



Upper Serpentine River

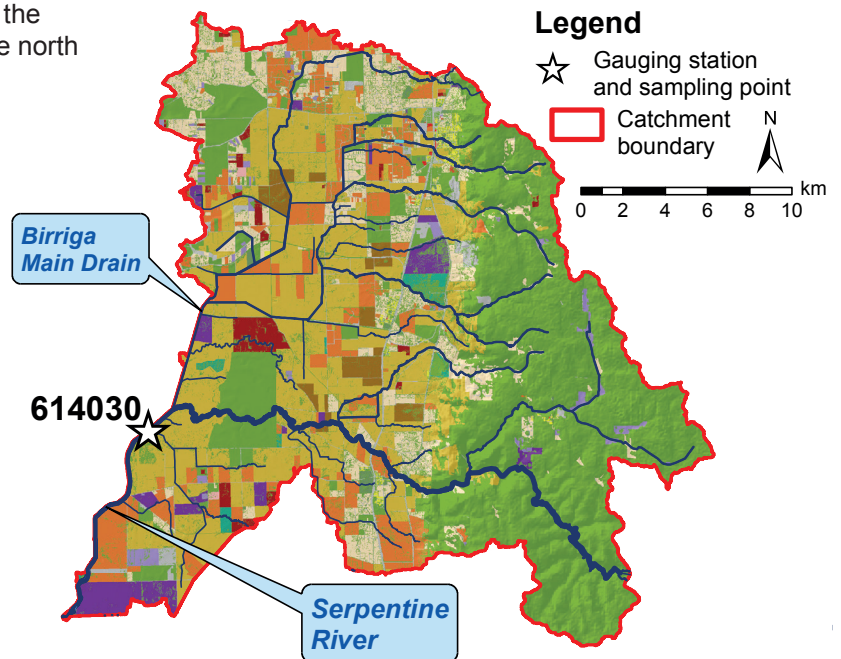
The Upper Serpentine catchment comprises land between Lake Amarillo and the Serpentine Dam draining to the Serpentine River. The Birriga Main Drain drains the north of the catchment.

The Serpentine River sampling site at Dog Hill (614030) is one of three long-term monitoring sites within the Peel-Harvey catchment. Flow has been measured since 1979 and nutrients monitored from 1983.

Historically, the Serpentine River flowed year-round at Dog Hill but, in February 1980 it stopped flowing for four days. In March 1988 it stopped for one day and between 2002 and 2011 flow regularly stopped during the summer or autumn with the exception of 2009. From 2012 the river returned to flowing year-round.

A mixture of soil types is found within the catchment and only a small area is subject to flooding (5%). More than half the catchment has a low or very low risk of phosphorus leaching to the waterways (62%).

To the east of the Darling Scarp the catchment remains relatively undisturbed. West of the scarp the land has been cleared, mostly for agriculture (e.g. stock grazing) and lifestyle blocks. More intensive land uses such as sheep feedlots, poultry farms and piggeries are also present.



Serpentine River at Dog Hill – August 2001

Land use classification (2006)	Area	
	(km ²)	(%)
Animal keeping – non-farming (horses)	47	9.3
Cattle for beef (predominantly)	120	24
Cattle for dairy	8.6	1.7
Conservation and natural	235	47
Horticulture	5.2	1.0
Industry, manufacturing and transport	17	3.4
Intensive animal use	6.6	1.3
Lifestyle block	43	8.6
Mixed grazing	13	2.5
Offices, commercial and education	0.34	0.07
Plantation	2.5	0.50
Recreation	1.4	0.28
Residential	2.1	0.42
Viticulture	0.36	0.07
Total	502	100

Nutrient summary: median concentrations, loads and status classification at 614030

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Annual flow (GL)	31	59	34	63	9.7	35	49	51	7.7	46	16	38	28	6.4
TN median (mg/L)	0.75	1.1	0.86	1.2	0.75	1.0	1.1	0.70	0.76	0.95	0.84	1.1	0.79	0.88
TP median (mg/L)	0.08	0.19	0.11	0.20	0.10	0.13	0.18	0.09	0.08	0.14	0.09	0.14	0.13	0.08
TN load (t/year)	51	110	59	111	14	63	88	93	10	83	21	70	47	8.1
TP load (t/year)	7.8	18	9.0	19	2.0	9.4	16	15	1.4	14	2.9	11	7.0	1.1

Status classification: Low Moderate High Very high

Status reported for three-year period end (i.e. 2012–14 reported in 2014)

TN = total nitrogen TP = total phosphorus