



Stormwater

Status	Council
Responsible Division	Technical Services
Objective	To ensure stormwater is managed to protect environmental, social and economic values of the community.

Context

The City will effectively manage and control stormwater runoff to protect the community and environment from the adverse impacts.

The City will achieve this in consideration of industry best practice water sensitive urban design principles.

Management of Stormwater Resources

The management of stormwater resources within the City will be in accordance with the following objectives outlined within the Stormwater Management Manual for Western Australia:

- a. Maintain or improve water quality of surface and groundwater resources.
- b. Maintain the total water cycle balance.
- c. Retain, use and infiltrate stormwater at source.
- d. Conserve water through maximising the reuse of stormwater.
- e. Integrate stormwater treatment into the landscape.
- f. Retain natural drainage systems and protect ecosystem health.
- g. Protect the built environment from flooding and waterlogging.
- h. Ensure the delivery of best practice stormwater management through planning and development.

Stormwater Volume Management

The City of Nedlands uses an Infiltration System approach to Stormwater Volume Management given the predominant high permeability of the natural soils occurring within the City limits.

It is a requirement for all private development lots within the City of Nedlands to retain stormwater fully onsite up to and including the 1% Annual Exceedance Probability (AEP) rainfall event. The storage capacity of these infiltration systems shall be determined using the following parameters:

- 1% AEP Rainfall event



- 8.0m / day infiltration coefficient
- 0.9 runoff coefficient

Onsite storage, treatment and infiltration such as soak wells must be employed within the City of Nedlands. The City of Nedlands drainage network is not to be used for permanent stormwater disposal. It may only be used for dewatering purposes during initial construction under temporary permit issued by the City of Nedlands, if no other means of disposal is available (e.g. removal from site by tanker).

To assist with the determining the capacity of the most common onsite retention systems the City has prepared a capacity design spreadsheet that can be used to determine the suitability of the proposed soak well configuration given the above parameters. This spreadsheet is available on the [City of Nedlands website](#).

Although soak wells are the most common infiltration system employed within the City of Nedlands, applicants are able to submit alternative infiltration designs provided they are prepared by an experienced and qualified professional, such as an engineer or hydrologist, with the design to be considered for approval by the City of Nedlands.

Stormwater Disposal into Natural Areas

The disposal of stormwater into natural areas can be detrimental to the environmental values of the City and therefore stormwater runoff will not be permitted in the following areas without appropriate flow and pollutant controls:

- a. Wetlands classified within the Geomorphic Wetlands of the Swan Coastal Plain dataset, developed and updated by the responsible state government authority.
- b. Lands classified under the Metropolitan Region Scheme as "Parks and Recreation".
- c. Coastal reserves and coastal foreshore.
- d. Any other land which, in the opinion of the Chief Executive Officer, is likely to suffer adverse environmental impact from the effects of stormwater drainage.

Stormwater Management Planning

In order to ensure that development within the City integrates water cycle management and water sensitive urban design principles, planning and development should be in accordance with the principles of the Department of Water and Environmental Regulations' Better Urban Water Management as amended.

No stormwater infiltration facilities are to be decommissioned unless alternative equivalent or larger capacity is provided.



Related documentation

Australian Rainfall and Runoff: A Guide to Flood Estimation, Book 9 – Runoff in Urban Areas (2019)
Better Urban Water Management (Western Australian Planning Commission, 2008)
Stormwater Management Manual for Western Australia (Department of Water and Environmental Regulation 2022)
IPWEA Guidelines for Subdivisional Development (v2.3 2017)
Liveable Neighbourhoods (Western Australian Planning Commission, Perth Western Australia, 2007).

Related local law and Legislation

Local Government Act 1995 (s3.51, Schedule 3.2 and Schedule 9.1)
Health Local Law 1997

Related delegation

Nil.

Review History

28 February 2023 (TS03.02.23)
27 June 2017 (Report CPS16.17)