

Seagrass snapshot: Wilson Inlet 2022–23

Through the Healthy Estuaries WA program, the condition and area of seagrass is being monitored in five South West estuaries, including Wilson Inlet. This snapshot provides an update on the distribution of seagrass in Wilson Inlet in December 2022.

It updates information from previous years, forming part of a collection available at estuaries.dwer.wa.gov.au/seagrass.

Understanding seagrass
condition helps to guide
how we manage
our estuaries

Wilson Inlet is a shallow lagoon on the south coast of Western Australia, near Denmark. The estuary closes seasonally because of a sandbar which isolates it from the ocean, often for several months of the year. The sandbar is artificially opened in winter most years to mitigate flooding. It was opened in June 2021 and remained open until January 2023, which is the first time on record that the channel remained open for an entire year.¹ Seagrass condition can be affected by the opening and closing of the bar as well as seasonal changes and environmental conditions.

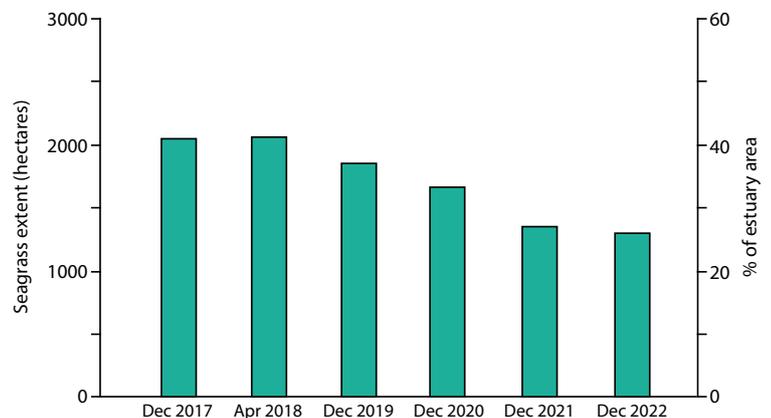
Ruppia megacarpa is the only species of seagrass found in Wilson Inlet. Seagrass meadows provide food and habitat for animals and produce oxygen, making them an important part of estuary ecosystems. It is important the estuary continues to maintain seagrass meadows; however, an overabundance of seagrass has been problematic in the past.

Seagrass over time

- Excessive nutrients in the estuary led to the extreme growth of seagrass in the 1970s.
- Studies have mapped seagrass in the estuary using various methods, with estimated areas ranging from 1,638 hectares in 1994 to 2,640 hectares in 2007.
- There has been a decline in the extent of seagrass meadows since 2017.

The Department of Water and Environmental Regulation has monitored seagrass with consistent methods since December 2017. While the area of seagrass in this latest survey was similar to that in December 2021, the seagrass was denser in some places.

Once pollinated, the long white flower stalks coil tightly close to where it emerges from the leaves. Seagrass was seen flowering in many areas across the estuary in December 2022. This indicates the plants are reproducing, which can support a viable seedbank.



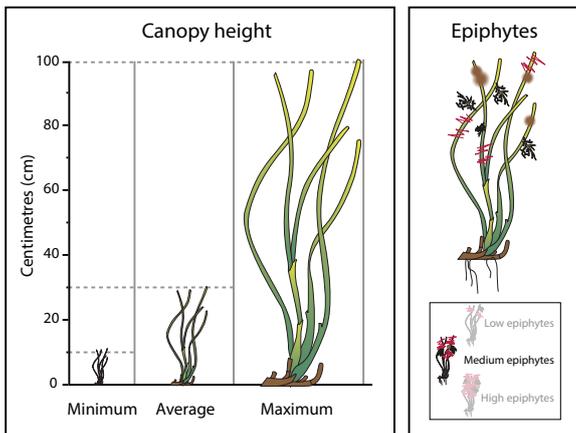
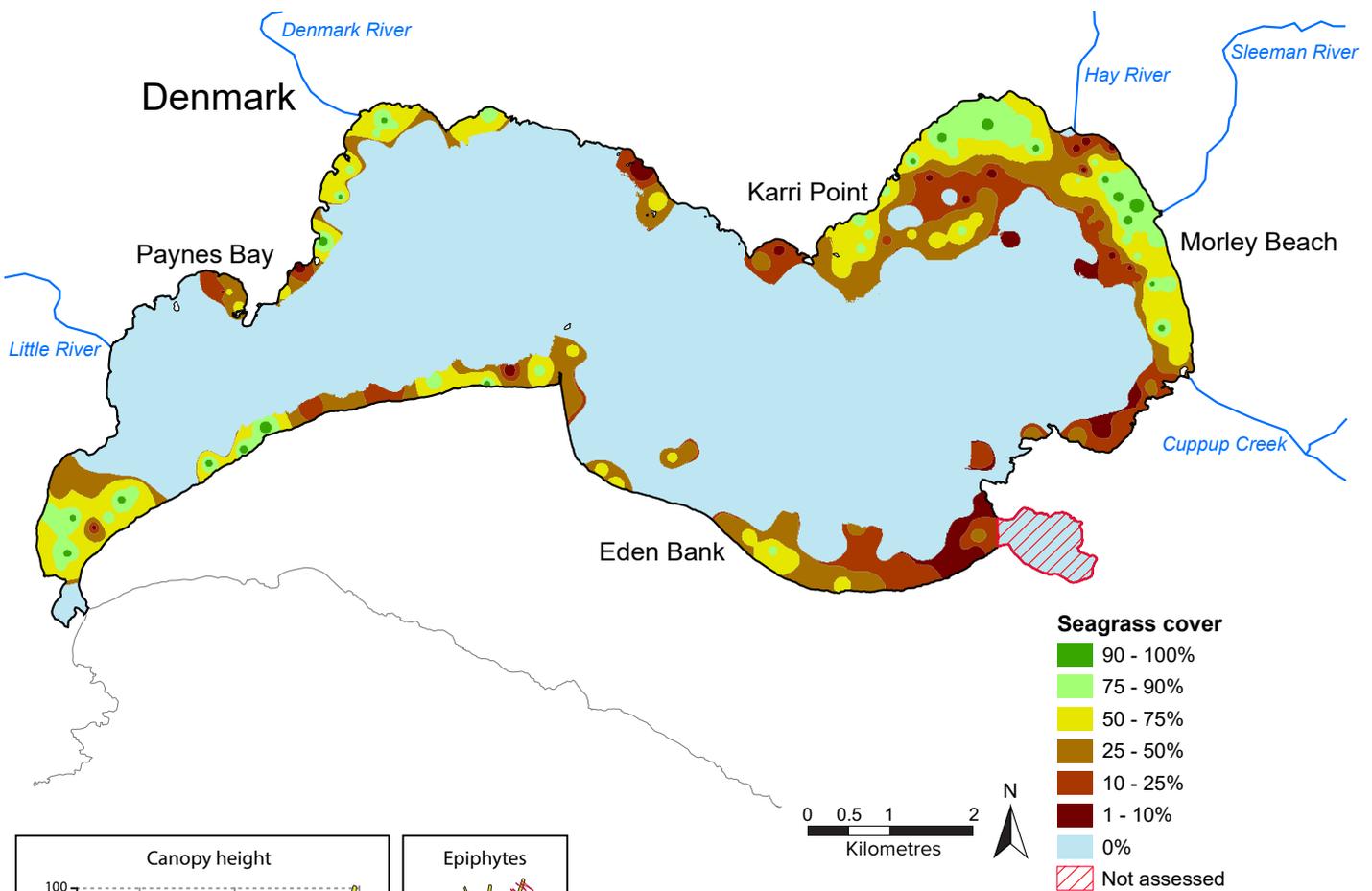
¹ Further information is available at estuaries.dwer.wa.gov.au/estuary/wilson-inlet/estuary/the-bar

Seagrass distribution in December 2022

Seagrass was estimated to cover 1,293 hectares in December 2022, which is about 27 per cent of the estuary area. The seagrass appears to be recovering in some parts of the estuary, particularly in Paynes Bay where seagrass was not recorded in December 2021. Dense meadows were found in several areas of the estuary, including near the mouth of the estuary and at Denmark River, Karri Point and Morley Beach. While the meadows have been dense along Eden Bank in previous years, these were mostly absent in December 2022. Seagrass was found in shallow areas of the estuary, with more than 95 per cent growing in water less than 2 metres deep at the time of the survey.

The average seagrass canopy height was 30 centimetres, but heights of up to 1 metre were observed in some areas.

The abundance of small organisms growing on the seagrass leaves (epiphytes)² has increased to a medium level since December 2021.



² Epiphytes can reduce light availability and affect seagrass growth.

