Progress update on Carnarvon Ministerial Advisory Committee

# Final Report Recommendations 30 June 2016



# Carnarvon Ministerial Advisory Committee Final Report Progress Report on Recommendations – as at 30 June 2016

NOTE: In this document:

- Gascoyne Water has been used when referring to the Gascoyne Water Cooperative and / or the Gascoyne Water Asset Mutual Cooperative.
- Committee has been used when referring the Carnarvon Ministerial Advisory
   Committee

#### CARNARVON MINISTERIAL ADVISORY COMMITTEE FINAL REPORT RECOMMENDATION

#### THEME 1: Upgraded and integrated water supply systems

Optimising and improving the equity and reliability of the irrigated water supply to the Carnarvon horticultural district requires infrastructure upgrades and integration of the whole irrigation water supply system.

Recommendation 1 – Equity of	Progress Report: Initiated
Supply (p17)	Gascoyne Water fully supports the principle of equity of
Responsible Organisation:	supply. However, it proposes to implement it in a more
Gascoyne Water	flexible way than that recommended by the Committee. The
The Committee recommends the definition of 'equity of supply' be adopted to facilitate the development of service level agreements with growers and the design and installation of infrastructure necessary to support this outcome – particularly during periods of peak demand.	recommendation relied largely on flow control at all grower off-takes to achieve equity of supply, particularly for growers at the eastern end of the distribution system.
	Gascoyne Water believes this recommendation is too restrictive and would inhibit activities such as water trading – a matter that needs to be actively encouraged. It would also limit the capacity to deliver water to growers when they have specific periods of high demand and water is available.
	Gascoyne Water has engaged engineering consultants to advise on options for methods and equipment for establishing equitable levels of service to all customers.

CARNARVON MINISTERIAL ADVISORY COMMITTEE FINAL REPORT		
R	ECOMMENDATION	
Recommendation 3.1 – Gascoyne	Progress Report: Well Progressed	
Water Infrastructure (p19)	Air Bleed Valves	
Responsible Organisation: Gascoyne Water	Gascoyne Water implemented a program of replacing seals and fully refurbishing and reintroducing air bleed valves to all	
The Committee recommends that the following improvements to the existing system owned and operated by Gascoyne Water be implemented:	services. Work for all the 185 current services was completed at the end of May 2016. <b>Complete</b>	
a. The existing distribution irrigation	Isolation valves	
pipeline, also referred to as the Gascoyne irrigation pipeline, requires additional air bleed valves and section valves to be installed to allow sections of the irrigation pipeline to be serviced without shutting down and bleeding the entire pipeline. <b>Complete</b>	Gascoyne Water has reviewed the requirement for, and potential location of, isolation valves as part of developing risk management plans throughout the distribution system. The risk plan considered the volume of water required to be evacuated to affect a repair, the inconvenience caused to growers caused by a disruption of supply in a section, allowing 24 hours for a repair and the cost of installing additional isolation valves. The risk assessment was completed in February 2016 and identified that no further valves are required. <b>Complete</b>	
b. Installation of additional	Development of Gascoyne Water's northern borefield	
production bores in the existing Gascoyne Water northern borefield is required to bring peak flow up to 183 litres per second including bores for stand-by. This will allow abstraction of the full licence volume of 3.6 gigalitres per year and will increase peaking capacity to a factor of 1.6, ultimately allowing increased supply to growers and an improved level of service during peak supply periods.	The northern borefield currently has a peak capacity of 128 litres per second from 10 production bores. With the assistance from the Gascoyne Food Bowl Initiative, Gascoyne Water plans to equip five extra production boreholes, and bring these into production by October 2016 to provide an additional 50 litres per second. This takes peak capacity up to 178 litres per second as well as providing greater flexibility to rotate pumping from bores.	
	In addition Gascoyne Water has nearly completed the process to take over the Water Corporation site in the river known as GP1. Initially this will be for a sand spear, but based on the history of this site, Gascoyne Water will apply for a production bore licence. The sand spear could produce 60 litres per second during river flow periods and 20 litres per second as a production bore. Testing of this site will commence in July or August 2016.	

	CARNARVON MINISTERIAL ADVISORY COMMITTEE FINAL REPORT	
	R	ECOMMENDATION
<ul> <li>c. Repair and enhancement to telemetry systems to ensure full and stable operation (Completed) and integration of the northern borefield into the overall system (see Recommendation 5).</li> </ul>	Supervisory Control and Data Acquisition (SCADA)	
	The installation of telemetry to 10 production bores in the northern borefield, that was completed in October 2015 continues to perform well. <b>Completed</b>	
	All member service SCADA was re-commissioned in early November 2015. This is used to monitor volumes and flows within the distribution main. Repairs to all instrumentation destroyed by a cyclone in March 2015 was completed by end of May 2016. <b>Completed</b>	
		Integration of the Gascoyne Water and the Department of Agriculture and Food and Water Corporation bore SCADA in Subarea B–L will occur once these systems are run by a single entity.
		Flow Meters
	Gascoyne Water is in negotiations with the supplier Bermad Technologies to rectify problems with grower flowmeters. Some parts for 31 meters have been replaced under warranty. Gascoyne Water has an ongoing project to review options to implement better and cost effective grower metering.	
	Recent updating of SCADA reporting, improved communication reliability, up skilling the knowledge to a range of staff and contractors, carrying critical spares and synchronization of customer and production meter readings has improved operation and management of the system.	

CARNARVON MINISTERIAL ADVISORY COMMITTEE FINAL REPORT	
RECOMMENDATION	
Recommendation 3.2 – Water	Progress Report: Initiated
Corporation – southern borefield collector main (p19)	Southern borefield collector main
Responsible Organisation: Water Corporation	The Water Corporation project will commence in late 2016 for the replacement of pipe for the first 24 kilometres (0– 24 kilometres) of the southern borefield collector main owned
The Committee recommends that the Water Corporation's southern borefield collector main should be progressively replaced in accordance with the Water Corporation's current replacement planning.	and operated by the Water Corporation. The project is estimated to be completed by mid-2019.
Recommendation 5 – Ultimate	Progress Report: Initiated
integration of the irrigation scheme (p21)	The Committee's report recommends Option 1 of the GHD report as the preferred configuration for an integrated
Responsible Organisation: Gascoyne Water, Water Corporation and Department of	irrigation supply. Whilst this recommendation is supported in principle, it will be subject to confirmation of the financial impacts and future funding arrangements.
Agriculture and Food The Committee recommends the infrastructure configuration outlined as Option 1 of the GHD report as the preferred engineering option for the scheme.	GHD (June 2016) has completed two reports describing the current (base case) and proposed infrastructure network. These reports will form a basis of the proposed integrated system to be implemented and managed by the selected single-entity organisation, as identified from the single entity governance review process.
	In the meantime any upgrade works undertaken by both Gascoyne Water and the Water Corporation will be consistent with the longer-term objective.

#### THEME 2: Improved Gascoyne Water governance and viability

The Committee recognises the need to put in place actions to build the good governance, capability and future viability of the cooperatives – Gascoyne Water. The improved capacity of Gascoyne Water dovetails into the question of the preferred bulk water supplier for the irrigation system, as the Committee has recommended that Gascoyne Water may be the bulk supplier based on its demonstrated performance against agreed criteria.

Recommendation 6.1 – Confirming	Progress Report: Initiated
a single bulk supplier (p23) Responsible Organisation: Department of Water The Committee recommends that the process be commenced to confirm a single bulk supplier for irrigation water in Carnarvon. This supplier should be either the Water Corporation or Gascoyne Water.	This recommendation was not accepted, as worded, by the Government, pending further investigations of additional governance options for a single entity to provide both bulk water and irrigation distribution services.
	Another potential supplier, a new Government-owned water utility, was identified and will be assessed through the governance review, along with the existing cooperative model, the Water Corporation and a Water Corporation subsidiary
	Marsden Jacob Associates completed a review of the single entity options on 21 June 2016. An addendum to the report to make recommendations on criteria for how an 'Improved Cooperative' could be assessed and criteria to measure its success was completed in July 2016.
	The recommended governance option and its implementation will be part of stakeholder consultation to be undertaken as part of the development of the Gascoyne Master Plan.
Recommendation 11 – Full cost recovery versus subsidies (p31)	Progress Report: On Hold
Responsible Organisation: Department of Water	On hold until completion of the single entity governance review. While this recommendation is supported in principle, it will
The Committee recommends that any level of financial assistance offered should be determined by the Government and be provided in line with Gascoyne Water meeting agreed performance outcomes.	also be subject to confirmation of the financial impacts, futur funding arrangements and community consultation during development of the Gascoyne Master Plan.

RECOMMENDATION		
Recommendation 2 – Development	Progress Report: Initiated	
of a Level of Service to growers (p18) Responsible Organisation: Gascoyne Water The Committee recommends that Gascoyne Water defines the level of service and put in place service level agreements with its members as a	Gascoyne Water is committed to providing the highest level of service achievable to both members and other customers.	
	Gascoyne Water has prepared a revised customer contract that sets out the terms and conditions and obligations for the supply of irrigation water to the Gascoyne Water Cooperative members and Coral Coast customers. The principle of equity of supply is a fundamental inclusion. It has been circulated to growers for comment.	
matter of priority.	Issues requiring further work include:	
	<ul> <li>flow control and flow measurement – establishing the most cost effective and reliable means of managing flow rates at customer off takes will be part of the engineering assessment of the equity of flow solution. It is anticipated that once the best solution for both of these issues is established Gascoyne Water will implement a project to install the required equipment and modify customer service plumbing and valves; and</li> <li>on farm storage – Gascoyne Water will expect that customers have sufficient on-farm storage to meet their businesses needs for a 24 hour period. Facilitating training opportunities and providing information on funding opportunities for members to implement water management strategies will be a key part of a suite of measures to be considered by the Gascoyne Water Board to encourage growers to increase their on-farm storage.</li> </ul>	
Recommendation 6.2 – Establish a deed of agreement with associated performance criteria (p25)	Progress Report: Initiated On hold until completion of the single-entity governance	
Responsible Organisation: Department of Water	review. However, should Gascoyne Water be designated as the single bulk supply and distribution entity no transfer of assets	
The Committee recommends that at present it would not be appropriate to designate Gascoyne Water to be the single bulk water supplier. However the Committee recommends that a procedure be put in place to facilitate the development of skills, capacity and experience with the intent of it being the bulk supplier in the future.	should take place until such time there is confidence in its long-term financial and operational success.	
	Marsden Jacob Associates completed a review of the single entity options on 21 June 2016. An addendum to the report to make recommendations on criteria for 'Improved Cooperative' could be assessed and criteria to measures its success will be completed in July 2016.	
A rigorous and regular assessment of Gascoyne Water's progress is required. At no stage should transfer of assets occur unless there is confidence in the long-term financial and operational success of the new scheme management. This process could take two to five years.		

Recommendation 10 – Financial	Progress Report: On Hold
viability of the Cooperatives – Gascoyne Water(p31)	The Government response to this recommendation was that the current charges levied by Gascoyne Water do not reflect
Responsible Organisation: Gascoyne Water	the actual cost of water. Any proposal for further financial assistance from the Government will only be considered after
It is recommended that Gascoyne Water implement price structures (increases) that reflect actual take up	finalisation of the single entity governance review and community consultation during development of the Gascoyne Master Plan.
of Gascoyne Food Bowl Initiative water to: • recover all costs associated	Implementation of the Gascoyne Food Bowl Initiative expansion, over the next few years, should bring economies of scale and help minimise water price increases.
<ul> <li>with the diligent operations and maintenance of the scheme; and</li> <li>collect sufficient monies to cover the cost of all future asset renewals of all assets over the asset life.</li> </ul>	Currently Gascoyne Water considers it produces and distributes its own water profitably after consideration of capital expenditure, operating expenses, administration/overheads and depreciation/replacement provision and any increases in water prices to growers should not be more than CPI increases. Any review of pricing schedules is awaiting the outcomes of the review of single entity options.

#### **THEME 3:** Commitment to the expansion of the Carnarvon horticultural industry

The Government is committed to a productive and sustainable irrigation industry in Carnarvon into the future. The Government is committed to the original intent of the Gascoyne Food Bowl Initiative to expand the horticultural industry through releasing an additional 400 hectares of new horticultural land linked to providing up to four gigalitres per year of additional water.

Recommendation 7 – Ownership of	Progress Report: On Hold
Gascoyne Food Bowl Initiative borefield assets (p27) Responsible Organisation: Department of Water and Department of Agriculture and Food The Department of Agriculture and Food will not be the long-term owner or operator of the Gascoyne Food Bowl Initiative borefield and pipeline assets.	The Department of Agriculture and Food will remain custodian of Gascoyne Food Bowl Initiative assets –
	production bores, approximately 24.5 kilometres of powerline and mains pipeline – until the new single entity is determined and arrangements are finalised to hand-over those assets.
	Two situations that could require temporary access to water from these assets are infrastructure supply problems during the late 2016 peak demand period and declaration of low aquifer storage conditions in late 2016 or early 2017.
	Unless either of these triggers occur access to the four gigalitres is not required until new land is released as part of the Gascoyne Food Bowl Initiative.
Recommendation 8 – Gascoyne Food Bowl Initiative infrastructure timetable (p27)	Progress Report: Progressing
	Gascoyne Water has now fully repaired and upgraded the existing pipeline and it has been buried throughout its length,
Responsible Organisation: Department of Agriculture and Food	up to 10.2 kilometres. This supply pipeline was inspected by engineers prior to installation and is now part of the permanent infrastructure of the northern borefield and is part
The Department of Agriculture and	of the overall integrated system design. Completed
Food has informed the Committee that it anticipates the project borefield development, out to 24.5 kilometres (as per engineering designs in recommendation 5) including electrification and the collector main pipeline will be completed by September 2016 in line with the agreement for funding from Royalties for Regions.	This Gascoyne Water pipeline and the Gascoyne Food Bowl Initiative new mains pipeline both run parallel along the northern bank of the Gascoyne River to discharge into the distribution system at the eastern end of McGlades Road. The two northern borefield supply lines provide for flexibility in managing flows in the distribution system and provide an alternative water source in event of interruption of supply from either borefield.

**Recommendation 4 – Development Progress Report: Progressing** of Gascoyne Food Bowl Initiative Progress of the Gascovne Food Bowl Initiative project is on borefield infrastructure (p20) track to meet the September 2016 completion date. All pipeline hardware components have been purchased and **Responsible Organisation:** Department of Agriculture and works commenced in June 2016 for installation of the first Food 24.5 kilometres of main pipeline and feeder pipes to priority production bores. Installation of the powerline has The Committee recommends a commenced and is also on-track. Both the pipeline and staged approach to the development powerline will be constructed to approximately the 24.5 of the Gascovne Food Bowl Initiative kilometre mark, including spur lines to individual production borefield and related assets. bores. Completion of the infrastructure should be designed to be fully Gascoyne Food Bowl Initiative funding does not cover integratable to the design system (by provision and installation of bore pumps and Supervisory September 2016). Control and Data Acquisition systems. This task was originally to be funded by Gascoyne Water. However Gascoyne Food Bowl Initiative funds have been found to equip and connected up to five production bores, to provide extra water if peak demand or low aquifer storage conditions occur. GHD completed a report in June 2016 for the Department of Water that estimated a cost of \$6 million for final connection of all the new Gascovne Food Bowl Initiative production bores into the integrated system.

Recommendation 9 – Temporary use of Gascoyne Food Bowl Initiative water (p28)	Progress Report: Initiated
	The Department of Agriculture and Food has applied for a groundwater abstraction licence of 4.0 gigalitres per year.
Responsible Organisation:	The Department of Water has increased the allocation limit
Department of Agriculture and Food and Department of Water	for subarea B–L by 0.7 gigalitres to allow for the full 4.0 gigalitres per year licence. <b>Complete.</b> The Department
The Committee supports the Minister for Agriculture and Food and Department of Agriculture and Food announcement that any water that	of Water has requested more information for the hydrogeological report that supports the licence application. The licence will be issued to the new single-entity water service provider, when established.
can be obtained from the Gascoyne Food Bowl Initiative will be available through Gascoyne Water to current growers on a temporary basis while	The Departments of Water, Agriculture and Food, Lands and Gascoyne Water are developing policies due to be completed prior to the 2016 peak demand period that will define:
land release processes are being completed.	<ul> <li>triggers and procedures for the temporary use of Gascoyne Food Bowl Initiative water by existing irrigators when required;</li> <li>how Gascoyne Food Bowl Initiative water will be</li> </ul>
	allocated for the proposed new Gascoyne Food Bowl Initiative land release; and
	<ul> <li>procedures for the share allocation of Gascoyne Food Bowl Initiative water for proposed new Gascoyne Food Bowl Initiative land releases.</li> </ul>
	Gascoyne Water and the Department of Agriculture and Food plan to equip and connect up to five new production bores by September 2016, in time to be available for the peak demand period of October to December 2016.
	Triggers for access to Gascoyne Food Bowl Initiative water are infrastructure supply problems during the late 2016 peak demand period and low aquifer storage conditions in late 2016 or early 2017. Administrative access to the water will be provided by amendments to Gascoyne Water's operating strategy. Unless either of these triggers occur access to the four gigalitres is not required until new land is released as part of the Gascoyne Food Bowl Initiative.

#### THEME 4: Improved water resource planning and management

The greater availability of water in the Carnarvon horticultural district needs to be supported by better management of and planning for the water resource. It is Government's role to ensure this is done in the best way.

Recommendation 12.1 – Improved	Progress Report: In progress
Aquifer Modelling Tools (p35)	GASFAMS was updated to version 1.4 in June 2016 using
Responsible Organisation:	improved model conceptualisation from recent Aerial
Department of Water	Electromagnetic and borehole data. This has improved the
The Committee recommends an accelerated upgrade of the groundwater flow model GASFAMS v1.2, with the first stage completed by December 2015. This update (GASFAMS v1.3) will incorporate the	understanding of the performance of local aquifers in Subarea A and the recent extraction from northern side of Subareas B–L, and allowed the water allocation limit for B–L to be increased by 0.7 gigalitres, to accommodate the 4 gigalitres per year licence for the Gascoyne Food Bowl Initiative. <b>Completed</b>
initial results (bore logs, aquifer test data and water quality data) from the Gascoyne Food Bowl Initiative northern borefield drilling project. It will be coupled with recent data from the extended no-flow period and the subsequent river recharge event.	However there were a number of issues concerning the model calibration, uncertainty in the model and the hydrogeological report supplied by the Department of Agriculture and Food.
	To address this, the Department of Water has commissioned an external review of the model to inform future modelling updates and large licensing/allocation decisions made in the Lower Gascoyne allocation plan area. This review will inform the decisions around how future model development should be progressed.

CARNARVON MINISTERIAL ADVISORY COMMITTEE FINAL REPORT RECOMMENDATION		
Recommendation 12.2 – Improved	Progress Report: Yet to start.	
Aquifer Modelling Tools (p36) Responsible Organisation: Department of Water A GASFAMS Lite version is developed for local usage that will enable the Department of Water to use the model for local decision making and quarterly aquifer status reporting.	Gascoyne Floodplain Aquifer Modelling System Lite will be a version of the existing GASFAMS model with a fixed set of parameters. This will allow the model to be run by the Department's regional staff in a timely and cost effective manner.	
	Work on the Lite model was scheduled for commencement in March 2016. However, due to delays in the finalisation of the main GASFAMS model update for the Gascoyne Food Bowl Initiative project, work on the Lite version will now commence in August 2016.	
	The quarterly Aquifer Status Reports will continue to be delivered as normal, using the current Department of Water spreadsheet model (Carnarvon Irrigation District Aquifer Condition) until the GASFAMS and Lite versions becomes available for in-house use by regional staff.	
Recommendation 13 – Improved	Progress Report: Completed and Scheduled Annually	
Seasonal Predictions (p36) Responsible Organisation: Department of Water	The 2015 to 2020 seasonal outlook was prepared by the Department of Water delivered in November 2015 to growers at the Gascoyne Water's Annual General Meeting. It was	
To alleviate uncertainty about water supply security it is recommended	well received by the growers and irrigation suppliers. <b>Complete</b>	
that medium term (three to five year) outlooks are generated annually to inform growers and water service providers on current, short term and medium term water availability.	The 2016 to 2021 seasonal outlook will be updated in October 2016 and will be delivered at Gascoyne Water's Annual General Meeting in November 2016.	

Recommendation 14 – Increase	Progress Report: In progress
Water Trading (p37) Responsible Organisation: Gascoyne Water The Committee recommends the	Gascoyne Water has in place water trading procedures consistent with National Water Initiative principles. Details of water trades are maintained and are kept up-to-date and shown on Gascoyne Water's website.
<ul> <li>release of water through temporary or permanent trading of C Class</li> <li>Gascoyne Water shares be actively supported and developed by:</li> <li>improving grower security of supply;</li> </ul>	Gascoyne Water recognises the flexibility of operation that can be achieved for growers that use "water share" trading to either enhance their production or to sell unused water shares to defray costs. Through communication the Gascoyne Water will continue to encourage growers to trade water shares.
<ul> <li>adoption of a pool based trading program, administered by Gascoyne Water, that is impartial and considers the offset of fixed</li> </ul>	There is little evidence that share trading is increasing to date, indicating that further work is required. It is anticipated that greater acceptance and use of water share trading will occur as confidence is developed with the greater reliability of water delivered by Gascoyne Water.
<ul> <li>costs; and</li> <li>informing the grower community on the risks and benefits of water trading.</li> </ul>	In April 2016 the Department of Water collated a document reviewing water trading and share trading options to assist Gascoyne Water in the drafting of new customer supply agreements. This draft document is still in discussion with growers before it can be implemented.
Recommendation 15 – Short Term	Progress Report: Completed and Scheduled Annually
Response Plan (p38) Responsible Organisation: Department of Water	The Peak Demand Response Plan 2015 was released to growers and irrigation water providers in September 2015 prior to the 2015 peak water use period. <b>Complete</b>
The Committee recommends that the Department of Water, Gascoyne Water and the Water Corporation prepare a 'Peak Demand Response Plan' by 31 August each year to address peak demand responses for the coming October to January period.	The Borefield Management Group is currently developing the Peak Demand Response Plan for release in August 2016. At this time it will be jointly communicated to stakeholders at a number of grower meetings. This communication will be done jointly by the Department of Water, Gascoyne Water and the Water Corporation
Recommendation 16 – Lower	Progress Report: Planning Commenced
Gascoyne water allocation plan (p38)	The Department of Water has initiated the allocation plan review and is currently developing:
Responsible Organisation: Department of Water The Committee supports the Department of Water's revision of the current <i>Lower Gascoyne water</i> <i>allocation plan 2011</i> as proposed in 2018.	<ul> <li>list of products that are needed to support the development of a revised plan;</li> <li>list of modeling requirements and model scenarios;</li> <li>community engagement plan; and</li> <li>schedule for the project over the next two years.</li> </ul> The allocation plan is proposed to be released as a draft in early 2018.

CARNARVON MINISTERIAL ADVISORY COMMITTEE FINAL REPORT	
RECOMMENDATION	
Recommendation 17 –	Progress Report: Ongoing
Communications (p39)	General
<b>Responsible Organisation: All</b> The Committee strongly recommends that the matter of communications be addressed with genuine purpose and involve all parties, particularly Gascoyne Water and growers and the agencies Department of Water, Water Corporation and the Department of Agriculture and Food as equal partners.	The Borefield Managers Group met on three occasions
	during 2016. The key focus for 2016 has been to balance outputs of the Northern and Southern borefields. The group is currently developing the Peak Demand Response Plan for release in August 2016.
	Department of Water
	<ul> <li>River flow advices: None completed due to no flows.</li> <li>Water budgets: developed and distributed monthly to members of the Borefield Managers Group.</li> <li>Aquifer Status Reports: released in January and April 2016 and included water budget summary for growers.</li> <li>Usage and salinity data: sent to Sub-area A licensees monthly.</li> </ul>
	Gascoyne Water
	Gascoyne Water activities include:
	<ul> <li>day-to-day contact with growers;</li> <li>publishing a Gascoyne Water Newsletter in February 2016. This included a Vietnamese version; and</li> <li>regularly updating Gascoyne Water's Website</li> </ul>
	Water Corporation
	The Water Corporation has continued to work in close consultation with Gascoyne Water, Department of Water and the Department of Agriculture and Food.
	Department of Agriculture and Food
	The Department of Agriculture and Food has continued to work collaboratively with Gascoyne Water and the Department of Water to complete the Gascoyne Food Bowl Initiatives bore field development as a fully integrated system. Other activities include:
	<ul> <li>public meeting about the proposed Gascoyne Food Bowl Initiative land release in March 2016;</li> <li>presentation to a recent table grape industry workshop; and</li> <li>press releases and an ABC radio interview on the commencement of works for the pipeline and powerline in June 2016.</li> </ul>