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HydroGeomorphic Terrain Evaluations
Water Planning and Management
UCG and CSG Assessments
Groundwater Management
Clay/Soil/Water Reactvity
Geochemical Modelling
Water Flow Modelling
Mine Water Disposal
Petrography

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Cotton Australia/QFF

NSPs SunWater Pricing for Cotton Schemes

C&R Consulting

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METHODOLOGY:
BULK

1. Establish Medium Priority (MP) Water Allocation Entitlement (WAE) Split including losses allocation TOTAL WAE
2. Establish head works utilisation factor for MP and HP including distribution losses allocation
3. Projected operation efficient cost split between distribution and bulk
4. Renewals annuity split between bulk and distribution
5. Renewals annuity average, established for next five years taking in to consideration current balance, negative or positive
6. Projected sector usage, taking in to consideration 8 years of historical data and dry conditions during that period

Medium Priority;

$$MP\ Bulk\ is\ MP\%\ of\ WAE\ \times operational\ costs + MP\ HUF\ \%\ for\ renewals\ annuity \div average\ usage\ OR\ 100\%\ usage$$

High Priority;

$$HP\ Bulk\ is\ HP\%\ of\ WAE\ \times operational\ costs + HP\ HUF\ \%\ for\ renewals\ annuity \div average\ usage\ OR\ 100\%\ usage$$

DISTRIBUTION

1. Establish projected operational efficient costs
2. Establish Medium Priority (MP) Water Allocation Entitlement (WAE) Split
3. Projected operation efficient cost split between distribution and bulk
4. Renewals annuity split between bulk and distribution
5. Renewals annuity average, established for next five years taking in to consideration current balance, negative or positive
6. Projected sector usage, taking in to consideration 8 years of historical data and dry conditions during that period
7. Establish distribution losses allocation bulk cost

$$Total\ operatings\ costs + MP\ Distribution\ losses\ bulk\ allocation\ charge\ \times \%\ of\ usage + HP\ Distribution\ losses\ bulk\ allocation\ charge\ of\ 100\% + Total\ renewals\ for\ Distribution \div \%\ of\ usage\ Distribution\ Allocation\ Entitlement$$

Actual water charges = PART A + PART B

The prices below are an indicator only and are to assist irrigators understand the possible impacts of the proposed NSPs. These numbers will be refined when more information becomes available.

Priority Water Charges; St George Bulk		
	Price per ML based on 85% usage ($)	Price per ML based on 100% usage ($)
Medium Priority water charges	23.63	20.08
High Priority water Charges	32.85	27.93
Actual water charges	River 19.42 MP	

* HP is only used for distribution losses at 100% per year.

Notes: Renewals Annuity in St George is $745 000 compared to operating at $977 000.
O.R.C value of $120 214 708

Priority Water Charges; St George Channel		
	Price per ML based on 85% usage ($)	Price per ML based on 100% usage ($)
Medium Priority water charges	43.61	37.07
Plus Bulk	23.63	20.08
TOTAL	**67.24**	**57.15**
Actual water charges	Channel 44.66 MP	

St George Channel costs Medium Only

Notes: Channel costs include $218 386 as a bulk water cost for distribution losses water.

Priority Water Charges; Dawson Bulk		
	Price per ML based on 70% usage ($)	Price per ML based on 100% usage ($)
Medium Priority water charges	22.34	15.63
High Priority water Charges	23.72	16.60
Actual water charges	River 21.60 MP Glede Weir 17.88 MP	

Notes: A large opening balance in renewals has keep renewals low. Only a 5% difference between HP and MP costs. Price for HP water at a 7% return on HUF with ORC and 100% usage is $541.40 per ML.

Priority Water Charges; Dawson/Theodore Channel		
	Price per ML based on 70% usage ($)	Price per ML based on 100% usage ($)
Medium Priority water charges	117.18	82.02
Plus Bulk	22.34	15.63
Total	**139.52**	**97.65**
High Priority water Charges	117.18	82.02
Plus Bulk	23.72	16.60
Total	**140.90**	**98.62**
Actual water charges	Channel 74.61MP	

Priority Water Charges; Callide Valley Bulk		
	Price per ML based on 45% usage ($)	Price per ML based on 100% usage ($)
Medium Priority water charges	87.34	39.00
High Priority water Charges	290.00	130.50
Actual water charges	Surface Water 30.71MP	

Note: Price for HP water at a 7% return on HUF with ORC and 100% usage is $5 591.54 per ML

Priority Water Charges; Emerald Bulk		
	Price per ML based on 80% usage ($)	Price per ML based on 100% usage ($)
Medium Priority water charges	13.22	10.58
High Priority water Charges	21.14	16.90
Actual water charges	**Medium Priority**	**High Priority**
	River 13.59 MP	22.39 HP

Priority Water Charges; Emerald Channel		
	Price per ML based on 80% usage ($)	Price per ML based on 100% usage ($)
Medium Priority water charges	33.03	26.42
Plus Bulk	13.22	10.58
Total	**46.25**	**37.00**
High Priority water Charges	33.03	26.42
Plus Bulk	21.14	16.90
Total	**54.17**	**43.32**
Actual water charges for Channel	**Medium Priority**	**High Priority**
	34.95MP	65.31HP

Note: Channel costs includes $382 451.25 for bulk water charges for distribution losses allocation.

Priority Water Charges; Chinchilla Weir Bulk		
	Price per ML based on 55% usage ($)	Price per ML based on 100% usage ($)
Medium Priority water charges	22.18	12.20
Actual water charges	34.11	

Priority Water Charges; Upper Condamine Bulk		
	Price per ML based on 45% usage ($)	Price per ML based on 100% usage ($)
Medium Priority water charges	69.90	31.46
Actual water charges		
North Branch	54.78	
North Branch – Risk A	25.26	
Sandy Creek or Condamine River	38.11	

NOTE:lack of information in NSP to split the proposed charges into the same as the actual charges other than to have a zero percentage in the HUF for Risk A water.

Priority Water Charges; Macintyre Brock Bulk		
	Price per ML based on 75% usage ($)	Price per ML based on 100% usage ($)
Medium Priority water charges	67.77	50.83
Actual water charges	34.53MP	

Priority Water Charges; Barker Barambah Bulk		
	Price per ML based on 60% usage ($)	Price per ML based on 100% usage ($)
Medium Priority water charges	46.70	28.02
Actual water charges regulated	32.63MP	
Actual water charges Redgate re-lift	50.49MP	

NOTE: renewals annuity is negative $813 000. Operating costs up by 14%

DAM SAFTY UPGRADES: Have the dam safety upgrades been incorporated into the operational or renewals costs.

CARRY OVER WATER: Is SunWater assuming they will charge for 100% of WAEs regardless of use by removing all references to storage rental fees? If a bulk charge is applied to WAEs of a 100% it would have to be in arrears not in advance as is the case now. Schemes without carryover or continues accountingwill only have the ability to use their allocation in the water year of the announced allocation putting into question the value of spending money on water use efficiency. Schemes that do have operational rules that allow for allocation to be used in proceeding years will not be as adversely affected because they will still have access to the allocation that they have already paid for.Is SunWater by promoting a 100% charge to cover all scheme costs regardless of use, turning their back on good water use practices for industry or are they going to address all scheme rules in the next 5 months so that all schemes have the ability to carry unused allocation forward?

LOST SCHEME INCOME: If medium priority water is converted to high priority water some schemes will lose 50% of the income generated by it being medium, how is this to be recovered? Ifthis process continues the proposed price differences between HP and MP bulk water charges is as low as 5% when the storage requirement is as large as 300%.

BULK CHARGES FOR LOSSES: If SunWater is going to recover bulk charges for losses allocation what incentive is there for them to reduce losses? I feel this is highlighted by comments in the plan that losses can only be quantified by replacing all the meters, if that is the case then how do they know what losses allocation is being used now? The requirement for bulk losses allocation to have cost recovery put forward by SunWater is a requirement of the NWI. DERM/Government also own

losses water for the river systems which has to be allocated out of the storages each water year, the same as SunWater distribution losses do, why are we not recovering them as bulk water charges.

Is it because they are not sure what is required or used? Does that comply with the NWI?Losses allocations were issued to SunWater as best guess numbers to insure they had the ability to deliver WAE within their networks. It was not intended that losses allocation could be traded unless it was clearly identified and proven that water savings have been made within the sections that the losses were allocated.

REVENUE OFFSETS: I question the numbers produced in the NSP as they don't capture all the revenue offsets including transfer adjustment fees, so what else is missing? If we are not going to see revenue data from all sectors how can we be sure revenues have not been wrongly allocated.

LAND MANAGEMENT:The ownership of the land and the requirement to pay rates still has to be sorted out in most schemes which have been paying the costs for rates to SunWater for 10 years but in some cases are yet to see evidence of their councils receiving it.

RECREATIONAL COSTS: These costs are getting out of control both as renewals and operational. Some of the reasons given for why water users should continue to pay for these facilities need to be examined closely. There is a history of very bad decisions being made in the past by SunWater and Government which water users are now paying for.

TOTAL EXPENDITURE: Total expenditure is put up through the NSPs with very little detail to support any of the numbers provided. SunWater provides multiple services within these schemes which have separate revenue sources. Unless they put up total revenue numbers and the data that sits behind these numbers we have no choice but to treat all the expenditure data as questionable at the very least. SunWater has grown its business beyond that of bulk water provider which is great, but evidence of how well it has managed to ring fence its costs is yet to be seen.

SUMMARY of NSPs: The irrigation industry has waited a long time for these NSPs only to be disappointed in the lack of detail. Our understanding of a NSP was that it was to provide detail onservices provided and costs and revenues needed to continue this service at scheme level. What we received was more like a submission on whatSunWater wanted and how they would like to achieve it, with some very broad data on scheme costs set out to suit a desired outcome. With the Government decision on zero asset values on infrastructure for irrigation, SunWater has managed under the HUFs to shift the asset values to urban and industrial users whom they can charge a rate of return on infrastructure and all the operating costs to irrigators. HUFs cannot be assessed on their own without including the impact of operational costs being apportioned on a per ML basis for HP and MP allocations.

SUBMISSION ON CENTRALISED COSTS:

There was nothing in this paper that supports the statement that it was a bottom up approach to costing. TABLE 1 Summary of activities. Have questions on new developments ability to impact on irrigation pricing. This happens by dropping water use in current schemes and pushing up yearly charges.Also, questioning the ability to separate renewals labour costs from operating labour costs.

TABLE 2: The cost allocation for strategy and stakeholder relations seems to be very high for what it is achieving. $1 800 000 per year.

TABLE 3: Missing is SunWaters total bulk water compared to SWC.

TABLE 4:A need to compare apples to apples. The table does not show how escalated SunWaters CRC is compared to SWC

SUBMISSION ON COST FORCASTINGASSUMPIONS:

Allowing for cost increases inside the 5 year price path is very risky. CPI is a very transparent process and insures SunWater stays efficient during the price path.

SUBMISSION ON RENEWALS ANNUITY:

How did the separation of the ARR for irrigation and urban and industrial occur? The methodology used to separate bulk and distribution renewals balances is wrong. If SunWater cannot supply the information regarding the funds going in and out of the renewals annuity accounts to separate bulk and distribution then we question the entire renewals annuity. The methodology being right or wrong has very little impact on price but the lack of accountability within the renewals annuity is a very big issue. Is it appropriate that an irrigation scheme that has been paying a rate of return over and above the cost of operatingshould have a negative balance in its renewals annuity?
Large negative renewals can come about several ways, incorrect use of the renewals annuity or insufficient funds set aside. This would meanif the price paths had been structured correctly these schemes would not have been paying a rate of return but a larger amount to renewals, insuring there is no negative balance.

PRICING PRINCIPLES AND TARRIFF STRUCTURES:

2.2.2(Customers demand is clearly a risk that cannot be managed by SunWater). It is hard to understand the reasons behind any service provider making that statement.SunWater has a responsibility as a service provider to insure the commodity they are providing has a place in the market as do all service providers. With the trend of water use numbers dropping through water use efficiencies, urban encroachment and lack of profitability, the service SunWater provides being water, is dropping. This was identified 10 years ago as the biggest contributor to the rising price of water and the lack of profitability of schemes. We still have a long way to go in addressing this issue. The modifying of scheme rules and water trading has progressed slowly but has not kept pace with declining water use numbers. The reality is we need to expand the areas the schemes deliver water to whether it be irrigators or urban and industrial uses, so that the escalating costs of operating and maintaining these schemes can bespread across larger amounts of water use.I do agree that SunWater cannot be expected to take on all the risk of demand in any one year but to suggest they have no role in the demand risk into the future is frustrating to say the least. The fact that SunWater still denies responsibility for a basic business approach like managing demand may be best addressed by setting prices based on 20% higher usage then historical.

- When was the last time SunWater promoted a scheme for development other than one they had WAE for sale in?
- When was the last time SunWaterassisted in the development of a new water use in a scheme that didn't involvetheir WAE?

Statement from the paper (a WDE shouldn't be affected by the trade of water).

- At the present a channel supplycontract is attached to the water entitlement and is separate from the land title.
- A peak flow entitlement is attached to the land entitlement.
- The peak flow entitlements have no relevance to water delivery entitlement(WDE) or allocations.
- SunWater monitors its water use between bulk and distribution the only way it can, that is through metered use. They have no way to monitor whether it was originally a bulk or distribution allocation. A large amount of water is seasonally traded between river and channel / bulk and distribution. SunWater doesn't track what water goes where, meaning you could have 50% of the water used on the river being channel water and 50% of the water used on the channel being river water.

- If you separate the costs for bulk and distribution and charge this out regardless of use you have the ability to destroy the value of channel/distribution allocations overnight.
- This paper suggests thatif you seasonal transfer river/bulk water and use it on the channel you don't incur any cost for distributionbecause the cost has already been covered.
- The paper also suggests that your peak flow entitlement/WDEwill be governed by the amount ofchannel allocation yourfarm was originally allocated.
- A lot of the original farms are no longer irrigated, so charging them maybe a little difficult. Large amounts of allocations have been purchased as channel water and not attached to any land, so do they incur a cost for having it delivered by the channel?
- The land values of channel farms with WDEs will crash overnight. Changing or improving water practices on these farms is pointless because they will be stuck with the cost regardless.
- The paper doesn't explain how the WDE could be traded or how you could pay someone to take it away.
- WDEs are not already defined.
- What will happen to the farms that have no historical access to WDEs? Will they be able to access their water at bulk rates only, or refused access to water? Which maybe a little hard as they have supplycontracts?
- The distribution costs will have to be shared between,in some cases, 40% less water than at present, insuring the complete distribution system is unviable.

2.2.3 Hydrologic Utilisation Factors (HUFs): The understanding we were given was that HUFs were Headwork's Utilisation factors they are a long way from being the same thing.

3.1(Recreation facilities are a modern day compliance cost.) Great if these were modern day storages. We seem able to separate and add in costs across different users until it comes to recreation facilities. It is not hard to come up with usage numbers based on irrigation or urban and industrial then apportion costs.

NOTE:

This is a quick review of the NSP's and relevant submissions by SunWater. Final review of these documents and proceeding submissions will follow.

[redacted]

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