



QUEENSLAND FARMERS' FEDERATION

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Submission

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GABORA Water Plan Coordinator
Water Policy
Department of Natural Resources and Mines
PO Box 15216
CITY EAST QLD 4002

Via email: wrpGreatArtesianBasin@dnrm.qld.gov.au

Dear Sir/Madam

Re: Submission on Draft Water Plan (Great Artesian Basin and Other Regional Aquifers) 2017 and accompanying Draft Water Management Protocol

The Queensland Farmers' Federation (QFF) is the united voice of intensive agriculture in Queensland. It is a federation that represents the interests of 15 of Queensland's peak rural industry organisations, which in turn collectively represent more than 13,000 primary producers across the state. QFF engages in a broad range of economic, social, environmental and regional issues of strategic importance to the productivity, sustainability and growth of the agricultural sector. QFF's mission is to secure a strong and sustainable future for Queensland primary producers by representing the common interests of our member organisations:

- CANEGROWERS
- Cotton Australia
- Growcom
- Nursery & Garden Industry Queensland
- Queensland Chicken Growers Association
- Queensland Dairyfarmers' Organisation
- Burdekin River Irrigation Area Irrigators
- Central Downs Irrigators Ltd
- Bundaberg Regional Irrigators Group
- Flower Association
- Pioneer Valley Water Cooperative Ltd
- Pork Queensland Inc.
- Queensland Chicken Meat Council
- Queensland United Egg Producers
- Australian Organic

QFF welcomes the opportunity to provide a submission on the Draft Water Plan (Great Artesian Basin and Other Regional Aquifers) 2017 and accompanying Draft Water Management Protocol. QFF provides

The united voice of intensive agriculture



this submission without prejudice to any additional submission provided by our members or individual farmers.

QFF's submission for the Statement of Proposals for the preparation of the Plan noted that our interest was primarily on the increasing use of the Great Artesian Basin and Other Regional Aquifers (GABORA) by irrigated agricultural industries and intensive animal industries located mainly along the eastern parts of the Basin. However, the draft plan shows that there are now only small quantities of unallocated water reserves available from very deep GAB aquifers below the Darling Downs and in surrounding areas. There are also limitations placed on the trading of water into these aquifers from surrounding GAB aquifers. This means that the GAB will not be a significant source of additional water for future agricultural development in the Darling Downs region. The cost of drilling for reserves in the deep aquifers will deter all agricultural use other than possibly the intensive livestock industries. Trading of existing entitlements will involve detailed investigation to locate acceptable entitlements and to comply with necessary regulations for the siting and installation of new bores. However, analysis for the preparation of the plan has failed to take account the importance of industries that take small amounts of water but are important within regional economies and have potential for further development. Case examples include the egg producing regions of the Darling Downs and industries that process agriculture production.

This submission will address the detail aspects of the draft plan and water management protocol. It is also important to recognise that while there has been significant new knowledge applied in the preparation of this second-generation plan, there is still significant work to be done before the next review to implement the a more comprehensive water planning framework. For example, information about existing entitlements is limited so the draft plan does not provide for the creation of tradable water allocations. However, arrangements are defined for the relocation of licences within and across defined areas. Metering of licences for agricultural use is to be introduced over the 10 year term of the new plan.

The following will address key aspects of the draft plan and comment on related rules defined in the WMP.

1. *Hydrogeological assessments*

These assessments provide important new information on the three main GAB Basins: Carpentaria Basin, Eromanga Basin (including part of the Galilee and Cooper basins) and the Surat Basin (including the Clarence Moreton and Mulgildie basins). The assessments provide a better definition of the aquifer groups within each of the above basins to facilitate the development of an improved planning framework (see Item 2 below). Water use from source aquifers has also been investigated to develop trends in historical use. Average groundwater use profiles were prepared to allow development of a regional scale water balance for each aquifer group for 1900 (pre-development) and 2015. These profiles and water balance were already developed for most of the Surat Basin by the Office of Groundwater Impact Assessment (OGIA).

Coal seam gas water extraction (mainly associated water) in the Surat Basin has increased significantly over the last 10 years now accounts for 44% of water extraction. Volumetric licences

(agriculture use mainly) extracts 35% and stock and domestic 21%. The hydrogeological assessments show that groundwater levels are declining in some aquifers within the Surat Basin, such as the Hutton sandstone. In most other parts of the GAB, groundwater levels are stabilising.

2. Plan area and water to which the plan applies

The revised groundwater units (aquifer groups) and sub areas provide a much clearer description of the aquifers to be managed as groundwater units and the division of these units into sub areas for the application of local rules. The Basin is a complex group of aquifers underlying a large area of Queensland. This revised system makes it easier to understand the issues being addressed by the plan and the new aquifers that are now included in the draft plan. However, the groundwater units and sub areas still cover significant areas which make management in local areas difficult; e.g. proponents investigating relocation opportunities may find it difficult to locate suitable bores.

3. Outcomes for management and allocation of water in the plan area

The inclusion of outcomes to address the following issues is supported:

- a) Maintenance and if practical increasing water pressure in aquifers
- b) Making water available for future development and social and cultural activities including access for Indigenous peoples
- c) Encouraging the efficient use of water through the implementation of water tight delivery systems
- d) Facilitating the operation of water markets and temporary or permanent movement of water
- e) Achieving Items b and d given the limited opportunities for making water available for future development in areas such as the Surat Basin. It is also expected that of the growth in the temporary or permanent movement of water will be slow in these areas due to availability of information regarding existing bores particularly metered use.

4. Strategies for achieving outcomes

Exceptions to the cap on the average volume that may be taken in the plan area are supported. It is noted that this exception includes:

- a) Amending a licence for the implementation of water tight delivery systems and make good obligations or conditions
- b) Grant of a licence to take a percentage of saved water from the installation of water tight delivery systems
- c) Provision for take of unallocated water
- d) Water sharing rules made under the water management protocol.

5. GAB Socio-economic report

This report focuses on the major industries for the wider Basin and the significance of their use of water. Page 37 states 'Laying hens are an insignificant water use in the GAB management area and have been omitted from this analysis.' However, the Department of State Development advises that the Darling Downs and the South West region is nationally recognized as a major logistics and processing hub for a range of important agricultural industries and related food supply chains, based

on existing regional assets and competitive advantage. The meat processing industries, intensive animal industries, vegetable processing and second stage food manufacturing industries are already heavily concentrated in the region, and have scope for significant further expansion provided key businesses in these supply chains have access to relatively small quantities of high security water. The egg industry in the region as an example has a farm gate value of \$113 million and uses 799 ML of water. This equates to a return of \$141,000 per ML at the farm gate.

Industries such as the egg producing industry is important to the current regional and state economy and for future development of the region. Accordingly, industries of this nature must be considered in future GAB planning. This is particularly the case because water availability from all sources (surface, sub artesian and artesian) is very limited in this region.

6. Unallocated water

This division makes provision for unallocated water to be held in either a general reserve (water for any purpose including agricultural development) or a state reserve (e.g. for coordinated state development projects, a project of regional significance, water for town water supplies, electricity generation project) or an Indigenous economic reserve. Schedule 4 shows the volumes of unallocated water that may be granted from these reserves for groundwater units or sub areas. Unallocated water has only been made available in less developed aquifers. For example, there are no reserves of water from the Eastern Downs Marburg aquifer in the Hutton groundwater unit given the increase in take that has occurred over the last 10 years.

The general reserve allocations that are likely to be of interest for intensive agriculture use would be the in the following groundwater units and sub areas:

- a. Springbok Walloon groundwater unit:
 - Southern Clarence Moreton Walloon (from the range east to Ipswich and down to the border) – 425 ML
- b. Hutton groundwater unit:
 - Crows Nest Marburg (north of Marburg) and Southern Clarence Moreton Marburg (below the Southern Clarence Moreton Walloon aquifer) – 425 ML
- c. Precipice groundwater unit:
 - Eastern Downs Precipice (below Dalby, Toowoomba and Warwick area) and Surat Precipice (covers a large from west of Dalby to east of Charleville and Cunnamulla) – 840 ML
 - Crows Nest Woogaroo (below the Crows Nest Marburg aquifer) and Southern Clarence Moreton Woogaroo (below the Southern Clarence Moreton Marburg aquifer) – 425 ML.

The 840 ML from the General Reserve in the Eastern Downs Precipice and Surat Precipice aquifers will be costly to access because of the depth of the resource and the likelihood that the water will require treatment. However, intensive animal and agriculture processing industries are likely to have an interest in this resource into the future. There are also significant reserves (1,275 ML) held in aquifers of varying depths in the Esk Lockyer Valley region and south of the border. These

reserves will be very important for future development in the south-eastern GAB regions as the State Reserve for aquifers in this area is only 250 ML.

The remainder of the General Reserve (3,505 ML) is held in western and northern aquifers. A portion (880 ML) is assigned to the Indigenous Economic Reserve in aquifers throughout the Basin.

The State Reserve has 16,750 ML in aquifers over a wide area of central and western Queensland for mining and energy development and local government use. The remaining 11,860 ML is held in the Gulf and Cape York region.

The process for granting unallocated water is defined in the draft plan, including matters that the chief executive must consider in granting an allocation such as the impact on the flow of water to groundwater-dependent ecosystems and impact on groundwater pressure. These provisions are like those in other water plans.

Given the interest that there will be in the portion of the General Reserve in the south-eastern part of the Basin, there should be adequate assessments made of developmental needs and the markets that would have an interest in these reserves before releases are made.

7. *Limits on the taking and interfering with water*

This allows a person to take or interfere with water in a plan area if it is for the following purposes (s.101 of the Water Act refers) the:

- a) For domestic purposes from bores with a water tight delivery system
- b) For stock purposes with a water tight delivery system in nominated groundwater units and sub areas subject to restrictions under the Plan
- c) For projects for the economic and social benefit of the Indigenous Community wholly managed by the community
- d) Prescribed activities under the Water Regulation
- e) For water bores for monitoring
- f) For water permits, water licences or authorisations under section 53 and 54.

The conditions under a. and b. are supported in terms of the implementation of measures to expand the capping and piping.

The conditions c. to e. are subject to maximum limit of 2 ML per water year and rules in the water management protocol to protect flows of water to groundwater dependent ecosystems. This means that the take of water for prescribed activities involving mines, dairies etc. can be no more than 2 ML in any water year. It is unclear what the impact of this measure will be for agriculture given that volumetric licences are currently unmetered.

All these measures reflect a tightening of control over the take of water without a licence for all industries using the GAB.

8. Requirement for water tight delivery systems for water bores

The draft plan provides for water licences to require the implementation of watertight delivery systems within 10 years. These provisions are supported but it is understood that only a small number of bores will be affected in the eastern parts of the GAB.

9. Protection of flows of water to groundwater-dependent ecosystems (springs) and existing entitlements

Protection for springs - A cumulative drawdown from 2007 of less than 0.4 m is required for all new licences for bores (for unallocated water and for stock and domestic purposes) for seasonal water assignments and for amendment or relocation of licences. This also applies for newly defined ecosystems from 2017.

The Water Management Protocol also provides for:

- g) Groundwater-dependent ecosystems register
- a) Determination of the long-term drawdown
- b) Prescribed activities and Indigenous community projects must be located 1km or more from a spring
- c) New stock bores are not allowed within 5km of springs, but there are no restrictions on domestic bores
- d) Where existing licences are within 5km of a spring no new licences can be approved closer to the spring and the chief executive can seek the amendment of an existing licence if this does not limit the water that may be taken from the existing bore
- e) The chief executive can undertake hydrogeological assessments to estimate the impact on springs from the take of water.

Protection of existing entitlements - New licences can also be approved if the drawdown in the location of existing licences is not more than the maximum drawdown. The draft plan also provides for the Water Management Protocol to determine the minimum separation distances from existing licences. Attachment 5 show these distances in kilometres for groundwater units and sub areas. The chief executive can undertake hydrogeological assessments to estimate drawdown.

It is understood that DNRM proposes to review set back distances for artesian bores and cumulative protection arrangements for bores as is to be implemented for springs. This may mean a change to the 5km limit in the current Plan or an amendment of the Water Management Protocol. These investigations must be subject to full consultation.

These requirements will also have a significant impact on where new bores can be established. Proponents of new bores must contact DNRM for advice about where new bores can be located in defined areas. This process of investigation for each new bore, while necessary, will mean that each bore relocation will take time and involve cost for investigations. The process must be kept under review and effort made to improve the availability of information to make it easier to identify areas that have scope to take additional bores.

10. Implementing volumetric licences

The draft plan provides a period of 10 years to implement volumetric limits for licences in areas such as the Mulgildie sub area. The matters that the chief executive must consider are similar to provisions for new licences for unallocated water held in reserves. These provisions are supported.

11. Amendment of water licences to implement watertight delivery systems

These draft provisions including the incentive to grant water licences for water saved from the implementation of these delivery systems are supported. It is hoped that this initiative will encourage the extension of these delivery systems.

12. Amending water licences for make good obligations or make good conditions

These provisions define a process for amending water licences to implement make good requirements by allowing deepening an existing bore or construction of a new bore to gain access to different aquifers. This is a necessary change as the existing plan has no measures to 'make good' impacts of resource industry activities.

It is unclear from the plan however what provisions have been made in targeted aquifers for volumes required to make good. For example, if CSG development proceeds in the eastern parts of the Darling Downs are there adequate reserves to 'make good' impacts?

13. Existing taking of water from bores in particular areas is authorised

This provision provides for the licencing of bores that are not licenced for various reasons; e.g. licencing of bores in the aquifers for non-stock and domestic use to the east of the Great Diving Range and bores for stock and domestic use that are now required to have a licence by the draft plan. This provision is supported.

14. Implementing and amending the plan

The Water Management Protocol is to address the following:

- a. *Rules and procedures for protecting flow of water to groundwater-dependent ecosystems and existing entitlements* – see comments under Item 8 of this submission
- b. *Rules for relocating water licences* – these rules provide that trading can only occur for licences that have a volumetric limit and are metered in accordance with the Water Regulation 2016. Licences can be relocated within aquifers (sub areas) of groundwater units and between aquifers, including deeper aquifers where there is less development and lower usage. However, restrictions do apply for the movement of licences into and out of specific zones that have high levels of use. For example, relocations are permitted within and out of the Eastern Downs Marburg aquifer of the Hutton groundwater unit, but licences cannot be relocated into this aquifer. The same applies for Eastern Downs Springbok Waloon aquifer, which is lies above the Eastern Downs Marburg aquifer.
- c. *Water sharing rules* – these rules also only apply to licences that have a volumetric limit and are metered in accordance with the Water Regulation 2016. The rules provide for a maximum authorised volume that may be taken in any year which includes a carry-over of the unused volumetric limit from one year to the next up to a maximum of two times the volumetric limit.

Water accounting rules allow the accumulation of carry-over from any number of previous years up to the volumetric limit. These rules are supported.

- d. *Seasonal water assignment rules* – these rules reflect the water relocation rules.
- e. *Performance assessment* – provides for monitoring of groundwater pressure and other matters and groundwater-dependent ecosystems with reporting every three years. Performance reporting on these issues and the implementation of the overall plan is to occur every 5 years.

The implementation of the relocation rules and seasonal water assignment rules need to be monitored to ensure that any unnecessary impediments to the movement of water are acted upon. Monitoring will be particularly important in those aquifers where relocation is the only option for development. The five-yearly performance reporting covers this need; however, it is considered that this issue should be investigated more regularly – say every three years. It should also be recognised that this issue will require investigation for input to decisions regarding release of the General Reserve.

Implementation of metering also should be reported on more frequently. The progressive expansion of metering for non-stock and domestic entitlements will be important for the implementation of the plan and particularly for the implementation of licence relocation.

This scope for this review of the GAB plan has been limited to some extent by availability of data. Hence it has been necessary for planners to be cautious in trying to implement a comprehensive planning framework. There is also the issue that the plan covers such a wide area. In this respect the socio-economic investigation has failed to look carefully at the implications of water availability in regional areas such as the southeast of the GAB region. Planning for the release of unallocated reserves must take into account the value of reserves for future development in this region, and effort has to be made to support the relocation of bore entitlements in this area, including the rollout of metering.

If you have any further questions regarding this submission, please contact Ian Johnson at ian@qff.org.au.

Yours sincerely

Travis Tobin
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