



# SSDP - Impacts on Fish Larvae

Literature Review  
April 2008

## Literature Review Focus

Specific studies into the effects of desalination plants on fish larvae and other marine organisms have found that an environmental consideration is: entrainment due to the intake pipe.

- Entrainment:
  - The in-take of dispersive larvae and juveniles of many different marine species as a result of the intake pipe.
  - Can potentially lead to reduction in local fish stocks.

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## Marine Fauna of the Binningup Region

- Limited information available for the Binningup Region
- Geographe Bay Region
  - Similar assemblages throughout southwest
  - Dominated by warm-temperate species
  - Some subtropical species
  - Few tropical species
  - Whiting species dominated seagrass beds between Capel and Dunsborough
- Similar assemblages anticipated for Binningup Region
- Gastropods, ascidians and crinoids dominated invertebrates in the southwest

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## Marine Habitats in the Binningup Region

- Baseline surveys indicated that
  - Sand was the dominant substratum
    - » Surf zone and nearshore habitats
    - » Seagrass beds
  - Various types of reef comprised the remainder
- SSDP marine habitat likely to be typified by
  - Limestone reefs
  - Seagrass beds
  - Nearshore and Surf zone habitats

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### Nearshore and Surf zone

- Limited structural complexity
- Significant to juvenile fish fauna
  - » Whiting & Herring
- Availability of prey and limited predators
- Detached macrophyte

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# Impact Assessment

- Marine environment

- Five main habitats
  - » Limestone patch reefs
  - » Seagrass beds
  - » Nearshore habitats
  - » The Surf zone
  - » Detached macrophytes
- Area likely to support variety of fish species in high densities
- Unlikely to be unique environments

- Entrainment

- Likely to occur

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## Conclusion

- Habitats surrounding the Binningup Region are significant to fish fauna assemblages and support populations of fish larvae.
- Can assume that the intake pipe will impact on fish larvae populations through entrainment.
- Binningup Region unlikely to support unique assemblages.
- Long-term impacts likely to be negligible.