

Report card for the Dungay Creek Water Source

Water source context		River flows	
Area	23,716 hectares (89% forested)	Low flow index* (for November)	80th%ile = 3 ML/day (Source. Stressed Rivers Assessment Report 1999)
Average annual rainfall	1,716 mm	Flow records	Low flow index calculated from nearest suitable gauging station (outside of water source)
Inflowing water source	None	Stream type	Gaining
Receiving water source	Macleay Valley	* 80 per cent of the time average daily flow exceeds 3 ML/day and this represents low flows	

Background information		
Water Source Attributes	Rating	Justification
Relative Instream Value (within catchment)	MEDIUM	<ul style="list-style-type: none"> - 8 threatened frog species. - 2 threatened bird species. - 1 other threatened fauna species. - 1 threatened wet flora species. - significant area of National Park.
Hydrologic Stress	HIGH	- within water source = high.
Relative Economic Significance of Irrigation (within catchment)	MEDIUM	<ul style="list-style-type: none"> - medium economic dependence of the local community on water extracted for irrigation. - high value of production from irrigation.
Risk to Instream Value (from extraction)	MEDIUM	- instream values are at moderate risk of being impacted by extractions within the water source.
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	265 ML/year*.	
Licensed purpose	96% used for irrigation.	
Proportion of extraction management unit	1% of total Extraction Management Unit entitlement.	

Total groundwater entitlement	0 ML/year**.
Estimated at October 2012* and November 2013**.	
Existing access arrangements during dry conditions	
Pumping restrictions	As required.
Cease to pump	No visible flow.
Reference point	1. Dungay Creek Road. 2. Old Rollands Plains Road.
Water user association	None.

Recommendations

Draft access rules for surface waters	
Cease to pump	<p>Pumping is not permitted from natural pools when the water level in the pool is lower than its full capacity.</p> <p>Note: '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.</p> <p>Note: Natural pools include in-river pools found within the channels of rivers and creeks and off-river pools located on flood runners, floodplains and effluents e.g. lakes, lagoons and billabongs.</p> <p>Note: For the minority of pump sites not within a natural pool, these licences will be required to cease to pump when there is no visible flow at that pump site.</p>
Reference point	Individual natural pool.
Draft access rules for alluvial aquifers	
Cease to pump	<p>Nil.</p> <p>Note: 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 alluvials below).</p>
Reference point	Not required.
<p>Note: Existing <i>Water Act 1912</i> licence conditions that are more stringent than these access rules will be carried forward.</p> <p>Note: These access rules do not apply to:</p> <ul style="list-style-type: none"> - Local water utility access licences - Town water supply access licences - 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) - 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>. 	
Distance rules	
Distance rules	<p>Standard suite of rules (with the exception of the proposal below).</p> <p>Note. The standard set of distance rules that are designed to minimise the impact of extractions on other ground water 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>

Rules for the granting of new water supply work approvals	<p>A new water supply work (groundwater work) approval:</p> <ul style="list-style-type: none"> 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, 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). <p>Note. The restriction on new works does not apply to water supply works being used for basic landholder right purposes.</p>
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Draft trading rules for surface and alluvial ground waters (Upstream Trading Zone)	
INTO management zone	Not permitted.
WITHIN management zone	Trades permitted subject to assessment.
Draft trading rules for surface and alluvial ground waters (Downstream Trading Zone)	
INTO management zone	Trades permitted (no net gain) from, Apsley Gorge, Apsley River, Bakers Creek, Blue Mountain Creek, Chandler Gorge, Chandler River, Christmas Creek, Coastal Macleay, Collombatti Creek, Commissioners Waters, 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, Nulla Nulla Creek, Oaky River, Salisbury Waters, Stockyard Creek, Styx River, Tia River, Toorumbree Creek, Warbro Creek, Yarrowitch River.
WITHIN management zone	Trades permitted subject to assessment.
Draft rules for granting access licences	
In-river dams	<p>Upstream Trading Zone - Not permitted.</p> <p>Downstream Trading Zone - Permitted.</p> <p>Note: 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>
Aboriginal community development	Not permitted due to the absence of a gauge.
Conversion to high flows	Not permitted due to the absence of a gauge.
Conversion to alluvial aquifer access licence	Permitted, subject to assessment.

Key factors for Panel decisions

- Medium instream value high hydrologic stress, medium risk to instream value and medium economic dependence.
- Trading rules were developed to accommodate the presence of significant macro invertebrates.
- The most basic access rule proposed due to no gauging station or suitable reference point other than the pump site in the water source.
- The Panel recommended that a cease to pump rule not apply to bores in the upriver alluvial after noting the absence of entitlement, 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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Published by the Department of Primary Industries, a division of NSW Department of Trade and Investment, Regional Infrastructure and Services.

Jobtrack 13078_RC11

Document prepared October 2014