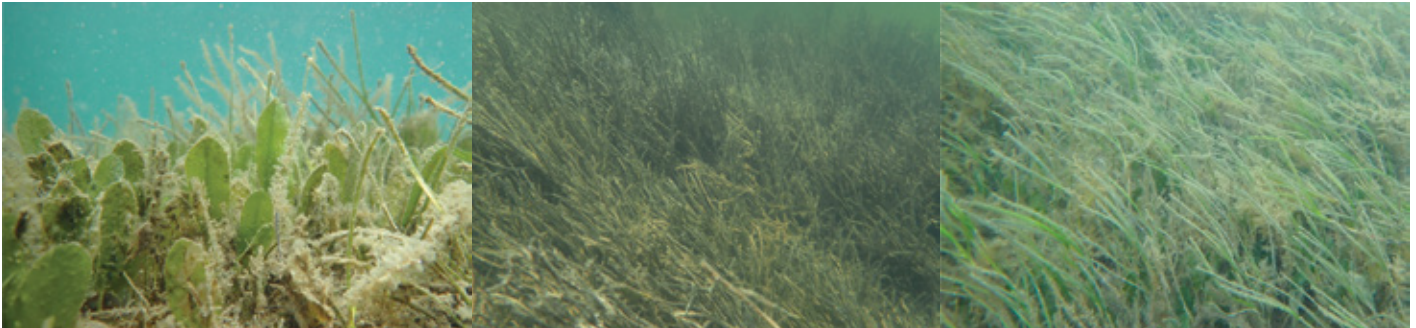
This snapshot provides an update on the distribution of seagrass in the Leschenault Estuary in February 2024. It updates information from previous years, forming part of a collection which are available at [estuaries.dwer.wa.gov.au/seagrass](https://estuaries.dwer.wa.gov.au/seagrass).

**Understanding seagrass condition helps to guide how we manage our estuaries**

The Leschenault Estuary is a long, shallow coastal lagoon north of Bunbury. The estuary is permanently connected to the ocean by an artificial channel called The Cut. Seagrass meadows are a vital component of the estuary ecosystem as they provide food and habitat for animals and produce oxygen. Yet, over the years, seagrass extent has declined within the estuary. This is likely because of changes in the catchment land uses that affect water quality, as well as climate change.

In recent years, nutrient concentrations in rivers that flow into the estuary have increased, causing excess algal growth and low oxygen in some areas. Over time, this could cause the water quality in the estuary basin to deteriorate. Poor water quality, combined with increasing macroalgae presence and climate change pressures, could have negative impacts on seagrass health in the estuary.

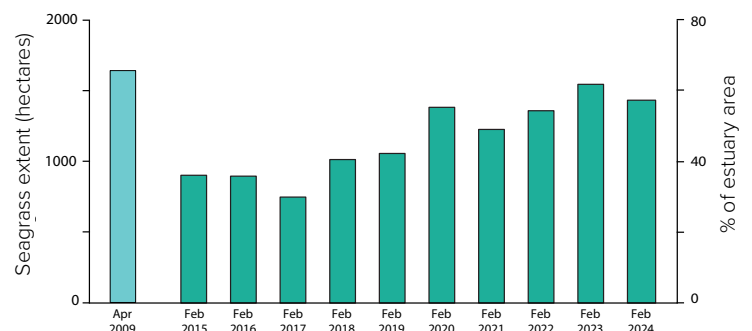
Three species of seagrass occur in the Leschenault Estuary. *Halophila ovalis* (left image) is dominant and is generally found throughout the estuary basin. *Ruppia megacarpa* (centre image) is often observed along the eastern shoreline. *Zostera muelleri* (right image) is found near The Cut, where the waters are more marine.



## Seagrass over time

- Historically, seagrass was distributed throughout the estuary, except in a small area of deep water in the central basin.
- In April 2009, seagrass extended across 1,741 hectares – about 69 per cent of the estuary area.
- By 2014, there had been a substantial loss of seagrass within the estuary, particularly in the northern basin. This prompted regular monitoring to start in 2015.
- Seagrass is slowly recovering but is yet to return to the extent observed in 2009.

The department has monitored seagrass annually from 2015 to 2024. Seagrass distribution within the estuary was lowest in 2017, increasing to about 60 per cent of the estuary area in recent years. In 2020, seagrass started recolonising the northern estuary, which had not been observed since 2009.



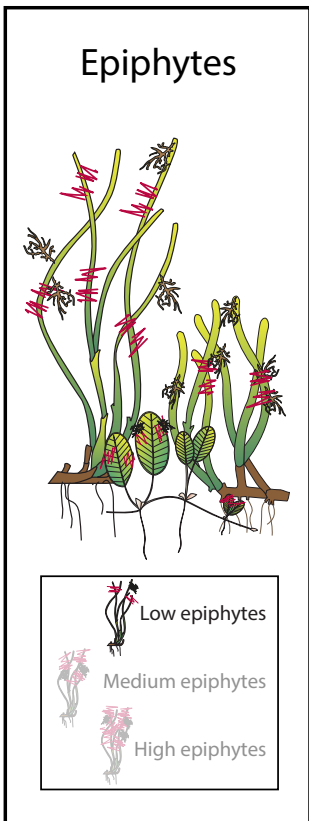
# Seagrass distribution in February 2024

In February 2024, seagrass was estimated to extend across 1,437 hectares, about 57 per cent of the estuary area. Areas close to The Cut and along the eastern shoreline north of Australind continue to have the densest seagrass cover. Compared with 2023, there was a slight decrease in seagrass extent, specifically in the central and northern basins. Seagrass cover declined slightly across the estuary, particularly in meadows near The Cut. However, some areas in the northern basin showed an increase in seagrass cover.

*Ruppia* was the most dominant species and has continued to expand its range in the southern basin near The Cut. *Halophila* was present across most areas of the estuary yet was absent from the northern basin. *Zostera* showed a small decrease in its distribution but remains localised close to The Cut.

The abundance of small organisms growing on seagrass leaves (epiphytes)<sup>1</sup> was low on average; however, the recovering meadows in the northern basin had medium to high abundance of epiphytes.

Overall, seagrass in the Leschenault Estuary was in a stable and good condition in February 2024. However, high nutrient inputs and increasing macroalgae abundances in several areas of the estuary could negatively impact seagrass health in the future. Continued efforts to improve water quality, including those in progress through the State Government's Healthy Estuaries WA program, will be essential to sustain long-term seagrass recovery.

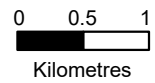
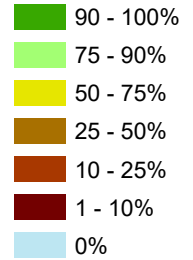


<sup>2</sup> Epiphytes can reduce light availability and affect seagrass growth.

The Cut

Bunbury

## Seagrass cover



Australind

