Department of **Water and Environmental Regulation**
Department of **Biodiversity, Conservation and Attractions**
GOVERNMENT OF WESTERN AUSTRALIA

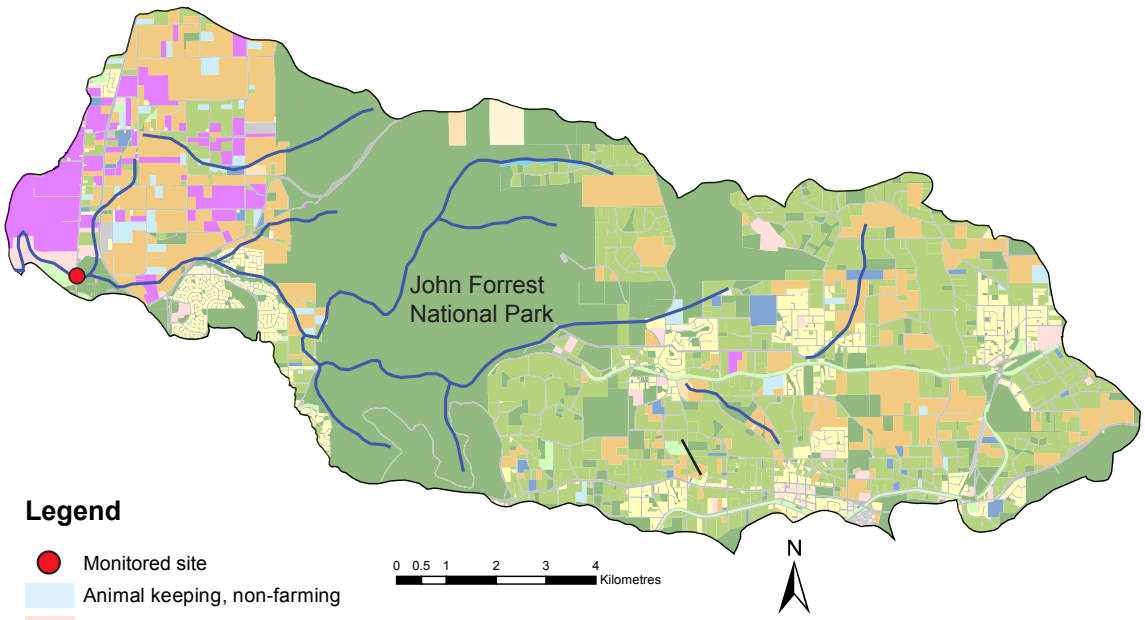
Jane Brook

Jane Brook is an ephemeral waterway in a largely natural state, with much of its riparian zone in the upper catchment still vegetated. It drains the Darling Scarp before flowing through the coastal plain and into the Swan River upstream of Middle Swan Bridge. Strelley Brook, a small tributary of Jane Brook, flows through the largely cleared coastal plain portion of the catchment and into Jane Brook just upstream of its confluence with the Swan River.

Soils in the catchment range from lateritic and ironstone gravels in the upper reaches to the east, to red and yellow earths on the western plains. Groundwater tends to have a relatively minor contribution to flow in Jane Brook.

Agriculture is the dominant land use in the catchment. Viticulture and poultry farming are the principal land uses in the lower Jane Brook catchment, while the upper catchment supports pasture. Little native vegetation remains in the lower catchment below the Darling Scarp, which includes expanding areas of intensive housing developments. Large tracts of natural bushland remain in the steep middle catchment along the scarp, including a portion of the John Forrest National Park. The upper catchment above the scarp is rural and urban with patchy areas of bushland remaining. Much of the brook's fringing vegetation remains intact.

Water quality is monitored fortnightly at the Department of Water and Environmental Regulation gauging station near the catchment's lower end, shortly before the brook flows into the Swan River. This site is positioned to indicate what nutrients are leaving the catchment and entering the Swan River, so the data may not represent nutrient concentrations in upstream areas. There were no flow data available in 2017.



Jane Brook in Swan View, November 2012.

Jane Brook – facts and figures

Average rainfall (2013–17)	~ 730 mm per year (Perth metro)
Catchment area	137 km² (total)
Per cent cleared area (2005)	49%
River flow	Ephemeral (June to December) No major water supply dams in catchment
Average annual flow	~ 6.5 GL per year (2013–16 average)
Main land uses (2005)	Conservation and natural, farming, rural residential blocks

Modified rock cascade on Jane Brook, along the Railway Reserve Heritage trail. July 2007.

Nutrient Summary: concentrations, estimated loads and targets

Year	Site	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Annual flow (GL)	616088	9.0	10.2		1.1*	17.4	8.0*	13.2	5.9*	1.4*	5.6*	
TN median (mg/L)	SWN7	0.64	0.56	0.63	0.43	0.86	0.54	0.61	0.56	0.38	0.56	0.45
TP median (mg/L)	SWN7	0.017	0.017	0.021	0.011	0.032	0.019	0.013	0.030	0.016	0.034	0.021
TN load (t/yr)	SWN7	7.82	9.17		0.72*	16.17	7.48*	13.61	5.08*	0.94*	4.76*	
TP load (t/yr)	SWN7	0.12	0.16		0.01*	0.30	0.33*	0.67	0.20*	0.03*	0.19*	

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).

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