

## Report card for the Nulla Nulla Creek Water Source

Water source context		River flows	
Area	21,306 hectares (84% forested)	<b>Low flow index*</b> (for November)	80th%ile = 16 ML/day (Source. Stressed Rivers Assessment Report 1999)
Average annual rainfall	1,517 mm	<b>Flow records</b>	Low flow index calculated from nearest suitable gauging station (outside of water source)
Inflowing water source	None	<b>Stream type</b>	Gaining
Receiving water source	Macleay Valley	* 80 per cent of the time average daily flow exceeds 16 ML/day and this represents low flows.	

Background information		
Water Source Attributes	Rating	Justification
Relative Instream Value (within catchment)	<b>MEDIUM</b>	<ul style="list-style-type: none"> <li>- 6 threatened frog species.</li> <li>- 1 threatened bird species.</li> <li>- significant area of National Park.</li> </ul>
Hydrologic Stress	<b>LOW</b>	<ul style="list-style-type: none"> <li>- within water source = low.</li> </ul>
Relative Economic Significance of Irrigation (within catchment)	<b>LOW</b>	<ul style="list-style-type: none"> <li>- low economic dependence of the local community on water extracted for irrigation.</li> <li>- medium value of production from irrigation.</li> </ul>
Risk to Instream Value (from extraction)	<b>LOW</b>	<ul style="list-style-type: none"> <li>- instream values are at low risk of being impacted by extractions within the water source.</li> </ul>
Upriver alluvial aquifer description		
<p>The upriver alluvial aquifer consists of medium to coarse grained sand, silts and gravel deposits. Groundwater from the aquifer is typically highly connected to the surface water. As a result of this connection, coupled with the coarser sediments, water quality is typically good with high yields potentially obtainable in some areas. Lower reaches of these freshwater systems have proven water resources such as the Kempsey town water supply bore field at Sherwood.</p>		
Groundwater Dependent Ecosystems	Nil.	
Licensed water entitlement		
Total surface water entitlement	66 ML/year*.	
Licensed purpose	100% used for irrigation.	
Proportion of extraction management unit	< 1% of total Extraction Management Unit entitlement.	
Total groundwater entitlement	50 ML/year**.	
Licensed purpose	100% used for town water supply.	
Estimated in October 2012* and November 2013**		

Existing access arrangements during dry conditions	
<b>Pumping restrictions</b>	No existing access arrangements.
<b>Cease to pump</b>	No visible flow.
<b>Reference point</b>	1. Nulla Creek Road Crossing. 2. Kempsey Road Crossing.
<b>Water user association</b>	None.

## Recommendations

Draft access rules for surface waters	
<b>Cease to pump</b>	No visible flow at the reference point. <b>Note:</b> This rule applies to all extraction from rivers and creeks in this water source including natural in-river pools within the channels of rivers and creeks.
<b>Reference point</b>	Nulla Creek Road crossing (the most downstream crossing on Nulla Nulla Creek).
Draft access rules for natural off-river pools	
<b>Cease to pump</b>	Pumping is not permitted when the water level in that natural off-river pool is lower than its full capacity. <b>Note:</b> 'Full capacity' can be approximated by the pool water level at the point where there is no visible flow into and out of that pool. <b>Note:</b> Natural off-river pools include those pools located on flood runners, floodplains and effluents e.g. lakes, lagoons and billabongs.
<b>Reference point</b>	Individual natural off-river pool.
Draft access rules for upriver alluvial aquifers	
<b>Cease to pump</b>	Nil. <b>Note:</b> A restriction on the establishment of new works in close proximity to the water course applies (refer to Rules for the granting of new water supply work approvals in the upriver alluvial aquifers below).
<b>Reference point</b>	Not required.
<p><b>Note:</b> Existing <i>Water Act 1912</i> licence conditions that are more stringent than these access rules will be carried forward.</p> <p><b>Note:</b> These access rules do not apply to:</p> <ul style="list-style-type: none"> <li>- Local water utility access licences</li> <li>- Town water supply access licences</li> <li>- Stock and domestic licences for the first three years of the plan (provided that extraction for stock purposes does not exceed 14 litres per hectare of grazeable area per day)</li> <li>- Water taken from existing dams. Any existing licence conditions associated with a dam will be carried over when the licence is converted under the <i>Water Management Act 2000</i>.</li> </ul>	

<b>Distance rules</b>	
<b>Distance rules</b>	<p>Standard suite of rules (with the exception of the proposal below).</p> <p><b>Note.</b> The standard set of distance rules that are designed to minimise the impact of extractions on other groundwater works, groundwater dependent ecosystems and groundwater dependent culturally significant sites apply. Exemptions to these rules (e.g. for replacement works) apply in specific circumstances.</p>
<b>Rules for the granting of new water supply work approvals</b>	<p>A new water supply work (groundwater work) approval:</p> <ul style="list-style-type: none"> <li>• may not be granted, or amended, to authorise the construction of a new work to take water within 40m of the high bank of any third order or greater stream,</li> <li>• may be granted or amended to authorise the construction of a new work to take water beyond 40m of the high bank of any third order or greater stream (new works would be subject to standard groundwater distance rules).</li> </ul> <p><b>Note.</b> The restriction on new works does not apply to water supply works being used for basic landholder right purposes.</p>
<b>Draft trading rules for surface and alluvial ground waters</b>	
<b>INTO water source</b>	Permitted, from, Apsley Gorge, Apsley River, Bakers Creek, Blue Mountain Creek, Chandler Gorge, Chandler River, Christmas Creek, Coastal Macleay, Collombatti Creek, Commissioners Waters, Dungay Creek, Dyke Creek, Euroka Creek, Five Day Creek, Gara River, Georges River, Gills Bridge Creek, Green Gully, Hickeys Creek, Kunderang Creek, Macleay Gorges, Macleay Valley, Malpas Dam, Mungay Creek, Oaky River, Salisbury Waters, Stockyard Creek, Styx River, Tia River, Toorumbree Creek, Warbro Creek, Yarrowitch River water sources but only up to a maximum of 230ML
<b>WITHIN water source</b>	Permitted, subject to assessment.
<b>Draft rules for granting access licences</b>	
<b>In-river dams</b>	<p>Permitted, subject to assessment.</p> <p><b>Note:</b> Dams require a licence if they are located on a permanent (spring fed) first or second order stream, a third order (or greater) stream, or if they exceed the maximum harvestable right dam capacity for the property.</p>
<b>Aboriginal community development</b>	Not permitted due to the absence of a gauge.
<b>Conversion to high flows</b>	Not permitted due to the absence of a gauge.
<b>Conversion to alluvial aquifer access licence</b>	Permitted, subject to assessment.

## Key factors for decisions

- Medium instream value, low hydrologic stress, low risk to instream value and low economic dependence.
- The most basic access rule was proposed due to no gauging station or suitable reference point other than the pump site in the water source.
- It is recommended that a cease to pump rule not apply to bores in the upriver alluvial after noting the absence of entitlement (for irrigation purposes), the continued and expanded restriction on the establishment of new works in close proximity to streams, and the negligible risk to the water source from extraction.

## Public exhibition

Feedback is particularly sought on the suitability of the proposed access and trading rules.

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