

An initiative of the Vasse Geographe Strategy

Vasse Estuary oxygenation trial

Photo courtesy of Department of Water



The Vasse Geographe Strategy is a State Government initiative to tackle water quality problems in the Geographe Bay catchment.

The Vasse Estuary oxygenation trial is a program under the Strategy to improve water quality in the Vasse estuary upstream of the Vasse surge barrier. The trial is being coordinated by the Vasse-Wonnerup wetlands partnership with technical support from the Department of Water.

The Vasse Estuary oxygenation trial will test a mobile oxygenation plant at the Vasse surge barrier over the 2015-16 summer. The mobile plant will increase dissolved oxygen in the channel improving conditions for fish and reducing the risk of fish kills. Major fish kills have been recorded in the Vasse Estuary since the mid-1900s. Low dissolved oxygen levels have been associated with many of these major fish kills. Low dissolved oxygen also contributes to the release of nutrients from the sediment, which in turn creates conditions for algal blooms.

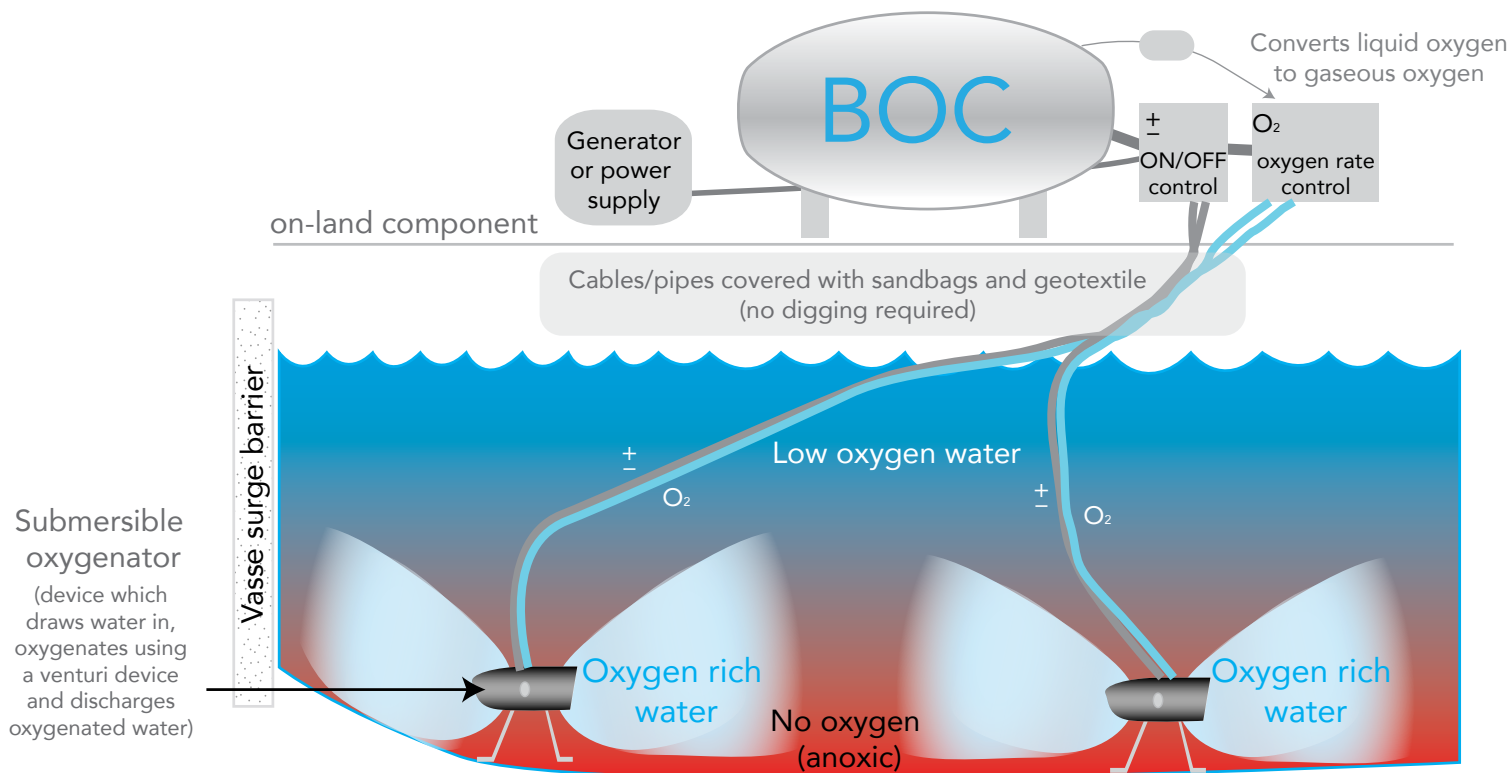
How the plant works

Low oxygen water from the estuary is drawn into two submersible oxygenators where gaseous oxygen is added to the water. The oxygen-rich water is then pumped back into the estuary, improving dissolved oxygen conditions.

The oxygenators are connected to a land-based plant by two cables each, one containing gaseous oxygen and the other electrical power. The land-based plant stores liquid oxygen, converts liquid oxygen to gaseous oxygen and houses the generator and control panels.

The plant will be operated from Perth via telemetry and will come on when oxygen levels are low. A Technical Officer from the Department of Water Busselton Office will provide local support to the trial.





Source: BOC

How will we know it works?

Extensive water quality monitoring will support the oxygenation trial. Continuous dissolved oxygen and the relationship between oxygen, nutrients and phytoplankton will be measured. The Department of Water will undertake a cost/benefit analysis at the end of the trial to assess whether oxygenation is a cost-effective technique for improving dissolved oxygen upstream of the Vasse surge barrier.

Will the plant affect its neighbours or the environment?

A temporary fence will be erected around the land based plant and all pipes and cables will be covered to ensure public safety. Higher oxygen levels in the water column will benefit fish and other aquatic fauna and reduce the release of nutrients from the sediments. Impacts on bird habitat or Ramsar values of the wetlands are unlikely.

Keeping the community informed and involved with the trial will be critical. If you have any concerns or further questions please contact the Department of Water's Busselton office on 9781 0111.

Where to next?

The Vasse oxygenation trial has been enabled under the broader Vasse Geographe Strategy. Further trials to improve water quality at the Vasse surge barrier are planned for summer 2016-17.

Get involved

Community members will have the opportunity to be involved in the development of a management plan for the Vasse-Wonnerup wetlands. Opportunities will be promoted on the GeoCatch website or email geocatch@water.wa.gov.au.

Department of Water

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More information

More information about the oxygenation trial and the Vasse-Wonnerup wetlands is available on the GeoCatch website at www.geocatch.asn.au



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