Consultants
Public submissions to Securing Western Australia’s water future: Position paper
Dear Sir/Madam

EMERGE ASSOCIATES FEEDBACK ON “SECURING WESTERN AUSTRALIA’S WATER FUTURE” POSITION PAPER

Thank you for the opportunity to provide feedback and comment on the Department of Water’s Securing Western Australia’s Water Future position paper on reforming water resource management (‘the paper’). We commend the Department on taking the initiative to address the fragmented and somewhat out-dated nature of water management legislation and regulation in Western Australia. Our feedback and comments on the paper are provided below.

Emerge Associates feedback

Resourcing to implement proposed changes

We note the proposed changes to licensing process and assessment criteria, and that approaches such as online self-assessment/processing could be expected to streamline applications. This is welcomed. We would encourage and expect that sufficient resources will be made available within the Department to inform/educate the public and industry of the changes and to ensure that the ongoing administration can be undertaken in an efficient and timely manner. The Department’s current approach and resourcing sees significant delays commonly experienced by applicants for licences. It is not unheard of for assessment of licences to take over 12 months. This is not an acceptable response and has the potential to cause significant financial impost to proponents and we would expect that the State Government will take the opportunity to ensure that administration of future reforms are adequately resourced.

Water rights for domestic landowners

It is queried whether the potential rights to resources beneath a landholding will be extended to domestic landowners and users. We understand that the current exemption for domestic users will remain for use from the superficial aquifer. If rights are to be extended to commercial landowners for access and use of deeper aquifers this should also be made to domestic landowners. We
acknowledge that this may also mean that domestic landowners are subject to some manner of licence/use scrutiny, however it may also provide water security equitably.

Measurement and metering

The proposed eventual metering of up to 95% of all users is supported. We assert that a 500ML/year cut off is too generous, and that there are many smaller users of groundwater which can collectively be significant. We are of the opinion that all commercial users should be subject to some form of measurement and reporting, and that the cost to do so is not significant given that the resource itself is currently effectively free.

Subsequent to more rigorous measurement and reporting, sufficient resources should be made available to ensure compliance with licence conditions. We appreciate the flexible and realistic approach that the Department takes to water use and compliance with licence conditions and would hope that this would continue. We would also expect that serious and repeated breaches of licence conditions would be investigated and where appropriate would result in more formal action from the Department. We note that this already occurs to some extent, however with the availability/requirement for additional licences and metering there will be a commensurate requirement for additional resources to administer the regulations.

Fees and charges

It is noted that there are no proposed changes to the annual cost of groundwater water by use/volume. We query whether there is the opportunity to introduce a way to fund administration of the system, to provide a return to the State Government on a resource which is being extracted from the ground and most importantly to drive innovation and water use efficiency. We appreciate that introducing such charges may be politically difficult, however a cost per volume has the potential to drive increased efficiency of use and return of unused allocations or portions of allocations.

Recovering over allocated resources

Emerge supports a mechanism to recover over allocated resources, such as where climate/rainfall changes result in a deteriorating resource. We are also of the opinion that in these cases the taxpayer should not be liable to pay compensation to water users for reductions in their allocation which are due to elements beyond the ability of the State Government to control. Further, we agree with the proposed approach taken by the NWI where the Stat Government bears the risk of allocation reduction arising from changes in government policy. Whatever system is adopted, we see it as critically important that transparency of the decision making process and the science supporting these is available for public review and scrutiny.

Summary and closing

Once again we thank you for the opportunity to provide feedback and comment on the paper. We would be pleased to discuss any aspect of the above in further detail, and look forward to the Department's responses and eventual finalisation and implementation of the proposed amendments.

Yours sincerely
Emerge Associates
David Coremans  
PRINCIPAL ENVIRONMENTAL CONSULTANT - HYDROLOGY

cc: none

End: none
31 December 2013

Policy submissions – Water Reform
Policy and Innovations Directorate
Department of Water
168 St Georges Terrace
PERTH WA 6100

ATTENTION: Manager – Allocation Planning

SUBJECT: Securing Western Australia’s Water Future - September 2013 Submission

Groundwater Consulting Services consults to a significant number of irrigated horticultural clients within the Gingin Groundwater Management Area and the Canning-Kimberley Groundwater Area. Groundwater Consulting Services consists of two hydrogeologists with about twenty years of experience each, mostly within Western Australia. Groundwater Consulting Services is familiar with the licensing process, policies and technical groundwater resource management issues in Western Australia.

We currently advise, monitor and report for major irrigators with combined groundwater licence allocations in excess of 50 GL/annum. Most projects involve detailed hydrogeological assessments, ongoing monitoring and compliance reporting, as well as interactions with other groundwater users, groundwater dependent ecosystems, traditional owner consultation and saline water interface management.

Comments provided here-in relate to groundwater management.

POINT 1

Development of statutory water plans is supported but without excellent science behind the plans, there is a risk of locking in inappropriate science to respond to political ideals. Over the last decade or so, our perspective of the department is one that has changed from a technically driven water resource manager to an administrative authority. Despite the technical work conducted by the department, there is an apparent disconnect between the technical and policy sections within the department, to the detriment of the level of water resource management.

The recently released Gingin Management Plan (August 2013) is a good example. The plan was released without reference to significant improved hydrogeological understanding gained by both the department and industry over the last decade and if converted to a statutory plan, foregoes the opportunity to make a significant improvement. There will need to be a carefully thought out process to ensure the technical rigour is established and agreed before converting any management plans to a statutory plan. We do not think that the department has sufficient internal independence to make this call (based on previous work published by the Department) and external advisors should be used. There will also need to be a mechanism to change statutory
Groundwater Consulting Services

water plans if the results of a drilling programme or hydrogeological investigation fundamentally change our understanding of aquifer thickness, distribution or properties.

POINT 2

Reduction of allocation in dry years is a necessary water resource management mechanism for surface water resources, as surface water storages typically have a low storage to annual inflow ratio. A major benefit of most groundwater resources is the large storage which can be accessed even if the short-term recharge is reduced – this access is constrained by the need to manage impacts such as on groundwater dependent ecosystems. The difference is not recognised in the position paper.

Most of the groundwater used in the Perth region is for population-driven consumption – public water supply or vegetable irrigation, and for industrial use. There is simply not the capacity to significantly reduce vegetable production in low rainfall years without increasing reliance on imported produce. This represents either export of water resource impacts to other Australian states or regions, or importation of produce which is grown to overseas health standards which may not match local health standards. It may be difficult to acknowledge such global issues in the proposed legislative changes however they should not be ignored.

In times of higher rainfall, the excess storage capacity available in most aquifers means that the water can be left in the aquifer to be harvested in subsequent years, and in the meantime, groundwater dependent ecosystems will enjoy a higher level of water availability. Increasing allocations on an opportunistic case-by-case basis is supported but should not be a resource-wide policy. For example, if high water resource availability and market conditions align for a particular crop, then short term additional entitlements could be issued to provide economic benefit. Such a mechanism is not suitable for perennial crops (eg citrus).

The difference between suitable management regimes for surface water and groundwater does not appear to have been recognised.

POINT 3

Should modification of annual entitlements (announced allocations) be considered, then the department must be able to review actual groundwater use rather than relying on licensed entitlements. The premise would be that if there is a perceived need to reduce allocations within a water resource, then actual groundwater use will be assessed. The level of groundwater use compared to licensed entitlements, including an assessment of the potential for unused allocations to be activated, should be made. This information can then be fed into a revised model simulation or other assessment of actual and potential impacts to assess whether there is a real threat to the groundwater resource or if there is simply an administrative conflict. Review the “growth in use” response mechanism implemented by the New South Wales Office of Water.

We are concerned that the Department of Water seems to be pushing improved management processes with more vigour than incorporation of technical water resource information, including that developed within the department itself.

POINT 4

Section 2.4.4.3. There were local water advisory groups in the past, they were disbanded and now proposed again. What lessons were learnt?

POINT 5

Consideration of the legislation of other states was clearly an afterthought in the document. Such a significant proposed reform should be thoroughly researched and policy driven from consideration
of the lessons learnt or successes of other states, in a local water resource setting. The proposed reform appears to be biased by surface water management ideals but is written for a state dominated by groundwater resources.

The proposed implementation of statutory water plans is a significant step and the department will need to actively ensure that the level of technical rigour in water resource management, and consultation with the industry is suitable. Recently released groundwater management plans for the Pilbara and Gingin groundwater areas were not conducted with an appropriate level of technical rigour and community consultation processes were below the expected standard. We would be happy to discuss these concerns further (submissions were made for both).

POINT 6

The need for secure long-term licence tenure is supported. However, the basis for long term tenure must be that the technical understanding of the resource is sufficiently mature to enable a conservative long term water availability to be provided. The gap between the long term conservative water availability and short term availability (where excess water is available due to above average rainfall) should be managed through short term licences issued to enable opportunistic expansion of production.

OVERALL

Groundwater Consulting Services feels that the proposed water reform is being implemented as a push to renew legislation to improve the legal strength of the water resource management processes. Although this is supported, there is a significant need to ensure that water resource management is driven by a robust technical understanding of the groundwater resource and design a legislative framework that supports the various needs of the water resources, the industry, the community and the environment. A thorough review of the appropriate legislation in other states (a cursory review has clearly been undertaken) is required.

Please do not hesitate to call should you have any queries.

Yours faithfully,
Groundwater Consulting Services Pty Ltd

Sam Burton
Director
A response to the September 2013 Position paper on Water Resource Management Reform

Having attended the public forum in the DoW Perth office on Friday 18 October 2013, I wish to make the following comments.

1. What aspects of the Reform process are important for future water resource management in WA?

I believe we need a Department of Water that is an effective and obvious leader in all aspects of State water management, and water services providers (such as the Water Corporation) be clearly identified as service providers - not water policy makers. The dominant historic role of the Water Corporation in water service provision throughout a large part of WA has led to many West Australians being unaware of the existence of the DoW – let alone what it does.

Because of WA’s unique hydrology, DoW needs strong ties with researchers in other State Departments and universities, and DoW funding of important water-management research projects, along with continuing water data collection, is fundamental for the future.

2. Modernisation and consolidation of water legislation

These aspects of water reform are necessary, and well overdue.

3. Adequacy of Planning tools

A detailed analysis of the Warren-Donnelly Surface Water Allocation Plan (WDSWAP) has led me to strongly believe that the existing planning tools used by DoW require independent review before any of these tools are attached to revised water legislation in the form of regulations.

I have studied the WDSWAP and the accompanying Methods Report, and have discussed with and corresponded with DoW staff in regard to aspects of these documents. The responses to my enquiries have been unconvincing, leading to my belief that independent review of the WDSWAP is required.
In particular, I refer to Figure 20 (p.46 & 47, Methods Report). I have serious concerns in regard to the blatant misuse of the statistics describing the minimum annual stream flows for the period 1975 to 2005, to estimate the minimum annual ecologically sustainable stream flow yields – which are the basis of the annual allocation limits applied by DoW in each sub-area of the Warren-Donnelly river catchments.

The use of the upper confidence limit rather than the regression line (ie the line of best-fit) – as described in the last four paragraphs on p.47, under the heading “Uncertainty in the model”, as the basis for estimating the annual allocation limits, has resulted in much larger increases in lower-yielding sub-areas than in higher-yielding sub-areas. This inequity between sub-areas can be seen in the two examples given in Appendix C (p.70 & 71) of the Methods Report.

The two examples shown in Appendix C indicate that for the East Brook sub-area:

the adjusted ecologically sustainable yield (adjusted ESY) is 37 per cent greater than the ESY, which results in a 12 per cent greater allocation limit; and

for the Lower Donnelly sub-area:

the adjusted ESY is 9 per cent greater than the ESY, which results in a 1.5 per cent greater allocation limit.

As a result of “shonky” science applied by DoW, landowners in lower-yielding sub-areas will be exposed to a greater risk of over-allocation than those in higher-yielding sub-areas. This is unfair.

The differences in allocation limits between sub-areas, resulting from the adjustment process are significant, and the adjustment process should be reviewed.

4. Risk of multiple farm dam-wall failure

With increasing numbers of farm dams being constructed in the wetter south-west, there is an increased risk of dam safety issues, particularly the risk of multiple, catastrophic dam-wall failures where two or more dams are constructed on a common streamline.

DoW should have a role in managing this particular farm dam safety issue, along with publishing guidelines describing dam spillway specifications.

Ian Laing
3 January 2014

NB. An extension of time to make this submission was sought on 30 Dec 2013.

As requested, I emailed DoW through the water Reform website, and was given a reference code:

ANON- G4AF-E4MW-Y at 3.51pm 30/12/13.

I could not access the website on Friday 3 Jan. 14. I. Laing
17 December 2013

Policy Submissions - Water Reform
Policy & Innovation Directorate
Department of Water
PO Box K822
Perth WA 6842

Dear Sir/Madam

Re: Securing Western Australia’s Water Future
September 2013

We refer to the above subject at reforming and Securing WA’s water resources.

The Southern Cross Water Corporation (SCWIC) has been advocating for over a decade the strategic importance of the SCWIC Brunswick Dam and pipeline key infrastructure Project which will harvest natural runoff from the Harvey catchment. In addition to natural diminishing rainfall, the project dynamics allows the following engineered scenarios, to supplement water sustainability from any brackish storage reservoirs open-cut mine and waste water resource in the south west.

Briefly, the planned dynamics are:

- De-salting Wellington Dam for potable use, as presented by SCWIC in report to KPMG/Department of Water.
- Re-use re-process Griffin Coal dewatering spent water for potable use.
- Transfer water hub to allow the proposed Brunswick Dam Holding water and pump to IWSS via Sterling Dam via a 17.2 kilometre pipeline.

The SCWIC scheme has been thoroughly engineered, is durable, proven and tested in many similar applications, however the Government has little or no interest in this key initiative, further the project capital is funded privately with no cost to WA Treasury. A brief summary is provided as appended to various government ministers.

In Summary to views, response and alternates of the Position Paper:

SCWIC propose to:

1. De-Salt 176 GL of Wellington Dam, water currently deemed not suitable for any consumptive use.
2. Harvest natural run-off from within the Harvey Catchment, recent floods would have yielded 25 GL.
4. Transfer into the IWSS via a 17.2 kilometre pipeline.
5. Continue investigating into Harvesting Spent, Mine, Power Stationer, Wastewater and contaminated lake water, currently unfit for human consumption

...2/Cont’d
Thank you for allowing a measured practical statement on securing water that would otherwise be lost. I look forward to hearing from you.

Yours faithfully,

[Signature]

Joseph Gruss
Director

Encl.