



NSW Government
Department of Water & Energy

Submission form for comments on the Hunter Unregulated and Alluvial Water Sources Draft Water Sharing Plan

Office Use Only

Submission No.

How to fill out this form

This form can be used to provide comments on the rules and provisions in a draft water sharing plan or water source report card. Key issues are listed below and the Department of Water and Energy would like your comments on these issues. You are also welcome to comment on other aspects of the draft water sharing plan. If you wish to provide more detailed comments than the space provided, you can attach additional pages. Please use one form per plan.

Note: some aspects of a water sharing plan cannot be changed as they must meet the statutory requirements of the *Water Management Act 2000*. The key areas for comment are listed below in the issues section.

Post to: Draft water sharing plan comments, Hunter DWE, PO Box 2213, DANGAR, NSW, 2309

Fax to: Draft water sharing plan comments, 02 4904 2503

Email to: HunterWSP@dnr.nsw.gov.au

Note: Submissions close Friday 2 May 2008

Name	State Water		
Postal Address	PO Box 915		
	MUSWELLBROOK	P/C	2333
Stakeholder Group (please indicate which of the following <u>best</u> represents your interest by ticking one box)	<input type="checkbox"/> Irrigator Interests	<input type="checkbox"/> Aboriginal Interest	<input type="checkbox"/> Environment Interests
	<input type="checkbox"/> Fishing Interests	<input type="checkbox"/> Local Landholder	<input type="checkbox"/> Community Member
	<input checked="" type="checkbox"/> Local Govt./ Utilities	<input type="checkbox"/> Other (specify)	
Which water source/s do your comments relate to?	Hunter Alluvials		
ISSUES	COMMENTS (please provide reasons for your concerns)		
1. Impacts of plan - what impact would the rules in the draft plan have on your operations or the water source?	Potential conflict with our regulated river customers as the Reg. Alluvial 1 water source may include part of the Hunter Regulated River water source.		
2. Cease/commence to pump levels – are these too high or too low? (The cease to pump is the higher of the upper limit of the very low flow class set out in Part 3 in the section on <i>Flow classes for these water sources</i> or the cease/commence to pump specified on the licence.)			
3. Sharing flows on a daily basis - are the daily extraction limits appropriate? (Refer to the section <i>Sharing surface water flows on a daily basis</i> in Part 10.)	<ol style="list-style-type: none"> Clause 18(1)(u) refers to flow classes in the Upper Hunter water source – State Water raises the issue of water diversions under the Barnard Scheme and how they are to be managed through this process, as they will impact on flows at the flow reference point – see also clause 18(2)(f). Clause 18 (1) (x) Jerrys Plains Water Source does not mention Macquarie Generation's dams. Flow classes established by clause 18(1)(ii) are not consistent with the planned environmental water in the Paterson Reg. Plan [clause 14(c)] where additional regulated releases are required when the 		

	Halton flow reference point is at lower flow levels (95 th percentile). State Water supports these higher cease to pump levels.
<p>4. Appropriateness of flow reference point eg. Gauge, monitoring bore (refer to Part 3, Clauses 17 and 18)</p>	Operation and maintenance costs of some of flow reference points are currently fully funded by Hunter/Paterson regulated water source customers. State Water expects that future cost sharing for these reference points will reflect their value in implementing the macro Plan.
<p>5. Environmental water provisions - do they provide adequate protection for the environment? (Refer to Part 4 <i>Environmental water provisions.</i>)</p>	
<p>6. Aboriginal Cultural Values - do the environmental water provisions provide adequate protection for Aboriginal cultural values</p>	
<p>7. Local Impact Rules - are these too restrictive or insufficient to protect environmental values/existing users? (Refer to Part 8 <i>Rules for granting water supply works (bores) approvals</i> and Part 10 <i>Management of local impacts</i>).</p>	<ol style="list-style-type: none"> 1. There is evidence of connectivity between the regulated river and the Hunter alluvial. Connectivity directly impacts on State Water's ability to operate regulated rivers efficiently and to minimise delivery losses. Increased losses impacts on the allocations for regulated access licence holders and ultimately State Water's financial viability. 2. State Water notes clause 40 (2) imposes a 400 metre buffer for a new bore from an existing bore yet the plan removes the 200 metre zone for the construction of the bore next to the Hunter regulated river. This appears inconsistent as a new bore would have a similar impact. State Water suggests that all reference to 200 metres in the plan be changed to 400 metres. 3. State Water suggests that Part 9 of the draft Plan needs to address conditions relating to works that are located near to regulated surface water access licences. For example, if it is reasonable for a aquifer work to be more than 400 metres from another aquifer work, then it would appear to be reasonable to have a similar or appropriate condition for distance from a regulated river work (if not from the regulated river itself) to minimise interference (unless of course a study determines minimal adverse impacts). 4. It is inconsistent to have different rules for essentially very similar extraction conditions once the connectivity has been identified. If there is connectivity in the aquifers and that requires distance conditions, then the conditions should likewise apply for distance from regulated rivers where there is more likely to be even increased connectivity.
<p>8. Trading rules – are these too restrictive or insufficient to protect environmental/cultural values? (Refer to Part 11 <i>Access licence dealing rules</i>).</p>	It is assumed that clause 80(2)(c) may allow a major utility such a Macquarie Generation to convert water to a major utility category at a 1:1 conversion rate [clause 80(4)]. State Water raises this issue because as it would appreciate an opinion on whether it would be possible for Macquarie Generation to convert an unregulated river licence, in say the Upper Hunter or Jerrys Plains water source, and physically transfer water extracted to Glenbawn Dam for later release and capture at Liddell (this is not unlike current Barnard Water transfers). It is noted that major utility licences also have special allocation provisions. The clause appears to conflict with clauses 54 and 57 of the Hunter Regulated Water Sharing Plan.
<p>9. Water access licences that can be applied for</p>	

<p>- are these appropriate? (Refer to Part 8 <i>Rules for granting access licences</i>)</p>	
<p>10. Circumstances where plan can change - are these appropriate? (Refer to Part 16 <i>Amendment to this Plan</i>)</p>	
<p>11. Other Comments (any other aspects of the draft plan)</p>	<ol style="list-style-type: none"> 1. Although not 'part' of the Plan it is unclear in Appendix 1 which water sources are exempt from the draft Plan. For example, the Locality Plan only partly identifies the Hunter Reg. water source (Upstream of Glenbawn Dam and Glennies Creek not shown) and the Paterson Reg. water source is not shown; the legend is also unclear with the regulated water sources not shown as areas exempt. 2. Clause (4) and elsewhere through out the Plan. It is suggested that the Hunter Reg. Plan was gazetted in 2004, not 2003; and the Paterson reg. Plan in 2007, not 2008. 3. The note under clause 5 (1) (jj) is in conflict with clause 4(b) in the Hunter Reg. Plan as it defines the same area. It is noted that clauses 5 (b) (iv) and (v) may clarify the area. 4. It is assumed that all access licences within 40 m of the Paterson Reg. River are not part of this draft Plan (no defined area). 5. Clause 18 (ii) Minister's Note Allyn River Management zone: State Water suggest the Note is not correct and that Dungog Shire Council (and from 1 July 2008 Hunter Water Corporation) should only access water for the township of Gresford from this management zone when flows in the Allyn river exceed 25 ML/d at East Gresford weir, if at all. State Water notes that the maximum usage for the two townships from the Paterson reg river was 77 ML in 2001/2. During the 01/02 season water was also extracted from the Allyn River so the total use for the townships was estimated to be approximately 150 ML. During 1989/90 the record of water pumped from the Allyn river was 264 ML as supplied by Council. It is noted that the total entitlement for the townships of Gresford and East Gresford is 150 ML ie 75 ML from the Allyn River Management zone and 75 ML from the Paterson Regulated water source. Based on the 1989/90 usage this entitlement appears inadequate. Council's estimate of usage thus appears low based on historical usage. Removal of the weir on the Allyn River would improve fish passage. State Water contends that towns in general should be encouraged to move to higher and more reliable sources of supply security and in this case leave water for S&D users in the Allyn River. 6. Clause 29(f) refers to local water utility share components in the Hunter Alluvial 1 water source. It is assumed that these refer to Singleton Council and they are in addition to their existing local water utility share components in the Hunter Reg. Plan. State Water believes that the share components in the Reg. Plan provided reasonable access limits for the town and that the utility should not be provided with additional entitlements which may impact on current regulated users as the water would be extracted close to the regulated river. It is suggested that as increases to local water utility entitlements are permitted under the WMA, and as there is a process to decide what the reasonable limit should be, that access to additional local water utility entitlements be restricted until such a process is complete. In any case the entitlements should probably be supplied from Glennies Creek Dam where the utility has its existing water supply infrastructure. If Singleton Council desires to be able to draw water from another location within the Hunter Regulated system this can easily be accommodated by the issuing of an additional works approval at this location. 7. State Water suggests that Macquarie Generation may need to be issued

with an unregulated river access licence (or major utility) in the Jerrys Plains water source (or a Part 9 converted to shares). They are currently invoiced 7,700 ML as an average extraction in this source. The total volume under clause 30(1) or 31(r) may need to be amended. It is noted that clause 31 shows 10,273 shares of unregulated river access licences in the Jerrys Plains water source, but it is not known if these include shares held by Macquarie Generation as State Water was unable to identify any shares held by them in that water source in the licensing databases.

8. Under clause 30 it may be clearer if a note was included that explained that although another major utility e.g. Macquarie Generation, extracts water within these water sources, they do not have a major utility licence in these water sources. In addition a note should be made that there may be a need for Macquarie Generation to be issued with a conveyance licence to transfer Barnard water through the Upper Hunter River water source.
9. Clause 40(18) for replacement of existing bores is inconsistent with the area of Hunter Alluvial 1 i.e. water source is only 1 metre distance from the existing bore. Replacement works must be within the Hunter Alluvial 1 water source.

10. **The Hunter Alluvial (Alluvial) has a recognised strong hydrological connection to the Hunter regulated river.**

In the early 1990s a ground water policy ensured that no additional bore we located within 200m of the bank of the Hunter Reg water source to ensure the security of regulated licence holders. State Water believes that this policy is still the existing policy. The draft plan undermines that policy.

A regional groundwater policy released by the then DLWC in the late 1990's early 2000's reinforced the above policy by requiring applications for a renewable class licence (where the entitlement was greater than 11 ML), to be 'at least 200m from the high bank of the Hunter River and tributaries, palaeochannels (abandoned river course), billabongs, wetlands or other defined drainage depressions along the alluvial deposits'. This policy applies to all new bores/wells licensed through a water trading scheme. Where these distances could not be adhered too, restrictions and limitations were placed on the license conditions. The draft Plan undermines that policy.

The NSW State Groundwater Policy Framework Document (1997) includes a key principle that the 'management of surface and ground water resources should be integrated' with the linking of the relevant management regimes. The draft plan proposes unequitable linkages with highly secure regulated river water linked to relatively low value groundwater allocations.

Many of the existing bores in the proposed Alluvial 1 and 2 water source were originally 'conjunctive use licences' whereby the licence holder could only realise an allocation if their regulated water licence allocation was reduced. In most years they had a zero allocation from the bore. This ensured that bores adjacent to the regulated river had minimum impact of regulated river flows as well as providing some drought relief at times of reduced surface water allocations. Along the regulated section of the Hunter, there were about 63 conjunctive use licences with a 12,145 ML conjunctive component (the additional amount of groundwater permitted to be extracted when restrictions were placed on surface water licences). It is believed that these licences may have been converted on a 3:1 ratio to separate groundwater entitlements i.e. 4,050 ML. The additional volume was effectively a windfall allocation and one that licence holders had never been able to realise in the past. A licence holder can now also trade that licensed entitlement whereas they

could never before and that makes it more likely that the volume will be used. This relative recent action has already impacted on the security of Hunter regulated licence holders.

State Water understands that studies on groundwater recharge (C&A 1995) indicated that only about 5% of rainfall contributed to groundwater yield within the alluvial aquifers. Based on rainfall patterns the estimated groundwater yield is 0.25 - 0.5 ML/ha/yr. As groundwater entitlements per hectare are much greater than those rates it is likely that there must be some significant induced recharge from the Hunter regulated river.

State Water also understands that studies undertaken by the former DLWC showed that in the long term about 55,000 ML per annum of the sustainable yield of the Alluvialis sourced from the regulated river. Any aquifer extraction would induce increased recharge from the regulated river.

The State Water Management Outcome Plan requires 'the degree of connectivity between aquifers and rivers to be assessed, and zones of high connectivity mapped to enable baseflows to the river to be maintained or improved'. The Plan has not addressed that target in the SWMOP and nor has not taken a precautionary approach by allowing potentially high extraction during dry periods.

The draft Plan further erodes current Hunter Reg. licence holder's security as well as potentially reducing State Water's economic viability as it:

- i. Removes the 200m exclusion zone and allows greater extraction in the most likely connected zones without any assessment of impacts on the Hunter (or Paterson) Reg water sources.
- ii. May allow unregulated licences [presumably from any water source within the EMU clause 79(2)(b) and 80(2)(a)] to convert/transfer to an aquifer licence in Alluvial 1 or 2. Note that State Water may have made an incorrect assumption as it is difficult to understand the logic of clauses (79)(2)(a) and (b) as they seem to exclude all dealings between any water sources except for two aquifer exemptions. It is noted, however, that in most other water sources [clause 78(2)(c)] dealings into the '40 m zone' are prohibited.
- iii. Allows increased use in Alluvial 1 by allowing potentially 20,300 share components to be transferred into this proposed water source [from Alluvial 2 by clause 79(2)(b)(ii)] plus the recent 3,800 share components (since licence separation), when in the past there was probably zero use, as most licences would have been conjunctive use. Although State Water notes that clause 79(5) does not allow new works within Alluvial 1 it does allow 'existing' works to use any water transferred
- iv. Provides a high level of security for aquifers licences more than 40m from the regulated rivers, some of which would have zero allocations in most years. As a result in drought periods regulated river losses are likely to substantially increase and the period of reduced allocations for regulated licensees could potentially increase

All of these draft provisions in the draft Plan have been made without any apparent check on the socio-economic impact on regulated licensed holders or financial implications for State Water. They have been proposed without any mitigating or precautionary provisions in the draft Plan e.g. requiring licence holders to demonstrate that there is no connectivity.

In addition, the note after clause 52 suggests that even greater allocations may be available for Alluvial 1 aquifer licences. State Water does not support a process that provides high volume allocations to

aquifer licences in highly connected systems when there is likely to be a detrimental impact on regulated river licensees, especially when many of these allocations have been gained through a recent windfall process.

The behaviour of groundwater in the Alluvial is dynamic, with the availability of water within these aquifers closely linked to surface water availability. For the Alluvial, the buffering capacity is small, with the ratio of recharge to storage about 1:10. The Alluvial should not be considered as a 'storage reservoir' as water continues to drain out of the aquifer during dry periods. Such drainage can be both back out to the surface, or through the Alluvium out of the system.

Even with the strong connection between the Alluvial and regulated river there is likely to be delay time between recharge and discharge of groundwater to the river. This delay provides a level of buffering to maintain the quality and quantity of the Hunter regulated river especially during dry periods.

It is basically the nature of the Alluvial that it is likely to be under stress at the same time as users are likely to want to maximise extraction. Allowing a high level of security and potentially increased extraction during dry periods will either increase pressure on an already overcommitted system at a time when the resource is at its most vulnerable, or will lead to increased (because of greater losses in the resource assessment process) and lengthen (because storages will recover slower) the access restrictions having to be introduced for regulated river licence holders.

State Water strongly suggests for the Alluvial water sources:

- i. Any current licences be converted to one of two security categories: irrigation of pastures – general security equivalent OR irrigation permanent plantings/industrial – high security equivalent**
- ii. That all licences within 200m of the Hunter regulated water source have an AWD that reflects the Hunter regulated river AWD for that category of licence unless a hydrogeological study undertaken by the applicant, and assessed as adequate by the Minister, demonstrates minimal potential for adverse impacts on existing licensed extraction in the Hunter regulated river water source**
- iii. That the dealing rules specifically prevent any dealing that potentially permits additional water to be extracted within the 200m zone unless a hydrogeological study undertaken by the applicant, and assessed as adequate by the Minister, demonstrates minimal potential for adverse impacts on existing licensed extraction in the Hunter regulated river water source**
- iv. That the dealing rules specifically prevent any dealing to existing bores in water front lands of the Hunter Regulated river water source**
- v. That all aquifer licences within the 200 m zone have an appropriate water use meter installed immediately**

11. Carryover provisions in the draft Plan [clause 59(3)] for licences with connectivity to the Hunter regulated water source are inconsistent with the provisions in regulated Plan. Either the draft Plan or the existing Hunter Reg. Plan needs to be amended.

12. Clauses 87 (3) and (4) recognise Macquarie Generation's operations but not other clauses as discussed previously including clauses 18 (1) (u), 18 (1) (x), and 18 (2) (f).