

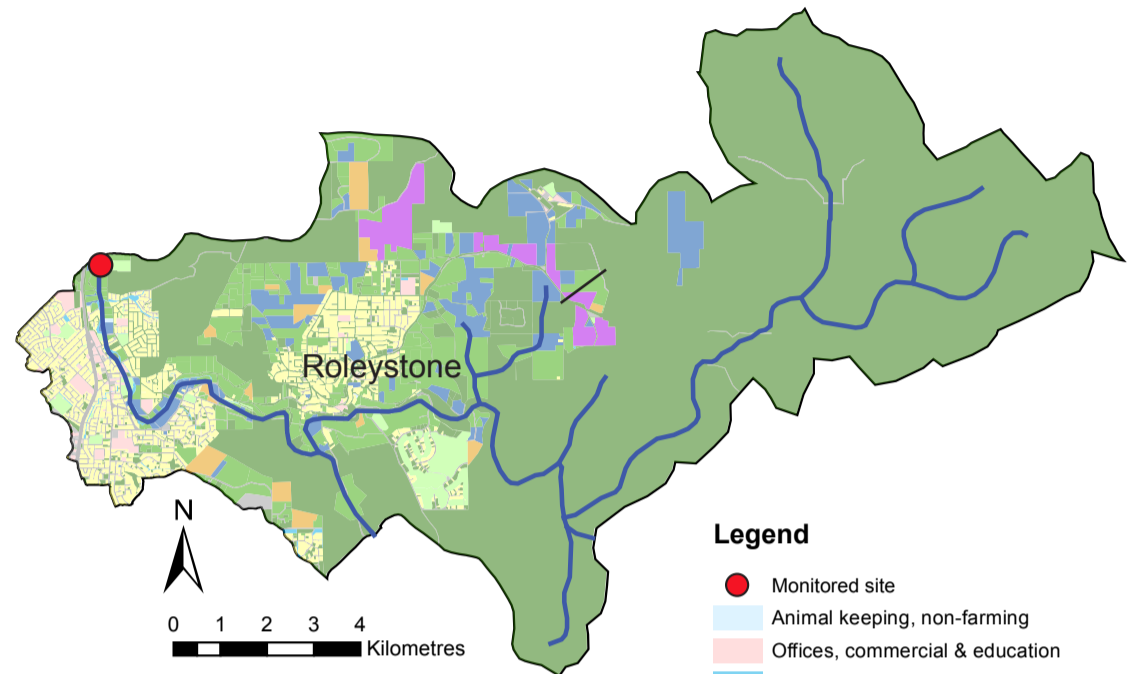
# Upper Canning River

The upper Canning River is a permanent, natural river system that only ceases to flow after a series of low rainfall years. The river is dammed on the Darling Scarp and this has produced an artificial flow regime. The upper Canning catchment drains the area below the Canning Reservoir wall to the junction with Southern River in Gosnells. It contributes the second-largest inflow to the Canning Estuary.

Much of the catchment remains uncleared and is classified as state forest. The catchment's western portion has been cleared for urban and agricultural use with many orchards present. Significant urban expansion is set to occur along the river in areas that are presently rural. Foreshore vegetation includes extensive areas of remnant vegetation including wetlands and woodlands, narrow riverine fringes of vegetation, and areas modified for public access that are mostly grassed.

The upper Canning is mostly a hills catchment. From the base of the reservoir, the river flows west for about 10 km through a deep valley in the Darling Scarp. The upper Canning River flows through Helena and then Dwellingup soils as it passes over the scarp. It then passes through a small portion of Southern River sands and Forrestfield soils before it becomes the lower Canning River. Most of the flow in the upper Canning results from surface water rather than groundwater.

Water quality is monitored at the Department of Water gauging station near the lower end of the upper Canning River. This site was chosen to estimate the nutrient concentrations leaving the catchment, so the data may not accurately represent nutrient concentrations in upstream tributaries.



The upper Canning River at Roleystone.



## upper Canning River – facts and figures

Length	~ 19 km (downstream of Canning Reservoir); ~ 35 km (total length)
Average rainfall (2011–15)	~ 709 mm per year (Perth metro)
Gauging station near monitored site	Site number 616027
Catchment area	147 km <sup>2</sup> (total) 147 km <sup>2</sup> (monitored)
River flow	Permanent, only ceases to flow after a series of low rainfall years Canning Dam is located on the Canning River
Average annual flow	~ 7.4 GL per year (2011–15 average)
Main land uses	Urban, animal agistment, horticulture, turf farms and forested areas

## Nutrient Summary: concentrations, loads and targets

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Annual flow (GL)	11.2*	9.3*	14.0*	4.6	9.8*	10.0*	10.5*	3.2	8.4*	5.5	8.8	9.1*	5.1*
TN median (mg/L)	0.36	0.22	0.42	0.29	0.50	0.36	0.38	0.30	0.46	0.33	0.38	0.31	0.32
TP median (mg/L)	0.023	0.016	0.019	0.013	0.013	0.017	0.016	0.017	0.021	0.012	0.012	0.013	0.012
TN load (t/yr)	10.32*	7.25*	12.68*	2.57	8.37*	8.36*	9.24*	1.65	7.14*	3.09	7.70	7.21*	3.26*
TP load (t/yr)	0.33*	0.21*	0.42*	0.08	0.27*	0.26*	0.31*	0.05	0.24*	0.10	0.26	0.22*	0.10*

TN short-term target = 2.0 mg/L

TN long-term target = 1.0 mg/L

TP short-term target = 0.2 mg/L

TP long-term target = 0.1 mg/L

insufficient data to test target  
  failing both short and long-term target  
  passing short but failing long-term target  
  passing both short and long-term target

\* best estimate using available data. Statistical tests that account for the number of samples and large data variability are used for testing against targets on three years of winter data. Thus the annual median value can be above the target even when the site passes the target (or below the target when the site fails).