

Title	Lake Wyangan Flood Study
Abstract	<p data-bbox="359 107 512 136">Conclusions</p> <p data-bbox="359 163 1326 248">The objective of the study was to undertake a detailed flood study of the Lake Wyangan catchment and establish models as necessary for design flood level prediction.</p> <p data-bbox="359 275 1425 450">Through the undertaking of the flood study it has been found that during flood events the majority of the catchment runoff flows to Tharbogang Swamp rather than Lake Wyangan, as had previously been assumed. Historically there has been little response of Lake Wyangan water levels to rainfall events within the catchment, with only the March 1989 event producing a significant response. The limited response in Lake Wyangan is due to a number of factors:</p> <ul data-bbox="395 477 1437 763" style="list-style-type: none"> <li data-bbox="395 477 1385 562">• It has a relatively small catchment area of around 100km², including diverted catchment runoff through the Lake View Drain (Lake Wyangan’s natural catchment is around 75km²); <li data-bbox="395 562 1430 674">• The calibration process found the catchment to indicate a high initial rainfall loss for the events considered. A large amount of rainfall (>60mm) is required before any catchment runoff is generated and a response in the lake can be observed; and <li data-bbox="395 674 1437 763">• A proportion of the catchment runoff volume is retained in temporary flood storages in the catchment, rather than further contributing to the flood storage in the lake. <p data-bbox="359 790 1441 1021">Being a volume-driven closed-catchment system with no natural outlet, flood levels in Lake Wyangan and Tharbogang Swamp are directly related to the catchment runoff volume generated by any given flood event. The high rainfall losses generate relatively small effective rainfall depths and the flood levels are therefore highly sensitive to changes in the adopted initial loss value. The calibration process found an initial loss value of around 60mm to be appropriate for the events considered. However, due to the characteristics of the available design rainfall temporal pattern, this loss value was reduced for design purposes.</p> <p data-bbox="359 1048 1382 1160">Tharbogang Swamp has a much larger catchment area than Lake Wyangan and therefore shows a much greater flood response. Unfortunately there has been no history of flood level recording in Tharbogang Swamp to compare to the modelled flood response.</p> <p data-bbox="359 1187 1390 1299">The study also identified a number of local overland flow paths which impact of the planned development areas of Council’s Growth Strategy 2030. It is important that these flow paths are taken into consideration during the stages of development planning.</p> <p data-bbox="359 1326 1393 1415">The flood study will form the basis for the subsequent floodplain risk management activities, being the next stage of the floodplain risk management process. The key locations to consider during this process have been identified as:</p> <ul data-bbox="395 1442 1417 1617" style="list-style-type: none"> <li data-bbox="395 1442 1377 1554">• Locations where there is potential for cross-catchment flow transfer from the Tharbogang Swamp catchment into Lake Wyangan (potential changes to the existing flow distribution may result from future on-ground works in these localities) ; and <li data-bbox="395 1554 1417 1617">• Locations where the floodways occur within the proposed development areas of the Giffith Growth Strategy 2030.
Resource locator	
Lake Wyangan Flood Study	<p data-bbox="359 1742 788 1771">Name: Lake Wyangan Flood Study</p> <p data-bbox="359 1798 959 1827">Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p data-bbox="359 1854 603 1883">Function: download</p>
Unique resource identifier	
Code	ecfc024f-d2ab-4b41-bfad-e63cbb3d169f
Presentation form	
Edition	01/03/2018

Dataset language English

Metadata standard

Name ISO 19115

Edition 2016

Dataset URI <https://datasets.seed.nsw.gov.au/dataset/ecfc024f-d2ab-4b41-bfad-e63cbb3d169f>

Purpose Land and Resource Management

Status On going

Spatial representation

Type vector

Spatial reference system

Code identifying the spatial reference system 4283

Topic category

Keyword set	
keyword value	
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16
Geographic location	
West bounding longitude	145.813293
East bounding longitude	146.192322
North bounding latitude	-34.250406
South bounding latitude	-33.890937
NSW Place Name	Lake Wyangan
Vertical extent information	
Minimum value	-100
Maximum value	2228
Coordinate reference system	
Authority code	urn:ogc:def:cs:EPSG::
Code identifying the coordinate reference system	5711
Temporal extent	
Begin position	
End position	N/A
Dataset reference date	
Resource maintenance	
Maintenance and update frequency	As needed
Contact info	
Contact position	Data Broker
Organisation name	Griffith City Council
Full postal address	admin@griffith.nsw.gov.au
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Responsible party role	pointOfContact
Limitations on public access	

Responsible party

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