

# Dredging

## Coastal Infrastructure



*Floating cutter-suction dredge – Kalbarri 2009*

Maintenance dredging is coordinated by DoT to maintain navigable channels at marine facilities across WA.

Dredging involves excavating sediments from the seabed to maintain navigable water depths and often mimics natural processes. Different locations require different dredging frequencies with some dredged annually and others less frequently depending on local weather and coastal processes.

DoT uses typically two dredging methods:

- floating cutter-suction dredge; and
- excavator operating from the shore or a barge.

A floating cutter-suction dredge disturbs and loosens sediments on the seabed, which are then collected through a suction pipe. The sediment is then pumped through a pipeline to the disposal site. Floating cutter-suction dredges are typically used in river mouths and boat harbours when relatively large areas and volumes of material need to be removed.

An excavator can be used to dredge sediments that are relatively close to shore, such as sand on boat ramps or to remove sand build up next to a groyne. Excavators can also be secured on barges and floated out to greater depths to access isolated high spots.



*Excavation from shore – Bremer Bay 2010*



*Sand bypassing Dawesville – 2009*

Sand bypassing is needed when there is a man made barrier stopping the natural flow of sediment such as a large harbour or navigation channel. Bypassing involves mechanically relocating the sand from the area of accumulation to a safe disposal site past the barrier.

DoT's maintenance dredging and sand bypassing programs occur throughout WA. However, work is dependent on weather and local coastal process, and can be hard to predict. Typical dredging frequencies and methods are outlined in the following table.

Dredging		
Site	Average Frequencies	Equipment
<b>Onslow</b>	5 year	Floating dredge
<b>Exmouth</b>	2-3 year	Excavator/Floating Dredge
<b>Carnarvon</b>	4 year	Floating dredge
<b>Denham</b>	7 – 10 year	Floating dredge
<b>Kalbarri</b>	Annual	Floating dredge
<b>Jurien</b>	5 – 10 year	Floating dredge
<b>Ocean Reef</b>	Annual	Excavator
<b>Bremer Bay</b>	Annual	Excavator
<b>Esperance</b>	2 year	Floating dredge
<b>Mandurah</b>	Annual	Customised sand bypassing equipment
<b>Dawesville</b>	Annual	Customised sand bypassing equipment

For further information please contact

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