

ESTUARY ASSESSMENT FRAMEWORK FOR NON-PRISTINE ESTUARIES

Estuary 909 (WOORAMEL RIVER)

Estuary ID 909
Name WOORAMEL RIVER
Location MID-WEST (GASCOYNE)
Latitude / Longitude -25.9 114.3 **Datum** GDA94

Condition Assessment This estuary is in largely unmodified condition

Initial Classification In the first stage of this condition assessment this estuary was classified as being largely unmodified.

Basis of Initial Classification This was based on the changes to the catchment natural cover: 40% cleared.

Processed-Based Classification

Issues:

General Comments / Notes:

	Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
STATE COMPONENT (OVERALL)		2	C	
ECOSYSTEM INTEGRITY INDEX			D	
Eutrophication				
Chlorophyll a (µg/L) [median(80th)] HEAD				
Chlorophyll a (µg/L) [median(80th)] MIDDLE	4.6 (4.6)	3	A	1
Chlorophyll a (µg/L) [median(80th)] MOUTH	2.2 (2.2)			1

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Chlorophyll a (µg/L) [median(80th)] AVERAGE

Harmful algal blooms

Turbidity [median(80th)]

Turbidity (NTU or secchi depth) HEAD

Turbidity (NTU or secchi depth) MIDDLE

Turbidity (NTU or secchi depth) MOUTH

Turbidity (NTU or secchi depth) AVERAGE

Shellfish closures

Fish/bird kills

Pathogens

Faecal coliforms (no/100mL) [median(80th)] HEAD

Faecal coliforms (no/100mL) [median(80th)] MIDDLE

Faecal coliforms (no/100mL) [median(80th)] MOUTH

Faecal coliforms (no/100mL) [median(80th)] AVERAGE

Critical habitat loss

Anoxic and hypoxic events

Invasive species

	Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
HABITAT CONDITION INDEX			D	2
Seagrass species present	Ruppia megacarpa			1

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Seagrass coverage			
Mangrove species present	None		
Mangrove coverage	0		2
Saltmarsh coverage	0		2
Wetland coverage			

	Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
FISH CONDITION INDEX	Fish/crustacean species lists for this estuary present in AuditCapture database		D	
Diversity				
Abundance				
Health				
Recruitment				

	Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
WATER QUALITY INDEX			D	
Nutrients [median(80th)]				
Ammonia (µg/L) HEAD	143 (340)	4	A	1
Ammonia (µg/L) MIDDLE	71 (71)			1
Ammonia (µg/L) MOUTH				
Ammonia (µg/L) AVERAGE				
Oxidised nitrogen (µg/L) HEAD				
Oxidised nitrogen (µg/L) MIDDLE				
Oxidised nitrogen (µg/L) MOUTH				

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Oxidised nitrogen (µg/L) AVERAGE					
Phosphate (µg/L) HEAD	4 (5)		2	A	1
Phosphate (µg/L) MIDDLE	4 (4)				1
Phosphate (µg/L) MOUTH					
Phosphate (ug/L) AVERAGE					
Dissolved oxygen [median(20th)]					
Dissolved oxygen [surface] (%sat or mg/L) HEAD	121 (110)		2	A	1
Dissolved oxygen [surface] (%sat or mg/L) MIDDLE	118 (117)				1
Dissolved oxygen [surface] (%sat or mg/L) MOUTH					
Dissolved oxygen [surface] (%sat or mg/L) AVERAGE					
Dissolved oxygen [bottom] (%sat or mg/L) HEAD	118 (118)				1
Dissolved oxygen [bottom] (%sat or mg/L) MIDDLE	101 (100)				1
Dissolved oxygen [bottom] (%sat or mg/L) MOUTH					
Dissolved oxygen [bottom] (%sat or mg/L) AVERAGE					
pH					
Heavy metals					
Are heavy metals a problem in this estuary (Y/N)?					
Other toxicants (including pesticides)					
Salinity	Surface salinity: MIDDLE 34.1, MOUTH 35.6; Bottom salinity: MIDDLE 34.1, MOUTH 35.9				1
Temperature	Summer maximum: MIDDLE 22.6, MOUTH 22.5				1
Depth					

Notes, Data and Supporting Qualitative Text

**Rating
(1-4)**

**Data
Confidence**

References

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SEDIMENT QUALITY INDEX	D
Sediment toxicants	
Sediment load TN	
Sediment load TP	
Invertebrate diversity	
Invertebrate abundance	

	Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
PRESSURE COMPONENT (OVERALL)			D	
UTILISATION INDEX	1995 BRS data: Crop/pasture & Plantations comprise 0.177871 % of the catchment. Native woody vegetation comprises 62.0161 % of the catchment.		D	3
Recreation Pressure				
Aesthetic & Amenity				
Yachting & Boating				
Shellfish				
Swimming				
Recreational Fishing				
Infrastructure Pressure				
Sewage Treatment Plants				
Urbanisation and urban runoff				
Dredging				
Commercial Pressure				
Industry				

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Aquaculture
 Reclamation / Declamation
 Commercial fishing
 Tourism
 Agriculture
 Habitat clearing
 Ports & Port Works
 Shipping Activity

Catchment 40% cleared

Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
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SUSCEPTIBILITY INDEX

D

Flow-modifying structures

Catchment loads

Flows and flushing

Naturally open (except July 1972, artificially) 2-6 weeks/year, occurring October to November following wet winters and late heavy rains or January to February after heavy cyclonic rains. Seasonal.

1

Acid sulphate soils

RESPONSE COMPONENT (OVERALL)

Institutional Arrangements

Management Actions

Community Initiatives

Details of References

1. Auditcapture database (WA state data), 2. AGSO, 3. Derived from BRS landcover data

Key Contacts