

## Seagrass snapshot: Leschenault Estuary 2024–25

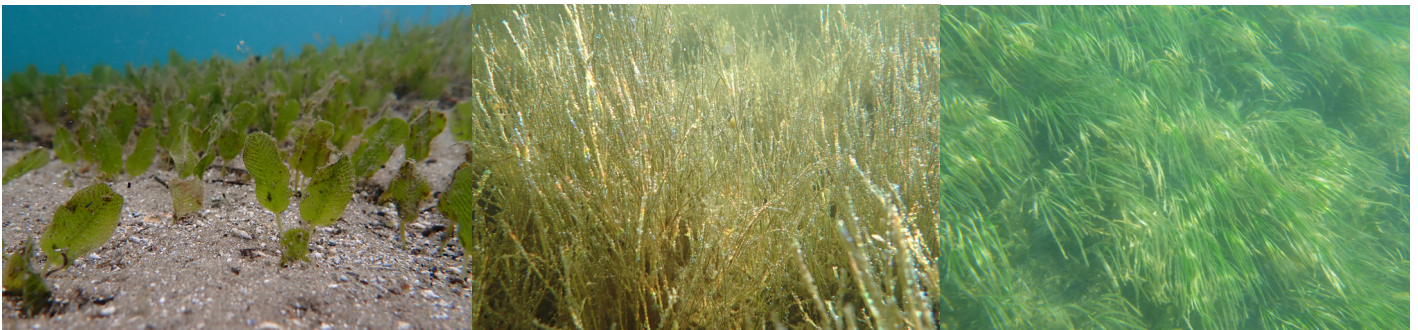
Through the State Government’s Healthy Estuaries WA program, the Department of Water and Environmental Regulation (the department) monitors the condition and area of seagrass in five estuaries in south-west Western Australia, including the Leschenault Estuary. This snapshot provides an update on the distribution of seagrass in the Leschenault Estuary in February 2025. The collection of annual snapshots is 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

Seagrasses are flowering plants which have evolved from land plants and adapted to live underwater in aquatic ecosystems. Seagrass meadows are a vital component of the estuary ecosystem, as they provide food and habitat for animals and produce oxygen. The Leschenault Estuary is a long, shallow coastal lagoon north of Bunbury, permanently connected to the ocean by an artificial channel called The Cut. Seagrass meadows are a crucial part of the estuary, yet over the years, seagrass extent has declined. 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. Poor water quality, combined with increasing macroalgae presence and climate change pressures, could have negative impacts on seagrass health in the estuary.

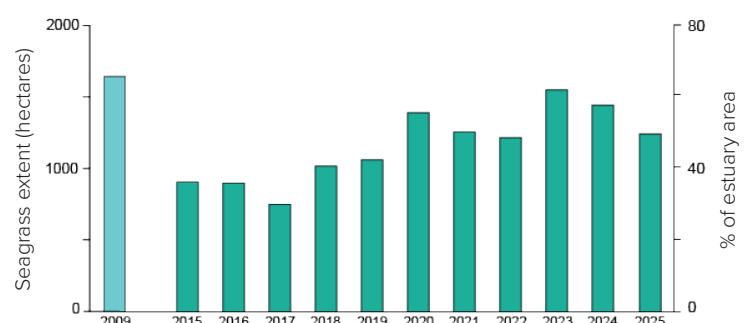
Three species of seagrass occur in the Leschenault Estuary. *Halophila ovalis* (left image) has historically been the most dominant species and is generally found throughout the estuary basin. *Ruppia megacarpa* (centre image) is often observed along the eastern shoreline. *Zostera muelleri* (right image) 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, a substantial loss of seagrass occurred, particularly in the northern estuary, prompting regular monitoring from 2015.
- Seagrass is slowly recovering but is yet to return to the extent observed in 2009.

The department has monitored seagrass annually in February from 2015 to 2025. Seagrass distribution was lowest in 2017, increasing to more than 50 per cent of the estuary area in recent years. In 2020, seagrass started recolonising the northern estuary, which had not been observed since 2009.



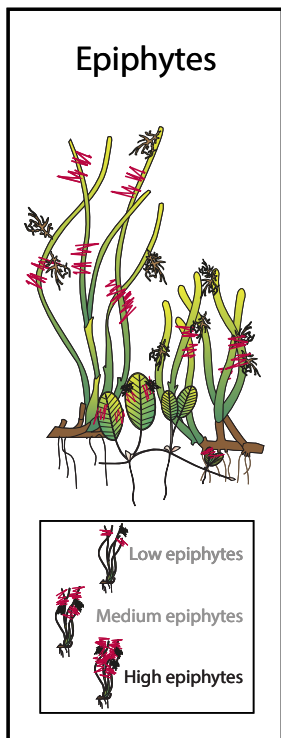
# Seagrass distribution in February 2025

In February 2025, seagrass was estimated to extend across 1,241 hectares, about 49 per cent of the estuary area. Areas close to The Cut continue to have the densest seagrass cover. Compared with 2024, there was approximately an 8 per cent decrease in seagrass extent, with notable reductions along the eastern shoreline south of Australind and in the most northern part of the estuary. In 2025, seagrass cover showed declines across the estuary, particularly in meadows along the eastern shoreline of the central basin.

*Ruppia* was the most dominant species and has continued to expand its range near The Cut. *Halophila* was present across most areas of the estuary but remained absent from the northern basin. *Zostera* has maintained localised distribution close to The Cut and is typically found in mixed meadows with *Ruppia* and *Halophila*.

On average, the abundance of small organisms growing on seagrass leaves (epiphytes)<sup>1</sup> was high across the estuary in February 2025, which can negatively affect seagrass health. However, the dense meadows in the northern basin had a low cover of epiphytes.

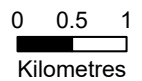
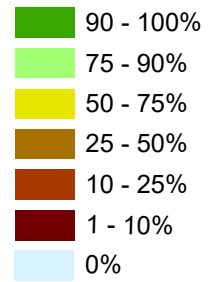
Overall, seagrass extent in the Leschenault Estuary has decreased in recent years, consistent with the overall decline in water quality observed. Also, sediment washed in from the catchment during post-drought rainfall events, combined with elevated tide heights, likely reduced light availability for seagrass in 2024-25. While inter-annual variation in abundance is typical of these seagrass species, the high nutrient inputs and increasing macroalgae remains a concern. The department's Healthy Estuaries WA program will continue to evaluate estuary health and engage with the local community, industry and other state agencies, in partnership with the Leschenault Catchment Council, to implement on-ground catchment management actions to protect and improve the condition of the estuary.



<sup>1</sup> Epiphytes can reduce light availability and affect seagrass growth.

The Cut  
Bunbury

## Seagrass cover



Australind

