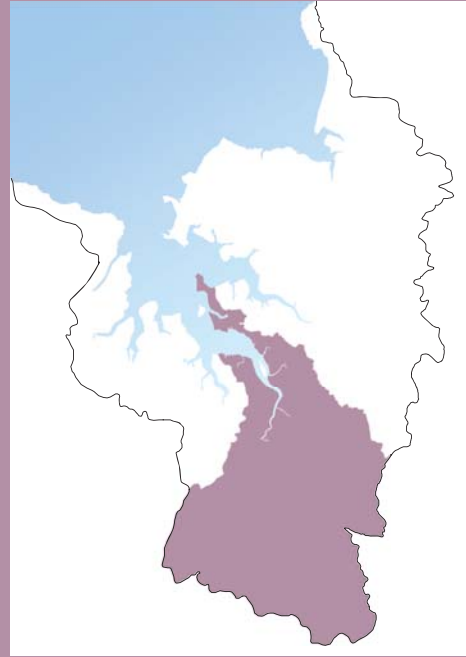


# Blackmore River and Estuary

## Summary

Water quality at the upper estuary monitoring sites was in moderate condition. Water quality at the freshwater monitoring sites was in moderate condition. The water-bug community at the biological monitoring sites was assessed as being similar to reference condition, with two sites assessed as more biologically diverse than reference condition.



## Nature of system

- Long residence time and poor flushing in the upper estuary
- Potentially light limitation of the upper reaches of the estuary during the wet season
- Minor freshwater flows are maintained by Darwin River Dam and Berry Creek during the dry season































## Potential sources of pollution

- Several licensed aquaculture operations are located in the catchment and discharge into the Blackmore estuary
- Sediment and nutrient loads during the wet season from diffuse sources



*Blackmore River downstream of Cox Peninsula Road bridge*

## Blackmore River freshwater and marine water quality

Indicator and units	Freshwater		Marine	
	Water quality objective	Compliance	Water quality objective	Compliance
 <b>Electrical conductivity</b> ( $\mu\text{S}/\text{cm}$ )	<200	32.5 	NA	
 <b>Turbidity</b> (NTU)	<20	6.5 	NA	
 <b>pH</b>	6.0–7.5	5.7–6.2 	6–8.5	7.2–8 
 <b>Dissolved oxygen</b> (%)	50–100	64–72 	80–100	*
 <b>Total suspended solids</b> (mg/L)	<5	5.5 	<10	*
 <b>Chlorophyll a</b> ( $\mu\text{g}/\text{L}$ )	<2	1.9 	<4	3 
 <b>NO<sub>x</sub></b> ( $\mu\text{g N}/\text{L}$ )	<8	7 	<20	12 
 <b>Ammonia</b> ( $\mu\text{g N}/\text{L}$ )	NA		<20	27 
 <b>Total nitrogen</b> ( $\mu\text{g N}/\text{L}$ )	<230	240 	<300	305 
 <b>Total phosphorus</b> ( $\mu\text{g P}/\text{L}$ )	<10	15 	<30	35 
 <b>Filterable reactive phosphorus</b> ( $\mu\text{g P}/\text{L}$ )	<5	6.5 	<10	6 
<b>Number of samples</b>		8		31–40
<b>2011 rating</b>				
<b>2010 rating</b> (2009 data)		C		B
<b>2009 rating</b> (2001–2008 data)		B		B

Note1: (nd). Limited or no data available Note2: (NA). Not applicable, no WQO developed Note3: Pioneer Creek, just outside the Blackmore catchment, is included in the data and is the most western freshwater system systematically sampled in the catchment. \* WQO currently under revision.

## Biological health using the AUSRIVAS score

Site	2009	2010	Change
DW31	A	A	No change
DW36	A	A	No change
DW37	A	X	Change
DW46	A	A	No change
DW47	B	A	Change
DW73	A	A	No change
DW74	A	A	No change
DW75	A	X	Change