

Seagrass snapshot: Oyster Harbour 2020–21

Through the Healthy Estuaries WA program, the condition and area of seagrass are being monitored in five South West estuaries, including Oyster Harbour. This snapshot provides an update on the distribution of seagrass in Oyster Harbour in January 2021.

It updates information from previous years available at estuaries.dwer.wa.gov.au/seagrass.

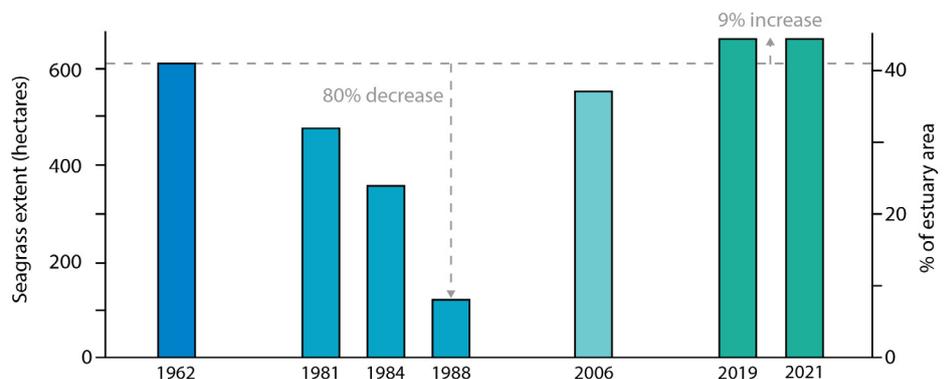
Understanding seagrass
condition helps to guide
how we manage
our estuaries

Oyster Harbour is a shallow estuary located in the Great Southern region of Western Australia, near Albany. The estuary is permanently open to the ocean through a channel at Emu Point. Catchment clearing and excessive nutrient inputs in the 1970s and 1980s caused a collapse of the ecosystem and extensive loss of seagrass in the estuary. In the decades since, water quality has greatly improved thanks to better catchment management practices.

The seagrass habitat in Oyster Harbour includes two species: *Posidonia australis* and *Posidonia sinuosa*. These species look similar, but *Posidonia australis* has wider leaves than *Posidonia sinuosa*. Seagrass meadows provide food and habitat for animals and produce oxygen, making them an important part of estuary ecosystems.

Seagrass over time

- In 1962, seagrass was distributed across 610 hectares.
- About 80 per cent of seagrass was lost in 1988 because of light reduction and excess nutrients, which promoted epiphyte growth.
- By 2006, seagrass recovered to span across 560 hectares, or 40 per cent of the estuary area.
- In 2019, seagrass had further recovered, extending across 663 hectares, or 50 per cent of the estuary area (nine per cent more than what was recorded in 1962).



The Department of Water and Environmental Regulation monitored the recovery of seagrass in 2019 and 2021. The recovery of seagrass is the result of work in the catchment to improve water quality and more than 20 years of seagrass restoration.

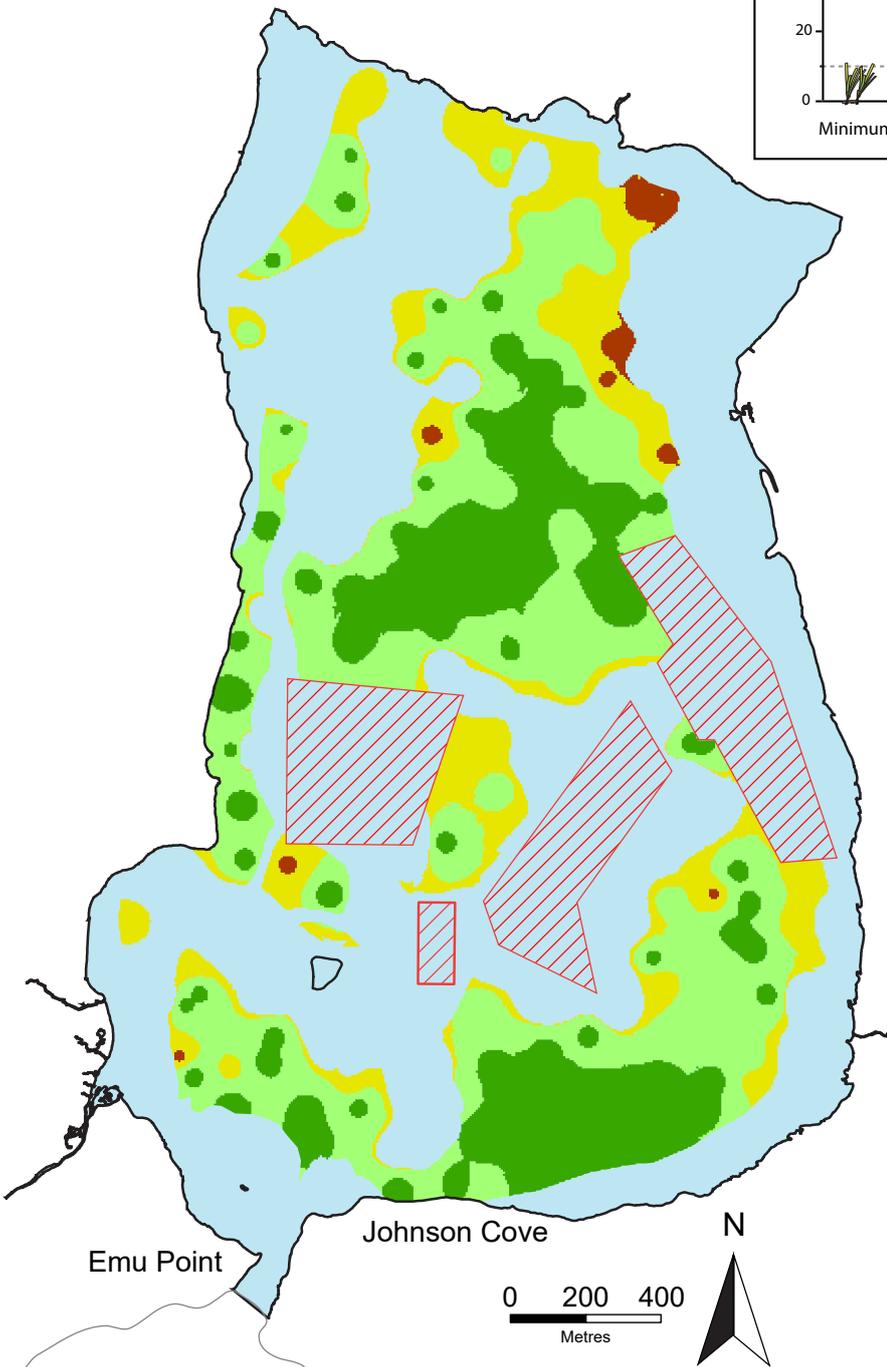
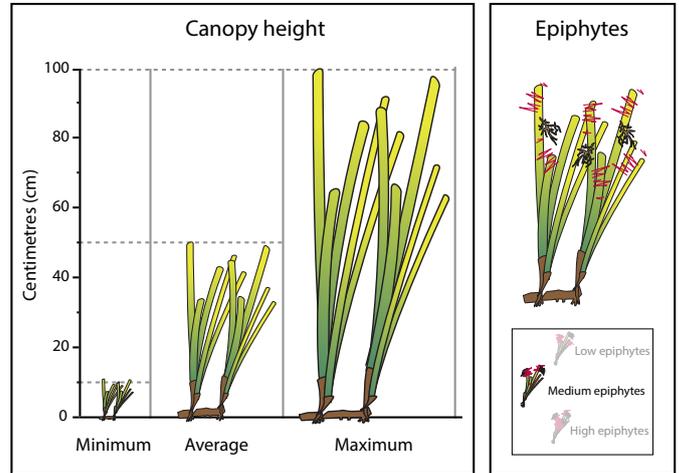


Seagrass distribution in January 2021

The extent of seagrass meadows in 2021 is consistent with 2019, improving slightly from about 663 hectares in 2019 to 665 in 2021. The highest-density meadows were found along the southern bank near Johnson Cove and in the central basin. *Posidonia australis* is found throughout the estuary, while *Posidonia sinuosa* is mostly found in the lower half of the harbour. In 2021, seagrass canopy height was typically around 50 cm, but ranged from 10 to 100 cm.

The department also observed the abundance of small organisms growing on the seagrass leaves (epiphytes), which can reduce light availability and impact seagrass growth. In 2021, on average, the epiphyte cover across the estuary was medium, which is higher than in 2019. Macroalgae levels were also

higher in 2021. These two observations suggest that nutrients were more abundant in these years. This highlights the importance of continued improvement of catchment management to reduce nutrient runoff to the estuary and maintain good water quality to support a healthy ecosystem.



Seagrass cover

