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

Swan Canning catchment
Nutrient report 2017

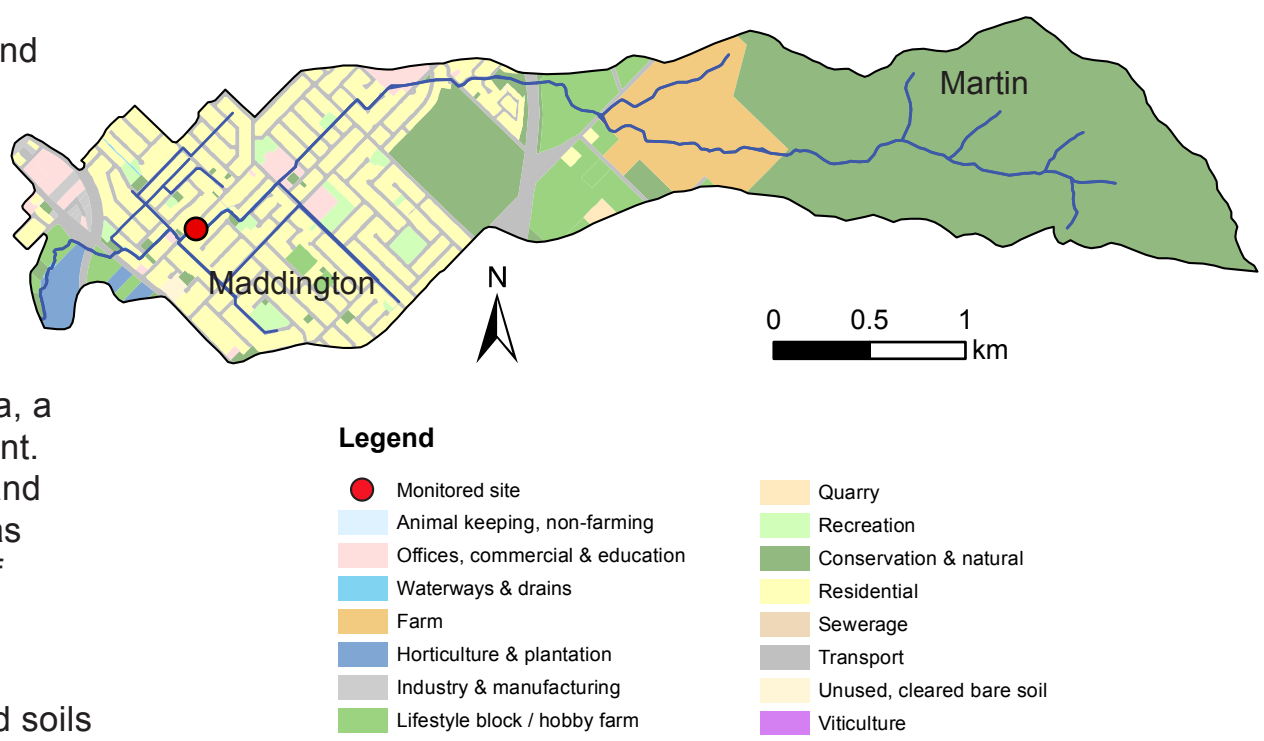
Helm Street Drain

Helm Street Drain has its headwaters in the Darling Scarp, where it is a natural creek, and then flows westwards before its confluence with the Canning River near Albany Highway in Gosnells. It is generally ephemeral, drying for a short period during summer (December to February) though it may flow year round.

The upper portion of the catchment remains uncleared and lies within the Banyowla Regional Park which was named after Banyowla, a Nyungar elder at the time of European settlement. The central section of the catchment has farmland and lifestyle blocks. West of these, the creek has been modified into a drain, including sections of piped and open channels, and the surrounding landuse is predominantly urban.

Helm Street Drain flows through red gravels and soils in the west followed by shallow red and yellow earths as it passes over the scarp. On the coastal plain the soils are predominantly acidic yellow and red sands. These types of soils have better nutrient-retention capacities than the leached sands found further west on the coastal plain.

Water quality is monitored fortnightly at a site near Helm Street in Maddington. This site was chosen to estimate the nutrient concentrations leaving the catchment, so the data may not accurately represent nutrient concentrations in upstream tributaries.



A flow control structure in Helm Street Drain, March 2016.

Helm Street Drain in Maddington, March 2016.

Helm Street Drain – facts and figures

Average rainfall (2013–17)	~ 730 mm per year (Perth metro)
Catchment area	6.0 km^2
Per cent cleared area (2005)	57%
River flow	May flow year round but often dries for short periods during summer (December to February)
Major land uses (2005)	Conservation and natural, and residential

Nutrient Summary: concentrations, rainfall and targets

Year	Site	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Annual rainfall (mm)	009225	703.0	807.8	607.2	503.8	860.8	608.2	782.4	674.4	617.8	715.8	854.0
TN median (mg/L)	SCCIS4	1.80			0.88	0.90	1.00	1.40	1.30	1.60	1.60	1.15
TP median (mg/L)	SCCIS4	0.032			0.022	0.033	0.029	0.045	0.030	0.033	0.035	0.061

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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