

PP3.5: Amending waterharvesting licences to better-specified entitlement.

Paper Author\Authors	s.73 irrelevant information
Consultation with	Mary Water Planning team, Water Policy and Divisional Support staff
Paper Version Number/Date	V1.0, March 2022
Issue Number	PP3.5
Issue Name	Waterharvesting licence amendment
Water Plan Area	Mary Basin
Description of Issue	<p>Summary of waterharvesting licences: There are 42 licences to take water in the Mary Basin water plan area that include the purpose ‘Waterharvesting’. The licences have attributes that complicate the amendment, including:</p> <ul style="list-style-type: none"> • Unspecified and poorly specified access conditions (flow threshold) for taking water - 7 of the licences have no specified access condition, only 2 have an access condition referring to a departmental gauging station, the remainder have access conditions referring to flow at the pump sites or at other locations including flow over a weir or dam, • ‘Small flow’ access conditions - 15 of the licences have a flow threshold of less than 150 litres per second, which is negligible compared to what is normally typically considered a waterharvesting event. • Unspecified volume of water able to be taken - Only 8 of the licences specify a volume able to be taken in a water year (5 via a condition, 3 with a nominal entitlement). • Multiple purpose (bundled) - 11 of the licences also specify the purpose ‘Irrigation’. <p>None of the licences are subject to Departmental announcement of periods of take – i.e. the licensee self-manages when water is taken. There is no intent to change this regime in this plan review.</p> <p>Few of the licences are actively used – an audit undertaken in 2019 showed that only 12 of the 42 licences were used on a regular basis.</p> <p>This paper proposes an approach to the amendment of these licences in accordance with Steering Committee-endorsed Policy Papers 3.1 (Investigate amendment to volumetric entitlements) and 3.4 (Licence condition rationalisation), to:</p> <ul style="list-style-type: none"> • include a Nominal Entitlement, a purpose of ‘Any’, and a specified rate of take • ‘unbundle’ multiple purpose licences

	<ul style="list-style-type: none"> rationalise licence conditions, including better-specified flow access conditions <p>Attachment 1 provides a summary of the existing waterharvesting licences.</p> <p>Principles for amendment: The following general principles were considered for the proposed amendments:</p> <ul style="list-style-type: none"> Seek fairness, equity, and transparency Actively engage with affected water users Recognises what the existing licence provides for, including licence conditions Treat all licences equally, regardless of level of utilisation Use best available information to assess water availability and demands Builds confidence regarding the availability, security and value of water entitlements and promotes the efficient use of water. Consider opportunities for rationalising licence contents and conditions to streamline licence management (particularly compliance) for the department and the licensee
<p>Recommendations</p>	<p>Include provisions in the water plan providing for amendment of the waterharvesting licences via the Water Entitlement Notice as follows:</p> <p>1. Nominal entitlement (NE):</p> <ul style="list-style-type: none"> For licence which already has a specified NE: Retain NE as specified. For licence with no specified NE, and <i>with</i> a condition stipulating volume able to be taken: Delete condition and include the specified volume as the NE for the licence. For licence with no specified NE, and <i>without</i> a condition stipulating volume able to be taken: Include NE on licence. NE to be calculated by multiplying the daily rate of take applying to the licence by 30. This assumes that waterharvesting may reasonably be able to be accessed no more than 30 days per year. 30 days per year aligns with preliminary modelling of area-based licences with no volumetric cap and is considered an equivalent and equitable water access benchmark. Where a licensee believes that a larger NE value is required, it is proposed that the water plan include a provision enabling consideration of a larger NE value if appropriate based on consideration of licensee-provided evidence demonstrating historic volumes of take, as specified in Policy Paper 3.6. <p>2. Purpose: All licences to have the purpose Any.</p> <p>3. Rate of take: Include a rate of take, in litres per second, for each licence. Rate of take is to be determined as specified in Policy Paper 3.6.</p> <p>4. Unbundling of multiple purpose (Irrigation and Waterharvesting) licences:</p>

	<ul style="list-style-type: none"> • For licence where each purpose has the same access condition: Do not unbundle – retain as one licence with contents and conditions applied as per items 1-3 above, and NE to be the sum of the NE determined as per item 1 above for the waterharvesting component PLUS the NE determined for the irrigation component in accordance with Policy Paper 3.6. • For licence where each purpose has a different access condition: Unbundle into two separate licences. Licence 1 to recognise the irrigation component with contents and conditions based on the recommendations in this paper, and the NE determined for the irrigation component in accordance with Policy Paper 3.6. Licence 2 to recognize the waterharvesting component with contents and conditions based on the recommendations in this paper. • Note: 6 of the 11 multiple purposes licences have different access conditions and would require unbundling into two separate licences using the above methodology – i.e. in total there will be 48 licences rather than the current 42. <p>5. Licence condition rationalisation:</p> <p>5(a) Flow access conditions:</p> <ul style="list-style-type: none"> • For licence without a specified passflow: Do not apply a passflow condition. • For licence with a specified flow access condition less than 150 litres per second or a ‘no take if no surface flow’ access condition: Replace flow threshold/ passflow condition, with a ‘don’t stop flow’ or ‘visible pass flow’ condition. • For licence with a specified flow access condition of 150 litres per second or more: Replace flow access condition with a standardised and consistently worded condition (e.g. where possible express flow in cubic metres per second rather than gauge board height, and refer to flow at Departmental gauging station where practical). <p>5(b) Other conditions to be rationalised. Rationalisation of other conditions in accordance with Policy Paper 3.4 is recommended.</p> <p>Attachment 1 provides details of the specific amendments proposed for each waterharvesting licence in the plan area.</p> <p>Attachment 2 provides a detailed discussion of the proposed rationale and methodology for amendment of the licences in accordance with the above recommendations.</p>
Date of Recommendation	Steering Committee meeting #6 – 5 May 2022
Implementation	<ul style="list-style-type: none"> • Consultation to discuss the proposed conversion will be undertaken during the broader consultation for the conversion of irrigation purpose licences in the plan area. • Unbundling of licences will be undertaken by amending the existing licence to remove one purpose and creating a new licence for the

	<p>other purpose and these two licence holders will be contacted to discuss proposal</p> <ul style="list-style-type: none"> • Drafting of water plan provisions providing for required water licence amendments and granting of new licences. • Include relevant water licence details in the draft and final Water Entitlement Notice (WEN). 						
Key messages (Why?)	Provisions need to be included in the reviewed water plan to amend existing waterharvesting licences in the water plan to clearly specify the volumetric entitlement to water, the conditions under which water may be taken, and to separate licences that currently include both waterharvesting and irrigation purposes.						
Risk Analysis	<p>Provide key risks involved in implementing the recommendations and any risk mitigations measures recommended.</p> <table border="1"> <thead> <tr> <th>Risk</th> <th>Risk Management Recommendation</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> • Opposition from licensees regarding amendment process and methodology. • Nominal entitlement on amended licence does not match the licensees demonstrable water requirements. </td> <td> <ul style="list-style-type: none"> • Provide for appropriate, constructive and meaningful consultation with licensees regarding proposed amendments. • Commence the consultation about the licence amendments with clearly articulated and relatively straightforward methodologies and rationale. • Provide opportunity to submit on the draft water plan • Provide opportunity for a licensee to make a submission proposing a different licence amendment to that specified in the draft WEN but in accordance with the draft water plan. The submission can be referred to the Referral Panel. </td> </tr> </tbody> </table>	Risk	Risk Management Recommendation	<ul style="list-style-type: none"> • Opposition from licensees regarding amendment process and methodology. • Nominal entitlement on amended licence does not match the licensees demonstrable water requirements. 	<ul style="list-style-type: none"> • Provide for appropriate, constructive and meaningful consultation with licensees regarding proposed amendments. • Commence the consultation about the licence amendments with clearly articulated and relatively straightforward methodologies and rationale. • Provide opportunity to submit on the draft water plan • Provide opportunity for a licensee to make a submission proposing a different licence amendment to that specified in the draft WEN but in accordance with the draft water plan. The submission can be referred to the Referral Panel. 		
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Attachments	<p>Attachment 1: Table summarizing details of existing waterharvesting licences and proposed licence amendments.</p> <p>Attachment 2: Discussion about the proposed rationale and methodology for amendment of the licences.</p>						
Steering Committee Decision	<p>Date: 5 May 2022</p> <table border="1"> <thead> <tr> <th>Outcome</th> <th>Comment/s</th> </tr> </thead> <tbody> <tr> <td>Endorsement of the recommendation</td> <td>Recommendations 1, 2, 4* and 5b endorsed. Recommendation 5a endorsed in part only for licences without a specified passflow</td> </tr> <tr> <td>Endorsement with some changes</td> <td>* Removed note for recommendation 4 in Attachment 2 regarding not unbundling if <150 l/s passflow and amended Attachment 1 where required.</td> </tr> </tbody> </table>	Outcome	Comment/s	Endorsement of the recommendation	Recommendations 1, 2, 4* and 5b endorsed. Recommendation 5a endorsed in part only for licences without a specified passflow	Endorsement with some changes	* Removed note for recommendation 4 in Attachment 2 regarding not unbundling if <150 l/s passflow and amended Attachment 1 where required.
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		<p>Recommendation 3 unresolved (Rate of take) - Resubmission of the matter in a future meeting</p> <p>Remainder of Recommendation 5a unresolved (licences with specified flow access condition or a 'no take if no surface flow' access condition) - Resubmission of the matter in a future meeting. Note these entitlements are highlighted in Attachment 1</p>
	Refusal	
	Resubmission of the matter in a future meeting	
	Others (if applicable)	QA multi-purpose volumes in draft WEN
	Signature	s.73 irrelevant information

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Attachment 1: Summary details of existing waterharvesting licences and proposed licence amendments (ordered in ascending order by Access Condition flow rate)

Licence number	Water source	Annual volume specified on licence (* indicates volume specified via licence condition)	Hectare area specified on licence	Purpose	Rate of take (litres/ s) (* indicates rate already specified on licence)	NE (ML) based on 30 days pumping per year	Access condition for taking water (litres/s)	Existing conditions	Recommended approach to amendment to better specified entitlement	Details for proposed amended licence. Note: l/s used for flow threshold less than 1000 l/s, cubic metres/ s used for threshold 1000 or greater. Note: for the sake of brevity details including licensee name, watercourse name, lot/ plan details for attached land and activity location have not been included below as they are implicit).
673 ir	Mary River	n/a	20	Irrigation, Stock, Waterharvesting	64.8 *	168	n/a	2.73 When the chief executive limits the water that may be taken under this water licence, the maximum area irrigated must not exceed 10 hectares. Irrigation of the reduced area shall be subject to the limitations imposed at the time. 1. Water taken under the authority of water licence 673 must only be taken from the section of the Mary River which formed the boundary of land previously described as	Convert to one Any purpose licence with a nominal entitlement based on the std approach for conversion of Ha to ML PLUS adopted volumetric conversion for waterharvesting. Omit land parcel condition as per std approach in licence condition rationalisation policy paper, and Ignore Stock component as the licensees are riparian land owners. No flow access condition to apply.	NE = 168 ML plus the NE determined as per the standard approach for 20 Ha irrigation entitlement Rate of take: 64.8 l/s Purpose: Any
672 ir	North Deep Creek	n/a	2	Irrigation, Waterharvesting	5.8	15	surface flow	1. The taking of water under the authority of this water licence for waterharvesting purposes is prohibited whenever there is no surface flow in North Deep Creek	Convert to two Any purpose licences - one with a nominal entitlement based on the std approach for conversion of Ha to ML, one for std approach for waterharvesting entitlement with standardised 'no flow no take' flow access condition. Note that the pump rate is based on the approved 50 mm helical rotor pump works.	Licence 1 (for Irrigation component): NE = NE determined as per standard approach for 2 Ha irrigation entitlement Rate of take: 5.8 l/s Purpose: Any Conditions: None Licence 2 (for Waterharvesting component): NE = 15 ML Rate of take: 5.8 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
672 ir	Paynter Creek	4*	2	Irrigation, Waterharvesting	10.5 *	n/a	surface flow	1.52 The equivalent volume of water that may be taken under this water licence must not exceed 4 megalitres per water year. 2.19 The taking of water under this authorisation for Irrigation and Waterharvesting purposes is prohibited whenever there is no surface flow in Paynter Creek, or when the taking of water will cause the cessation of or prevent the continuance of surface flow downstream of the activity site.	Convert to one Any purpose licence with a nominal entitlement of 4 ML/ annum. Include standardised 'no flow no take' flow access condition.	NE = 4 ML Rate of take: 10.5 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
670 ir	Little Yabba Creek	n/a	5	Irrigation, Waterharvesting	25.5	66	n/a	None	Convert to one Any purpose licence with a nominal entitlement based on the std approach for conversion of Ha to ML PLUS adopted volumetric conversion for waterharvesting. No flow access condition to apply.	NE = 66 ML plus the NE determined as per the standard approach for 5 Ha irrigation entitlement Rate of take: 25.5 l/s Purpose: Any
670 ir	Deep Creek	6*	2	Irrigation, Waterharvesting	12.0	n/a	n/a	1.52 The equivalent volume of water that may be taken under this water licence must not exceed 6 megalitres per water year.	Convert to one Any purpose licence with a nominal entitlement of 6 ML No flow access condition to apply.	NE = 6 ML Rate of take: 12 l/s Purpose: Any
670 ir	Mary River	n/a	n/a	Waterharvesting	30 *	78	n/a	None	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. No flow access condition to apply	NE = 78 ML Rate of take: 30 l/s Purpose: Any
670 ir	Fat Hen Creek	n/a	n/a	Waterharvesting	299.8	777	n/a	None	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. No flow access condition to apply	NE = 777 ML Rate of take: 299.8 l/s Purpose: Any
670 ir	Tinana Creek	n/a	n/a	Waterharvesting	25.5	66	n/a	None	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. No flow access condition to apply.	NE = 66 ML Rate of take: 25.5 l/s Purpose: Any
670 ir	Munna Creek	n/a	n/a	Waterharvesting	165 *	428	n/a	None	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. No flow access condition to apply.	NE = 428 ML Rate of take: 165 l/s Purpose: Any
670 ir	Sandy Creek	n/a	n/a	Waterharvesting	45.0	117	5	2.39 The taking of water under this authorisation for Waterharvesting purposes is permitted only during those periods when the flow of water in Sandy Creek, downstream of the site where the taking of water is authorised exceeds 5 litres per second as indicated by a mark established by the chief executive.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised 'no flow no take' flow access condition. Note pump works development approval associated with licence specified 45 l/s rate of take (no pump size specified).	NE = 117 ML Rate of take: 45 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
670 ir	Sandy Creek	n/a	n/a	Waterharvesting	64.8	168	5	2.39 The taking of water under this authorisation for Waterharvesting purposes is permitted only during those periods when the flow of water in Sandy Creek exceeds 5 Litres per second as indicated by the mark established or to be established by the chief executive. The mark may be altered from time to time by the chief executive to more accurately reflect the prescribed surface flow.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised 'no flow no take' flow access condition. Note no current pump works but original licence was for 75 mm centrifugal pump. 75 mm is not a valid outlet size for such a pump - 80 mm is the std. nominal outlet, not 75mm. The pump rate for an 80 mm pump as	NE = 168 ML Rate of take: 64.8 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.

Licence number	Water source	Annual volume specified on licence (* indicates volume specified via licence condition)	Hectare area specified on licence	Purpose	Rate of take (litres/ s) (* indicates rate already specified on licence)	NE (ML) based on 30 days pumping per year	Access condition for taking water (litres/s)	Existing conditions	Recommended approach to amendment to better specified entitlement	Details for proposed amended licence. Note: l/s used for flow threshold less than 1000 l/s, cubic metres/ s used for threshold 1000 or greater. Note: for the sake of brevity details including licensee name, watercourse name, lot/ plan details for attached land and activity location have not been included below as they are implicit).
									per Sch 9 of the water plan (64.8l/s) used for the purposes of the amendment.	
72.i	Gutchy Creek	12	n/a	Waterharvesting	12.*	n/a	12	2.39 The taking of water under this authorisation for waterharvesting purposes is permitted only during those periods when the flow of water in Gutchy Creek exceeds 12 litres per second as indicated by a mark established or to be established by the chief executive.	Convert to one Any purpose licence with a 12 ML nominal entitlement. Include standardised 'no flow no take' flow access condition.	NE = 12 ML Rate of take: 12 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
72.i	Sandy Creek	n/a	n/a	Waterharvesting	94.9	246	15	1. The taking of water under this authorisation is prohibited when the flow in Sandy Creek on the downstream control falls below 15 litres per second. This flow will be indicated by a mark on a gauge board installed, or to be installed, by the Chief Executive.	Convert to one Any purpose entitlement with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised 'no flow no take' flow access condition.	NE = 246 ML Rate of take: 94.9 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
72.i	Sandy Creek	4*	1	Irrigation, Waterharvesting	2.75.*	n/a	18	1.52 The equivalent volume of water that may be taken under this water licence must not exceed 4 megalitres per water year 2.39 The taking of water under this authorisation for irrigation purposes is permitted only during those periods when the flow of water in Sandy Creek exceeds 8 litres per second as indicated by the 0 mark on the gauge board to be installed at the Kenins Road Creek crossing. The mark may be altered from time to time by the chief executive to reflect more accurately the prescribed surface flow. SPEC01: The taking of water under the authority of this license for waterharvesting purposes is prohibited whenever the flow upstream of the activity site is less than 18 litres per second as indicated by the 'WH' mark on the gauge board to be installed at the Kenins Road Creek crossing. The mark may be altered from time to time by the chief executive to reflect more accurately the prescribed surface flow. 5.42 On each occasion that water is taken under this authorisation for Waterharvesting purposes, the holder must record the meter or measuring device reading, the date and the time at the beginning of the period when take commenced; the meter or measuring device reading, the date and time at the end of the period that take ceased. Such records must be made available to the chief executive at Gympie Office within the time specified by the request.	Convert to one Any purpose licence with a nominal of 4 ML/ annum. Include standardised 'no flow no take' flow access condition. Delete metering condition as the licence is a metered entitlement under the Water Regulation.	NE = 4 ML Rate of take: 2.75 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
72.ir	Jam Tin Creek	n/a	20	Irrigation, Waterharvesting	15.*	39	19	1. The taking of water under the authority of this water licence for waterharvesting purposes is only permitted if a flow of no less than nineteen (19) litres per second is passing downstream of the point of take. To remove any doubt, whilst the licensee is waterharvesting under the authority of this water licence, a minimum flow of nineteen (19) litres per second must pass downstream of the point at which the water is being taken.	Convert to two Any purpose licences - one with a nominal entitlement based on the std approach for conversion of Ha to ML, one for std approach for waterharvesting entitlement with standardised 'no flow no take' flow access condition.	Licence 1 (for Irrigation component); NE = NE determined as per standard approach for 20 Ha irrigation entitlement Rate of take: 15 l/s Purpose: Any Conditions: None Licence 2 (for Waterharvesting component); NE = 39 ML Rate of take: 15 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
72.i	Greens Creek	n/a	n/a	Waterharvesting	12.*	31	24	1. The taking of water under the authority of this licence is permitted only when the surface flow downstream of the pump site exceeds 24 Litres/Second. 2. The Chief Executive may require that a suitable and approved flow measuring device be installed and maintained at the licensee's expense to measure the prescribed flow.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised 'no flow no take' flow access condition. Delete measuring condition as it is meaningless, and metering will be applied via Water Regulation if required	NE = 31 ML Rate of take: 12 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.

Licence number	Water source	Annual volume specified on licence (* indicates volume specified via licence condition)	Hectare area specified on licence	Purpose	Rate of take (litres/ s) (* indicates rate already specified on licence)	NE (ML) based on 30 days pumping per year	Access condition for taking water (litres/s)	Existing conditions	Recommended approach to amendment to better specified entitlement	Details for proposed amended licence. Note: l/s used for flow threshold less than 1000 l/s, cubic metres/ s used for threshold 1000 or greater. Note: for the sake of brevity details including licensee name, watercourse name, lot/ plan details for attached land and activity location have not been included below as they are implicit).
70	Rock Of Ages Creek	n/a	n/a	Waterharvesting	64.8	168	30	2.39 The taking of water under this authorisation for Waterharvesting purposes is permitted only during those periods when the flow of water in Rock of Ages Creek exceeds 0.03 Cubic Metres/Second as indicated by a mark established or to be established by the chief executive, or by other means specified in the letter accompanying this licence. The mark may be altered from time to time by the chief executive to reflect more accurately the prescribed surface flow.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised 'no flow no take' flow access condition.	NE = 168 ML Rate of take: 64.8 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
70	Munna Creek	n/a	14	Irrigation, Waterharvesting	46.3	120	43	2.39 The taking of water under this authorisation for waterharvesting purposes is permitted only during those periods when the flow of water in Munna Creek at the downstream side of Kunst Bridge exceeds 43 Litres per second as indicated by the mark identified by the chief executive.	Convert to two Any purpose licences – with a nominal entitlement based on the std approach for conversion of Ha to ML, one for std approach for waterharvesting entitlement with standardised 'no flow no take' flow access condition.	Licence 1 (for Irrigation component); NE = NE determined as per standard approach for 14 Ha irrigation entitlement Rate of take: 46.3 l/s Purpose: Any Conditions: None Licence 2 (for Waterharvesting component); NE = 120 ML Rate of take: 46.3 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
72	Sandy Creek	n/a	n/a	Waterharvesting	149.3 *	387	60	2.39 The taking of water under this authorisation for waterharvesting purposes is permitted only during those periods when the flow of water in Sandy Creek exceeds 60 litres per second as indicated by the mark identified by the chief executive. The mark may be altered from time to time by the chief executive to more accurately reflect the prescribed surface flow.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised 'no flow no take' flow access condition.	NE = 387 ML Rate of take: 149.3 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
70	North Maroochy River	n/a	n/a	Waterharvesting	64.8	168	60	2.39 The taking of water under this authorisation for Waterharvesting purposes is permitted only during those periods when the flow of water in North Maroochy River exceeds 60 litres per second as indicated by the mark determined by the chief executive.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised 'no flow no take' flow access condition.	NE = 168 ML Rate of take: 64.8 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
72	Kandanga Creek	n/a	n/a	Waterharvesting	299.8	777	76	1. The taking of water under the authority of this licence is prohibited when the residual flow in Kandanga Creek downstream of the activity site is less than 76 litres per second. This flow rate will be represented by the '0' mark on a gauge board to be installed by the chief executive.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised 'no flow no take' flow access condition.	NE = 777 ML Rate of take: 299.8 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
70	Wide Bay Creek	16*	4	Irrigation, Waterharvesting	25 *	65	80	1. The equivalent volume of water that may be taken under this water licence for irrigation purposes must not exceed 16 megalitres per water year. 2.39 The taking of water under this authorisation for waterharvesting purposes is permitted only during those periods when the flow of water in Wide Bay Creek exceeds 0.08 cubic metres per second as indicated by the mark identified by the chief executive. The mark may be altered from time to time by the chief executive to more accurately reflect the prescribed surface flow.	Convert to two Any purpose licences - one with a 16 ML nominal entitlement for the irrigation component, and for std approach for waterharvesting entitlement with standardised 'no flow no take' flow access condition.	Licence 1 (for Irrigation component); NE = 16 ML as per existing condition Rate of take: 25 l/s Purpose: Any Conditions: None Licence 2 (for Waterharvesting component); NE = 65 ML Rate of take: 25 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
72	North Maroochy River	n/a	n/a	Waterharvesting	50 *	130	103	2.39 The taking of water under this authorisation for Waterharvesting purposes is permitted only during those periods when the flow of water in the North Maroochy River exceeds the 0.0 metre mark as indicated by the gauge board established by the chief executive.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Original licensing report indicated that flow was 103 litres per second at the 0.0 gauge board height. Include standardised 'no flow no take' flow access condition.	NE = 130 ML Rate of take: 50 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.
70	Belli Creek	n/a	n/a	Waterharvesting	149.3	387	104	1. The taking of water for waterharvesting under the authority of this water licence is permitted only when the flow at the Cedar Creek Road crossing over Belli Creek adjacent to [redacted] exceeds 0.104 cubic metres per second as indicated by the 0.0 metre mark on the gauge board at this road crossing, or at such other times as the chief executive authorises. The gauge board reading may be altered by the chief executive from time to time to reflect more accurately the prescribed surface flow.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised 'no flow no take' flow access condition.	NE = 387 ML Rate of take: 149.3 l/s Purpose: Any Conditions: The taking of water under this authorisation is permitted only when there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.

Licence number	Water source	Annual volume specified on licence (* indicates volume specified via licence condition)	Hectare area specified on licence	Purpose	Rate of take (litres/ s) (* indicates rate already specified on licence)	NE (ML) based on 30 days pumping per year	Access condition for taking water (litres/s)	Existing conditions	Recommended approach to amendment to better specified entitlement	Details for proposed amended licence. Note: l/s used for flow threshold less than 1000 l/s, cubic metres/ s used for threshold 1000 or greater. Note: for the sake of brevity details including licensee name, watercourse name, lot/ plan details for attached land and activity location have not been included below as they are implicit).
72	Obi Obi Creek	112*	8	Irrigation, Waterharvesting	64.8 *	n/a	165	1.52 The equivalent volume of water that may be taken under this water licence must not exceed 112 megalitres per water year. 2.39 The taking of water under this authorisation for waterharvesting purposes is permitted only during those periods when the flow of water in Obi Obi Creek exceeds 165 litres per second downstream of the pump site as indicated by a mark established or to be established by the chief executive. 1. During the periods when flow is greater than 165 litres per second the licence may be used for either irrigation or waterharvesting, and the area irrigated may be increased to 16 Hectares.	Convert to two Any purpose licences with a sum of nominals no more than 112 ML/ annum - one based on standard approach for conversion of Ha-specified entitlement (based on 8 Ha area of irrigation), the other entitlement based on the balance remaining nominal entitlement. Include standardised flow access condition.	Licence 1 (for Irrigation component); NE = NE determined as per standard approach for 8 Ha irrigation entitlement Rate of take: 64.8 litres/ second Purpose: Any Conditions: None Licence 2 (for Waterharvesting component); NE = (112 minus the NE volume determined for licence 1) Rate of take: 64.8 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when the flow in Obi Obi Creek downstream of the point of take exceeds 165 litres per second.
72	Wide Bay Creek	n/a	n/a	Waterharvesting	149.3	387	170	2.44 The taking of water under this authorisation is permitted only when the flow of water in Wide Bay Creek at the point of the taking is greater than 170 litres per second and must cease when the flow of water in Wide Bay Creek at the point of the taking is less than 170 litres per second.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition.	NE = 387 ML Rate of take: 149.3 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when the flow of water in Wide Bay Creek downstream of the point of take exceeds 170 litres per second.
72	Munna Creek	n/a	n/a	Waterharvesting	64.8	168	180	2.39 The taking of water under this authorisation for Waterharvesting purposes is permitted only during those periods when the flow of water in Munna Creek at the Glen Echo road crossing located approximately 3.5km downstream from [72] exceeds 0.18 cubic metres per second as indicated by the 0.0 metre mark on the gauge board at the Glen Echo road crossing over Munna Creek located approximately 3.5km downstream from [72] or at such other times as the chief executive may permit.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition.	NE = 168 ML Rate of take: 64.8 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when the flow in Munna Creek at the Glen Echo Road crossing exceeds 180 litres per second.
72	Glastonbury Creek	n/a	n/a	Waterharvesting	60 *	155	310	2.39 The taking of water under this authorisation for waterharvesting purposes is permitted only during those periods when the flow of water in Glastonbury Creek at the crossing on Glastonbury Creek Road adjacent to [72] exceeds 0.31 cubic metres per second as indicated by the zero (0.0) metre mark on the gauge board at the crossing on Glastonbury Ck Road adjacent to [72] or at such other times as the chief executive may permit. The gauge board reading may be altered from time to time by the chief executive to reflect more accurately the prescribed surface flow. 5.42 On each occasion that water is taken under this authorisation for waterharvesting purposes, the holder must record the meter or measuring device reading, the date and the time at the beginning of the period when take commenced; the meter or measuring device reading, the date and time at the end of the period that take ceased. Such records must be made available to the chief executive at the Gympie office within 5 days of the chief executive making the request.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition. Delete measuring condition as metering will be applied via Water Regulation if required	NE = 155 ML Rate of take: 60 l/s Purpose: Any Conditions: 2.44 The taking under this authorisation is permitted only when the flow in Glastonbury Creek at the Glastonbury Creek Road crossing adjacent to [72] exceeds 310 litres per second.
72	Myrtle Creek	n/a	20	Irrigation, Waterharvesting	64.8	168	500	1.81 Water taken under this authorisation must only be water that has been impounded under the authority of water licence [72] on Myrtle Creek and water licence [72] on an Unnamed tributary of Myrtle Creek. 2.16 The taking of water under this authorisation for waterharvesting purposes is permitted when the level of water in Myrtle Creek over the top of the concrete weir authorised by water licence [72] exceeds 0.15 metres in depth.	Convert to two Any purpose licences - one based on std approach for conversion of Ha to ML, one for std approach for waterharvesting entitlement. Include condition 1.81 only on the new Irrigation component licence - as it has meaning for that licence but no effect for licence with passflow requirement. Include standardised flow access condition on waterharvest component licence	Licence 1 (for Irrigation component); NE = NE determined as per standard approach for 20 Ha irrigation entitlement Rate of take: 64.8 litres/ second Purpose: Any Conditions: 1.81 Water taken under this authorisation must only be water that has been impounded under the authority of water licence [72] on Myrtle Creek and water licence [72] on an Unnamed tributary of Myrtle Creek. Licence 2 (for Waterharvesting component); NE = 168 ML Rate of take: 64.8 l/s Purpose: Any 2.44 The taking of water under this authorisation is permitted only when the height of water flowing over the crest of the weir on Myrtle Creek authorised by water licence [72] exceeds 0.15 metres.

Licence number	Water source	Annual volume specified on licence (* indicates volume specified via licence condition)	Hectare area specified on licence	Purpose	Rate of take (litres/ s) (* indicates rate already specified on licence)	NE (ML) based on 30 days pumping per year	Access condition for taking water (litres/s)	Existing conditions	Recommended approach to amendment to better specified entitlement	Details for proposed amended licence. Note: l/s used for flow threshold less than 1000 l/s, cubic metres/ s used for threshold 1000 or greater. Note: for the sake of brevity details including licensee name, watercourse name, lot/ plan details for attached land and activity location have not been included below as they are implicit).
70	Tinana Creek	n/a	n/a	Waterharvesting	46 *	119	500	1. The taking of water under the authority of this licence is prohibited whenever the flow at the control weir in Tinana Creek immediately upstream of Missings Bridge is less than 0.500 cubic metres per second as indicated by the 0.6 metre mark on the gauge board at Missings Bridge. The gauge board reading may be altered from time to time by the chief executive to reflect more accurately the prescribed surface flow. 2. The licensee shall record the beginning and end of any pumping period by way of the time and date upon which the pumping is commenced and finished. Such records are to be made available on request to any departmental authorised officer.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition. Delete measurement condition as metering to be applied via Water Regulation if required	NE = 119 ML Rate of take: 46 l/s Purpose: Any Conditions: 2.44 The taking under this authorisation is permitted only when the flow in Tinana Creek at the Bauple East Gauging Station at Missings Bridge (State gauging station 138903A) exceeds 500 litres per second.
70	Duckinwilla Creek	n/a	n/a	Waterharvesting	347.2 *	900	>500	1. Pumping under this license is only permitted when there is a flow over the Town Water Supply weir on the Burrum River. 2. Taking water under the authority of this water licence must only be taken from the riparian frontage of Duckinwilla Creek that was previously described as 70	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition. Delete the land parcel condition.	NE = 900 ML Rate of take: 347.2 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when there is a flow in the Burrum River over the spillway of Burrum Weir Number 1.
70	Duckinwilla Creek	n/a	n/a	Waterharvesting	115.7 *	300	>500	2.19 The taking of water under this authorisation for waterharvesting purposes is prohibited whenever there is no surface flow in the Burrum River over the Town Water Supply Weir.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition.	NE = 300 ML Rate of take: 115.7 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when there is a flow in the Burrum River over the spillway of Burrum Weir Number 1.
70	Myrtle Creek	n/a	n/a	Waterharvesting	347.2	900	>500	1. The taking of water under the authority of this water licence for the purpose of waterharvesting is permitted only when there is a residual depth of flow downstream equivalent to 300 mm	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition.	NE = 900 ML Rate of take: 347.2 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when the depth of flow of water in Myrtle Creek downstream of the point of take exceeds 0.3 metres.
70	Eighteen Mile Creek	n/a	n/a	Waterharvesting	347.2	900	>500	1.81 Water taken under this authorisation must only be water that has been impounded under the authority of water licence 70. 1. The taking of water under the authority of this licence for the purpose of waterharvesting is permitted only when there is a depth of flow downstream from the weir equivalent to 300mm	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition.	NE = 900 ML Rate of take: 347.2 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when the depth of flow of water in Eighteen Mile Creek downstream of the point of take exceeds 0.3 metres.
70	Mary River	n/a	n/a	Waterharvesting	299.8	777	619	2.39 The taking of water under this authorisation for Waterharvesting purposes is permitted only during those periods when the flow of water in Mary River at the first control downstream of the pump site exceeds 0.619 cubic metres per second as indicated by the Zero (0) metre mark on the gauge board at the bridge located adjacent to 70 or at such times as the chief executive may permit. The gauge board may be altered from time to time by the chief executive to reflect more accurately the prescribed surface flow.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition.	NE = 777 ML Rate of take: 299.8 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when the flow in the Mary River downstream of the point of take exceeds 619 litres per second.
70	Teebar Creek	n/a	n/a	Waterharvesting	140 *	363	>1000	2.39 The taking of water under this authorisation for waterharvesting purposes is permitted only during those periods when the flow of water in Teebar Creek at the downstream property boundary of 70 exceeds one (1.0) metre in depth as indicated by the mark on the gauge board installed or to be installed by the chief executive. 1. The Water authorised to be taken under this water licence can be taken only from between 80 metres -120 metres upstream of the downstream property boundary of 70	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include flow threshold condition but consider whether flow threshold could be better specified. (note - flow at 1 m height was never determined when licence was granted - the height was based on an assumed approximate height of water to allow the large pump to operate).	NE = 363 ML Rate of take: 140 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when the depth of flow of water in Teebar Creek downstream of the point of take exceeds one metre.
70	Unnamed Tributary of Six Mile Creek	36	n/a	Waterharvesting	18 *	n/a	>1000	2.39 The taking of water under this authorisation for waterharvesting purposes is permitted only during those periods when the flow of water in Lake McDonald (Six Mile Creek Dam) exceeds Full Supply Level as indicated by flow over the spillway.	Convert to one Any purpose licence with 36 ML nominal entitlement. Include standardised flow access condition.	NE = 36 ML Rate of take: 18 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when there is a flow in Six Mile Creek over the spillway of Lake MacDonald.
70	Munna Creek	n/a	n/a	Waterharvesting	64.8	168	1100	1. The taking of water under the authority of this water licence for waterharvesting purposes is prohibited during those periods when the level of water in Munna Creek falls below E.L. 46.8 metres (assumed datum). This will be indicated by a mark on the gauge board to be established by the Chief Executive. The Chief Executive may alter the specified level from time to time to reflect any change in stream channel conditions.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition based on 1.10 cubic metres per second flow as per the original report on file for grant of licence in 1974 (the report stated that the flow at 46.8 m assumed height was 95 ML/ day (1100 l/s))	NE = 168 ML Rate of take: 64.8 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when the flow of water in Munna Creek downstream of the point of take exceeds 1.10 cubic metres per second.

Licence number	Water source	Annual volume specified on licence (* indicates volume specified via licence condition)	Hectare area specified on licence	Purpose	Rate of take (litres/ s) (* indicates rate already specified on licence)	NE (ML) based on 30 days pumping per year	Access condition for taking water (litres/s)	Existing conditions	Recommended approach to amendment to better specified entitlement	Details for proposed amended licence. Note: l/s used for flow threshold less than 1000 l/s, cubic metres/ s used for threshold 1000 or greater. Note: for the sake of brevity details including licensee name, watercourse name, lot/ plan details for attached land and activity location have not been included below as they are implicit).
70	Myrtle Creek	n/a	n/a	Waterharvesting	219.9	570	2380	2.39 The taking of water under this authorisation for Waterharvesting purposes is permitted only during those periods when the flow of water in Myrtle Creek exceeds a RL of 90.67 as indicated by the gauge board installed.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition based on 2.38 cubic metres per second flow as per the original report on file for grant of licence in 1967 (the report stated that the flow at 90.67m was 84 cusecs)	NE = 570 ML Rate of take: 219.9 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when the flow of water in Myrtle Creek downstream of the point of take exceeds 2.38 cubic metres per second.
70	Mary River	n/a	n/a	Waterharvesting	85 *	220	2750	2.39 The taking of water under this authorisation for waterharvesting purposes is permitted only during those periods when the flow of water in the Mary River exceeds 2.75 cubic metres per second as indicated by the zero (0.0) metre mark on the gauge board located at the bridge over the Mary River on Kilcoy Lane Conondale, or at such other times as the chief executive may permit. The gauge board reading may be altered from time to time by the chief executive to reflect more accurately the prescribed surface flow.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition.	NE = 220 ML Rate of take: 85 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when the flow of water in the Mary River downstream of the point of take exceeds 2.75 cubic metres per second.
70	Mary River	n/a	n/a	Waterharvesting	46.3	120	3700	The taking of water under the authority of this license for water harvesting purposes shall be permitted only when the licensee has notified the Department's representative at Gympie of his desire to pump and has obtained approval. Permission will be granted only when in the flow in the Mary River exceeds the needs of all those entitled to take water from the river and this equates to a flow of 3.70 cumecs (3700 litres/sec) as shown by the mark 1.78 m on the gauge board located at the Miva Gauging Station.	Convert to one Any purpose licence with a nominal entitlement based on the std approach for waterharvesting entitlement. Include standardised flow access condition. Delete the requirement to notify and seek permission of Departmental officer as the condition has never been enforced and is administratively burdensome on licensee and the department.	NE = 120 ML Rate of take: 46.3 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when the flow of water in the Mary River at the Miva Gauging Station (State gauging station 138001A) exceeds 3.70 cubic metres per second.
70	Mary River	400	n/a	Waterharvesting	100 *	n/a	12400	The taking of water under the authority of this water licence is authorised only when there is a flow of water in excess of 12.4 cubic metres per second in the Mary River at the Moy Pocket Gauging Station (State gauging station 138111A).	Convert to one Any purpose licence with a 400 ML nominal entitlement. Include standardised flow access condition.	NE = 400 ML Rate of take: 100 l/s Purpose: Any Conditions: 2.44 The taking of water under this authorisation is permitted only when the flow of water in the Mary River at the Moy Pocket Gauging Station (State gauging station 138111A) exceeds 12.4 cubic metres per second.

Attachment 2: Discussion about the proposed rationale and methodology for licence amendment

1. Nominal entitlement (NE):

Policy paper 3.1 provided that the NE would be based on either:

- For licences with a condition stating the volumetric equivalent, the volumetric equivalent, or,
- (for licence with no specified NE or volumetric equivalent condition) Development of a methodology that considers a variety of matters including modelled water availability, crop water demands, water use efficiency, existing access rights, previous conversions in the plan area and consultation with affected water users.

NE for licences with a condition stating the volumetric equivalent: Five of the licences include a volumetric equivalent condition. All these licences are also multi-purpose licences (for Irrigation and Waterharvesting) as described below. One of the licences (reference number [s.73 irrele](#)) states that the volumetric equivalent only relates to the irrigation component of the licence. Hence the NE for the Waterharvesting component of that licence will need to be determined in accordance with the methodology stated below. For the other four licences the NE will be the value specified in the condition. However, the NE consideration is complicated by the approach to unbundling specified below – for example, licence [s.73 irrele](#) has a 165 litre per second waterharvesting access condition hence it would be unbundled into two licences with the sum of the NE for both licences to be the 112 megalitre volumetric entitlement currently specified by the licence condition.

NE for licence with no specified NE or volumetric equivalent condition: Several different options for determining NE for a licence with no specified NE or volumetric equivalent condition were considered by the project team, taking into consideration the widely varying contents and conditions of the licences. Methodologies for conversion or amendment of waterharvesting licences used in other water plan areas including those in the Murray Darling plan area were also considered, summarized as follows:

Methodologies for conversion or amendment of waterharvesting licences used in other water plan areas:

Plan area, and year of approved methodology	Summary details of waterharvesting licence that were converted	Approach used
Burnett, 2014	<ul style="list-style-type: none"> • 90 licences, some bundled with other purpose • Some self-managed, others take by announcement 	<ul style="list-style-type: none"> • Licences treated equally whether actively used or inactive. • Some converted to water allocation with purpose Any, nominal volume based on the modelled relative share of entitlement volume, volumetric limit is double the nominal volume. • Others retained as licences but amended to purpose Any, nominal entitlement double the individuals share of the MAD. • Rate of take expressed in Litres per second • Conditions based on existing licence conditions with some rationalisation of flow thresholds as required via the ROP amendment.
Baffle, 2009	<ul style="list-style-type: none"> • 10 licences • Variety of access conditions 	<ul style="list-style-type: none"> • Licences treated equally whether actively used or inactive. • Amend licences to include purpose Any • Rate of take in litres per second, daily volumetric limit in ML/ day as per table in water plan • Nominal entitlement determined taking into consideration the licence condition, pump works capacity, intent of licence, and any measured water use information

Border Rivers, 2017 (Upper Weir River)	<ul style="list-style-type: none"> • 10 licences, not bundled with other purpose • Access prescribed via gauge boards at specified reference points 	<ul style="list-style-type: none"> • Licences treated equally whether actively used or inactive. • Convert licence to water allocation with purpose Any, Nominal volume based on the modelled relative share of waterharvesting entitlement volume as per the ROP model • Allocations to be managed under existing water management area or zone
Condamine and Balonne, 2013 (Gowrie Oakey Creek tributary licences)	<ul style="list-style-type: none"> • 7 licences • Self-managed take via individual gauge boards 	<ul style="list-style-type: none"> • Convert licence to water allocation with purpose Any • Inactive licences treated differently to active licence (Active: nominal volume and volumetric limit determined in accordance with existing provisions in plan, Inactive: nominal volume is the mean annual diversion over the simulation period; volumetric limit four times the daily rate of take. • Retain access flow condition stated on the licence

None of the methodologies appeared to provide a complete viable solution to the unique attributes of the Mary water plan waterharvesting licences, although elements were translatable.

On review of the information reviewed the team concluded that a fair and reasonable approach was to consider an NE be based on an estimate of the days per year that a waterharvesting licence holder could reasonably expect to be able to take water – i.e. the pumping opportunity.

Despite the widely varying access condition applying to the licences, perusal of the available historical licence granting information revealed that each licence was intended to provide the licensee with the ability to take water when there was a flow in the watercourse in excess of the normal requirements of other (e.g. irrigation and stock and domestic) water users. Based on the long-term knowledge of Gympie office Departmental staff, it was thought reasonable to assume that waterharvesting water could be taken under each licence 30 days per year. The figure of 30 days per year also aligns with preliminary modelling of area-based licences with no volumetric cap and is considered an equivalent and equitable water access benchmark.

Metered water use data was analysed but not considered particularly relevant - only four of the 42 waterharvesting licences were metered, and one of those already had a specified NE. Usage over the 12 metered water years varied significantly from year to year, and never exceeded the NE that would be given using the above methodology apart from one instance in a particularly dry year.

In addition, 30 pumping days would adequately provide for the water requirements of the one unmetered large long-term active water harvester who has already provided indicative information regarding actual volumes of water taken (s.73 irrelevant information) on the upper Mary River with an estimated requirement of no more than 300 megalitres per annum).

The team noted that such an approach would be supported by the inclusion in the water plan of provisions enabling consideration of a larger NE based on an individual licensee’s demonstrated historic take, as detailed in Policy Paper 3.6. Licensees would also have the option to have the NE considered by the Referral Panel under the Water Act if the submission was consistent with the water plan.

2. Purpose: All licences will have the purpose Any in accordance with policy paper 3.1. This will provide flexibility and recognises that the purpose of use of water taken is effectively an irrelevant consideration once the licence entitlement is properly specified with a NE and other parameters as outlined in this paper.

3. Rate of take: A rate of take, in litres per second, will be specified for each licence. This will provide the licensee with flexibility in terms of what pump works are used to take the water – i.e., they will be exempt from the requirement to obtain development approval under the *Planning Act 2016*. Litres per second is considered an appropriate unit as it is simple to understand for the licensee seeking to purchase an appropriate pump and matches

the relatively small pump rates applying to the licences. In addition, 20 of the licences already have a rate of take expressed in litres per second – there is no rationale to change that specification for those licences. Rate of take is to be determined as specified in Policy Paper 3.6.

4. Unbundling of multiple purpose (Irrigation and Waterharvesting) licences:

There are 11 such multiple-purposes licences. Unbundling of these licences is recommended where the licenced purposes have clearly separate access conditions - for example the water taken for irrigation purposes can be taken at any time, while the water for waterharvesting purposes can be taken only when there is a certain flow at a specified location. In its bundled form such a licence is confusing for the licensee and makes water accounting and compliance challenging if not impossible given the self-managed nature of the waterharvesting entitlement take. Unbundling of such licences where appropriate will result in clearly-defined licences that can be clearly understood by the licensee and managed by the department.

There is not considered to be any rationale for unbundling those multi-purpose licences with purposes that have the same access conditions.

5. Licence condition rationalisation:

5(a) Flow access conditions:

The licences have widely varying flow rates when waterharvesting may commence – i.e.:

- 7 of the licences have no specified flow access conditions.
- 2 include a 'no take if no surface flow' access condition.
- 15 include flow access conditions of less than 150 litres per second (6 have flow access conditions of less than 20 litres per second)
- 5 include flow access conditions of between 150 and 500 litres per second
- 13 include flow access conditions greater than 500 litres per second.

In addition, the flow access conditions vary in the way that the flow is specified – i.e.:

- 3 of the licences specify the flow access via an assumed height datum on a gauge board at the pump site rather than an actual specific depth of water. Fortunately, the original licensing reports for these indicate the estimated flow at the specified gauge board height – hence the licences could be amended to include a stream flow rate.
- 4 of the licences specify the flow access condition via a depth of water flow at a certain location. It is noted that if required a flow could be determined for the specified depth of water using standard hydrographic techniques (it was estimated for the purpose of the above flow access condition analysis)
- 10 of the licences specify the access flow in cubic metres per second
- 13 of the licences specify the access flow in litres per second
- The flow access conditions are particularly inconsistent and confusing in their wording – e.g. some refer to flows at the point of take, some downstream, and some upstream of point of take; and they inconsistently describe whether the flow is a passing flow or a simple flow threshold.

Given the above matters, the following is recommended regarding rationalisation of the flow access conditions

- **For licence without a specified flow access condition:** Do not apply flow access condition. This is consistent with the general (albeit unwritten) approach of not amending licence conditions unless there is a particular requirement to do so in the water plan. The licences without access conditions can currently lawfully take water under any flow conditions and there is no rationale to change that. They are no different to most of the many Irrigation purpose licences in the water plan area - there is no intent to apply flow access conditions to those licences.
- **For licence with a specified flow access condition of less than 150 litres per second or a 'no take if no surface flow' access condition.** A flow of less than 150 litres per second is negligible compared to what is generally

considered applicable to a waterharvesting entitlement. In practical terms, such a flow is physically small, and measurement and enforcement of such flows is challenging and impractical. It is not reasonable to expect a licensee to properly manage take in compliance with such specific small flow events. In practical effect such a small access flow condition would be no different to a simple condition requiring that the licensee not stop flows passing downstream. Hence it is recommended that the flow access conditions for this group of licences be replaced with a 'don't stop flow' condition from the standard 'Schedule A' WMS licence list. Standard condition 2.44 is probably suitable as it provides for the inclusion of the required detail – e.g. 'The taking of water under this authorisation is permitted only when *there is a flow of water in the watercourse and the taking does not prevent the flow continuing downstream of the point of take.*'. This approach will greatly simplify the currently confusing conditions on 15 of the waterharvesting licences.

- **For licence with a specified flow access condition of 150 litres per second or more:** It is reasonable to assume that a flow of 150 litres per second or more is a meaningful value for waterharvesting licence take, particularly in a small watercourse – i.e. it can presumably be measured to a reasonable level of accuracy and the licensee could reasonably be expected to manage their take in accordance with the licence accordingly. Hence it is recommended that the existing flow access conditions for this group of licences be replaced with standardised conditions expressing the specified flow in a consistent manner - e.g. where possible express access flow in litres or cubic metres per second rather than a gauge board height or height of flow and refer to flow at Departmental gauging station where practical. Note that a height of flow reference may still be appropriate for those licences that specify a height at a well-known landmark that is unlikely to change dimensions (e.g. the Burrum weir no. 1 or Lake MacDonald). This approach will provide for greater clarity about the licence requirements for the individual licensees and an enhanced ability for the department to check licence compliance if required.

Currently only three of the licences have a flow access condition referring to a flow at a Departmental gauging station (GS). Opportunities for expressing the flow access conditions on the other waterharvesting licences in terms of a flow at a Departmental GS were explored. Analysis of the licence locations showed that there were limited opportunities to use Departmental GSs for access conditions – i.e., as per the recommendations above, only 14 of the licences will require reference to a specific flow in the watercourse – i.e., the other licences will either not require a flow access condition or be subject to a 'don't stop flow' condition. Only 6 of the 14 licences seem to provide any opportunity to be correlated to a GS – the other licences are either located at sites that are too distant from any GS to provide a meaningful correlation to GS or refer to a height of flow at a non-departmentally owned weir.

Given the limited likely opportunities and the project time and resourcing constraints it is recommended that further work to tie in the access conditions to GS not be undertaken. Further work could be done in the future outside of the water plan amendment process via individual amendment of licences if desired.

Attachment 3 shows the approximate locations of the waterharvesting licences and GS in the plan area.

5(b) 'Other' conditions to be rationalised. As noted above, the waterharvesting licences are subject to other conditions apart from those discussed above, as shown in Attachment 1. Case by case analysis of the other conditions was undertaken to determine what could be rationalised in accordance with policy paper 3.4. The principles applying to the licence condition rationalisation are well articulated in policy paper 3.4 and provide adequate guidance for making recommendations for rationalisation of the other conditions and are described in Attachment 1 of this paper.

Attachment 1 provides details of the specific amendments proposed for each waterharvesting licence in the plan area.

Attachment 3: approximate locations of the waterharvesting licences and GS in the plan area

