

Report card for Hydes Creek Water Source

Background

| Water source context | | River flows | |
|--|--|---|--|
| Area | 42.62 km ² | Low flow index* | 122 ML/day (80 th percentile of November [critical month] days)* |
| Inflowing water source | None | Flow records | 13 years—Bellinger River at Fosters Gauge (205016) |
| Receiving water source | Coastal Bellinger | Stream type | Gaining |
| *80% of the time average daily flow exceeds 122 ML/day in the critical month of November and this represents low flows. | | | |
| Catchment boundary definition | | | |
| All surface waters and alluvial aquifers in the hydrological catchment of Hydes Creek. The water source intersects Pine Creek State Forest and Tuckers Nob State Forest. | | | |
| Upriver alluvial aquifer description | | | |
| 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. | | | |
| Groundwater Dependent Ecosystems | | Groundwater dependent vegetation ecosystem present. | |
| Licensed water entitlement | | | |
| Total surface water entitlement | 339 ML/year. | | |
| Licences | 8 licences to access surface water. | | |
| Proportion of extraction management unit | 12% of the Bellinger River Catchment Extraction Management Unit. | | |
| Total groundwater entitlement | 120 ML/year. | | |
| Licences | 1 license to access groundwater. | | |
| Note: Estimated at January 2020. | | | |

| Existing access arrangements during dry conditions | |
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| Cease to take | 1 ML/day, or when there is no visible flow at the point of take. |
| Take restrictions | Maximum 8 hours a day when flow is between 1 ML/day (95 th percentile) and 4 ML/day (80 th percentile). |
| Reference point | Kethels Road Bridge (staff gauge). |

Proposed recommendations

| Draft access rules for surface waters | | |
|---------------------------------------|---|---|
| Conditions | Tidal Management Zone | Non-tidal Management Zone |
| Cease to take | Less than or equal to 56 ML/day (estimated 95 th percentile critical month) or when there is no visible flow at the point of take. | Less than or equal to 56 ML/day (estimated 95 th percentile critical month) or when there is no visible flow at the point of take site. |
| Commence to take | 24 hours after flows have returned above 56 ML/day. | 24 hours after flows have returned above 56 ML/day. |
| Take restrictions | Take is permitted for a maximum 8 hours/day when flows are between 56 ML/day and 122 ML/day (80 th percentile). Take is unrestricted when flow is greater than 122 ML/day. | Take is permitted for a maximum 8 hours/day when flows are between 56 ML/day and 122 ML/day. Take is unrestricted when flow is greater than 122 ML/day. |
| Reference point | Bellinger River at Fosters Gauge (205016). | Bellinger River at Fosters Gauge (205016). |
| Exemptions | Rule does not apply to licensed domestic and stock, local water utilities, pumping related to specific food or animal safety/care or extraction from dams in accordance with conditions of approval . | |
| Draft access rules for groundwater | | |
| Cease to take | Surface water cease to take rule applies. | |
| Commence to take | Surface water commence to take rule applies. | |
| Exemption | Rule does not apply to licensed domestic and stock, local water utilities, pumping related to specific food or animal safety/care or extraction from take pool in accordance with conditions of approval. | |

| Draft distance rules for groundwater | | |
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| Distance conditions | <p>A standard suite of rules have been adopted for the upriver alluvials. Distance criteria will apply to new and replacement bores (not current) in relation to:</p> <ul style="list-style-type: none"> • minimising interference between bores • protecting groundwater dependent culturally significant sites • contaminated sites • acid sulfate soils • basic landholder rights • protecting groundwater dependent sensitive environmental areas. | |
| Exemptions | <p>Exemptions to these rules (e.g. for replacement works) apply in specific circumstances.</p> | |
| Draft licence dealing rules | | |
| Rule | Trade | |
| | Tidal Management Zone | Non-tidal Management Zone |
| INTO water source | No net gain in trade. | No net gain in trade |
| WITHIN water source | Permitted. | Permitted. |
| Conversion | | |
| Surface to ground | Permitted. | |
| Ground to surface | Not permitted. | |
| High flows | Permitted. | |
| Draft rules for granting access licences/works approvals | | |
| Aboriginal cultural access licence | Permitted, no greater than 10ML/yr. per application and subject to assessment. | |
| Aboriginal community development access licence | Permitted, subject to assessment. | |
| In-river dams | Permitted, subject to assessment. | |
| Alluvial bores | Permitted, subject to assessment and distance rules. | |

Key factors for decisions

- Medium instream value, high hydrologic stress, medium risk to instream value and high economic dependence.
- Medium risk of low flow periods due to significant area of timber plantations in the catchment.
- Applications for Aboriginal community development access licences accepted for consideration.
- Recommend trades into the tidal pool area up to a limit are allowed due to the low hydrologic stress and low sensitivity of the estuary to inflows (low flows).
- Access rules apply to aquifer access licences within 40 m of the unregulated river to due to high connectivity between this water source and its alluvial aquifers.

Public exhibition

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

The draft Bellinger River Area water sharing plan and other fact sheets are available from <https://www.industry.nsw.gov.au/water>