



Department of  
Primary Industries  
Office of Water

AUDIT OF IMPLEMENTATION

# Hunter unregulated and alluvial water sharing plan audit report card

Prepared for the period between 1 July 2009 and 30 June 2014

Publisher: NSW Department of Primary Industries, Office of Water

Title: Audit of Implementation Hunter unregulated and alluvial water sharing plan audit report card Prepared for the period between 1 July 2009 and 30 June 2014

First published: March 2018

**ISBN: 978-1-76058-197-8**

**More information**

[www.water.nsw.gov.au](http://www.water.nsw.gov.au)

**Acknowledgments**

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## Acronyms and abbreviations

AWD	Available water determination
BLR	Basic landholder rights
CtP	Cease-to-pump
D&S	Domestic and stock
FRP	Flow reference point
HWC	Hunter Water Corporation
IDEL	Individual daily extraction limit
LTADEL	Long-term average annual extraction limit
TDEL	Total daily extraction limit
the Minister	the Minister for Natural Resources, Lands and Water
the Act	<i>Water Management Act 2000</i> (NSW)
WA	<i>Water Act 1912</i> (NSW)

## Glossary

***Water sharing plan term review*** refers to the Minister's decision to extend the existing plan or replace it with a new one at the end of its first 10 year term in line with s.43A provisions of the *Water Management Act 2000* (the Act).

***Amend water sharing plan*** refers to changes made to the plan during its 10 year term. These changes may be provided for in the original plan provisions or made by the Minister under s.45(1)(a) of the Act

## Introduction

This report card covers the *Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009* that commenced on 1 July 2009. It is one of 6 report cards (covering regulated rivers, unregulated rivers and inland groundwater) prepared in 2014 by the NSW Office of Water and refined by the Audit Panel appointed by the Minister for Natural Resources, Lands and Water under section 44 of the *Water Management Act 2000*.

The report cards were used by the Audit Panel in its review of whether the water sharing plan provisions of the ten plans covered by the 2014 audit are being given effect to. This is the first audit for five of these plans covering the period 2009-2014 and the second audit for the remaining five groundwater plans covering the period 2010-2014.

The report cards form an attachment to the Audit Panel's final report to the Minister. The report includes details on the audit process and Panel membership, together with the findings and additional measures identified by the Audit Panel that are required to give effect to the current plans, and lessons for future water sharing.

Report cards are aligned with the sections in the water sharing plans. There are no report cards for plan sections that provide context or those that contain only enabling provisions linking the plan to the Act (see Table 1).

**Table 1: Water sharing plan sections that do not require report cards**

Plan Section	Title
Part 1	Introduction
Part 2	Vision, objectives, strategies and performance indicators
Part 6	Bulk access regime
Part 7	Requirements for water under access licences

Reflecting the requirements of the Act and the Audit Panel's terms of reference, the report cards focus on the implementation of the provisions in the plans. They do not attempt to assess the outcomes or effectiveness of the plan in achieving its objectives.

Assessment of implementation is classified as follows:

- **Always implemented:** Always implemented when required, or not required to be implemented as triggers for action have not been reached, but everything is in place should action be required.
- **Sometimes implemented:** Required to be implemented and sometimes implemented.
- **Not implemented:** Required to be implemented but never implemented.
- **Not required:** Activities not yet scheduled to commence or Minister has not exercised their discretion to act.

The preparation of the report cards has required an examination of each individual clause in each audited plan. Consequently, the level of detail, wording and implementation activities reflects the variations across each plan. Wherever possible, activities that have the same implementation requirements and classification across plans have been grouped together.

The focus on implementation of water sharing plan provisions also means that the report cards do not summarise all of the water management activities that the government is involved in. Activities that complement the implementation of the plans or are undertaken to fulfil NSW requirements under the National Water Initiative, State Plan or other drivers are not reported on.

The considerable NSW Government effort and investment in the establishment, monitoring and review of performance indicators of water source condition changes are also not covered by the report cards. These performance indicators will be used to determine the performance of the plan against its objectives at the end of the 10 year term and so would be classified in the report cards as “Not required” (activities not yet scheduled to commence). Information on ecological and social and economic performance monitoring is available in the progress reports for the relevant water sources and elsewhere on the NSW Office of Water website at [www.water.nsw.gov.au](http://www.water.nsw.gov.au).

## Part 3 – Basis for water sharing

Table 2: Flow reference points (FRPs)

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Always Implemented	FRPs established for all water sources with flow classes.	<p>Real time hydrometric stations have been established for all of the FRPs which specify numeric flow conditions.</p> <p>The FRP for the Seaham Weir pool management zone of the Williams River water source relies on established heights being maintained at the weir. This infrastructure is maintained by Hunter Water Corporation, and the data is not publicly available. Effective operation of this FRP relies on the Water Users Association communicating with HWC and passing the information on the water users.</p> <p>A number of water sources which specify the maintenance of visible flow at defined location do not have operational gauges. These locations would rely on an active water user association to report whether there is a visible flow or not.</p>	<p>Investigate the potential for making Seaham Weir height data available on Office of Water website.</p> <p>Support Water User Associations to monitor and make announcements when visible flow CtP triggers have been reached.</p>

Table 3: Changes to flow reference points

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Not required	Changes to the FRPs have not been required in this plan.	<p>The plan's FRPs were considered suitable during the first five years of its operation.</p> <p>The hydrologic studies and changes to FRPs referred to in this clause have not been required.</p>	Routinely assess the suitability of existing FRPs and the need for hydrologic studies.

Table 4: Very low flow class

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Not Implemented	Very low flow classes were not implemented. Licence conditions requiring adherence to cease to pump (CtP) conditions have not been issued	<p>The plan requires that some conditions (pre-existing CtP established by land board hearings) are retained. Determining which CtP conditions from WA licences are retained, and replacing the plan CtP requirements has delayed the rollout of licence conditions.</p> <p>In many areas cease-to-pump (CtP) conditions have been adopted by Water User Associations in decision making. However, in the absence of licence conditions, adherence to the CtP is unenforceable.</p>	Issue licences with conditions as a priority.

Table 5: Changes to flow classes

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
All years	Not required.	Minister did not exercise discretion.	<p>All the changes to flow classes detailed in the plan may be undertaken at the discretion of the Minister. At this stage the Minister has not exercised this discretion.</p> <p>The majority of changes to flow classes allowed for in the plan occur at the commencement of year 6 or by year 10, and involve the collection of further data or the introduction of groundwater monitoring. Other amendment clauses are discussed below:</p> <ul style="list-style-type: none"> <li>• The condition for Merriwa requires the reintroduction of the town gauge. While this has occurred, the previously existing licence conditions which referred to this gauge have not been reinstated to the Water Management Act licences.</li> <li>• The plan allows for amendments in the Williams should the trial for the Williams River Accreditation Scheme conclude. The scheme is still operational, so no amendment is currently required.</li> <li>• In the Isis water source, studies are currently underway to determine if the water source should be divided into two management zones.</li> <li>• An additional study is being undertaken to consider whether an additional management zone should be considered for the Williams River Water Source, for the reach of the Williams upstream of the Chichester River confluence.</li> <li>• In the Congewai water management zone of the Wollombi water source, studies are currently underway to determine the very low flow class limit.</li> </ul>	<p>Reinstatement of previously existing licence conditions</p> <p>Continue to monitor status of the accreditation scheme.</p> <p>Finalise study</p> <p>Finalise study</p> <p>Finalise study</p>

## Part 4 – Environmental water provisions

Table 6: Limits to the availability of water

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
All years	Not implemented	<p>Planned environmental water provisions are implemented via limits to extraction placed on all licences issued under the Act.</p> <p>In the absence of water use information the level of compliance with these licence conditions cannot be established.</p>	See report cards for Part 10 (Limits to the availability of water) for further details.	See comments in Part 10 (Limits to the availability of water).

Table 7: Limits to very low flow class

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
All years	Not implemented	<p>All licences issued under the Act in those water sources with flow classes typically include very low flow conditions on works approvals, however this has not occurred for this plan area.</p> <p>In the absence of the Act conditions, Water User Associations may be operating within the rules specified in the plan.</p>	See report card Part 13 (Mandatory conditions) for further details.	See comments in Part 13 (Mandatory conditions)

Table 8: Limits when no visible flow

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
All years	Not implemented	All licences issued under the Act typically include a visible flow condition on works approvals, however this has not occurred for this plan area.  In the absence of the Act conditions, Water User Associations may be operating within the rules specified in the plan.	See report card Part 13 (Mandatory conditions) for further details.	See comments in Part 13 (Mandatory conditions)

## Part 5 – Basic landholder rights

Table 9: Domestic and stock rights

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
All years	Always implemented	Domestic and stock (D&S) rights are available in the plan area, subject to water availability.	The Office of Water is developing guidelines for the take and use of water for domestic consumption and stock watering. These will set limits on extraction of water for D&S purposes.	Office of Water to ensure that domestic and stock use is limited in line with the State-wide Reasonable use guidelines once they are finalised and approved.

Table 10: Native title rights

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
All years	Not required	No native title rights for water have been established in this plan area during the first five years of its operation.		

Table 11: Harvestable rights

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Always implemented	Harvestable rights are available in the plan area.	There were no changes to the harvestable rights order during the first five years of plan operation.	

Note: No report cards have been prepared for Parts 6 or 7 of the plan as they do not contain any provisions requiring action by the government.

## Part 8 – Rules for granting access licences

Table 12: Licence applications

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Always implemented	Procedures are in place to grant access licences in accordance with the plan.	The plan provides for only a limited set of application types which are allowed.	

## Part 9 – Rules for granting and amending water supply works approvals

Table 13: Runoff harvesting dams and in-river dams

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Always implemented	<p>Procedures are in place to allow for works approvals for runoff harvesting dams to be amended as a result of changes to the share component attached to the work, as required by the plan.</p> <p>Procedures are in place to restrict the construction of in- river dams as required by the plan.</p>		

Table 14: Water supply works approvals

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Always implemented.	Procedures are in place to ensure works approvals are granted in accordance with the plan.		

## Part 10 – Limits to the availability of water

Table 15: Assessment of current long-term average annual extraction limit (LTAAEL)

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years – For Basic Landholder Rights and Access Licences, Other than Major Utility licences held by Hunter Water Corporation</i>	Not implemented	There is no clear numerical statement of the LTAAEL	The plan identifies a method for assessing the numerical limit, however, the information required to quantify the limit is not readily accessible.	The Office of Water to establish a clear numerical statement of the LTAAEL.
<i>All years – For Major Utility licences held by Hunter Water Corporation</i>	Always implemented	Long-term average annual extraction limit for HWC is stated in plan.		

Table 16: Variation to plan limit

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years – For Basic Landholder Rights and Access Licences, Other than Major Utility licences held by Hunter Water Corporation</i>	Not implemented	The LTAAEL has not been changed in the plan area to reflect changes in entitlement, as the LTAAEL has not been quantified.		The Office of Water to establish a clear numerical statement of the LTAAEL.
<i>All years – For Major Utility licences held by Hunter Water Corporation</i>	Always implemented	No variations to the LTAAEL for Major Utility have been required		

Table 17: Compliance with plan limit

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>From year 4 – For Basic Landholder Rights and Access Licences, Other than Major Utility licences held by Hunter Water Corporation</i>	Not implemented	Compliance with the LTAAEL has not been assessed in the manner prescribed in the plan.	<p><i>See Report Cards for Part 11 (Rules for managing access licences – daily flow sharing) for details on water use measurement.</i></p> <p>In the absence of water use information, it is not possible to confirm the level of compliance with the plan and associated proposed licence conditions.</p>	<p><i>See Report Cards for Part 11 (Rules for managing access licences – daily flow sharing) for details of required actions associated with water use measurement.</i></p> <p>The Office of Water to assess the long-term average annual extractions in the unregulated water sources against the plan limits annually following establishment of water use measurement.</p> <p>The Office of Water to report the results of assessment and proposed management actions, if required, once adequate water use data is available.</p>
<i>From Year 4 – For Major Utility licences held by Hunter Water Corporation</i>	Always implemented	Usage reported against LTAAEL by HWC on an annual basis.		

Table 18: Available water determinations (AWDs)

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Always implemented	AWDs for each water source have been made as per plan requirements.	<p>Details of AWDs are available on the NSW Office of Water internet site <a href="http://www.water.nsw.gov.au">www.water.nsw.gov.au</a></p> <p>The Act requires that a public register of AWDs is maintained. AWD made within this water source are not recorded on the register, which is updated by Water NSW, who have generally only updated AWDs for those water sources in which it manages water accounts.</p>	Ensure AWDs are published on the Office of Water's public register.

## Part 11 – Rules for managing access licences

Table 19: Water allocation account management

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
All years	Not implemented	None of the account management provisions have been implemented.	<p>Broad scale metering has not been implemented across NSW, although a targeted program has introduced meters in some parts of the state. Incentives provided to water users through the introduction of a 2 part tariff for those with meters have not resulted in significant numbers of meters being installed.</p> <p>It is unlikely that water use metering will be introduced in the majority of coastal unregulated catchments in the near future, however water extraction measurement options, such as the introduction of water pumping logbooks, may be considered.</p> <p>If metering or alternative means of assessment were introduced procedures would need to be established for undertaking these assessments and establishing and maintaining water accounts.</p>	<p>NSW Office of Water take steps towards establishing feasible methods of assessing extraction in unregulated systems in order to allow water accounting for individual water licences.</p> <p><i>See Report Cards Part 11 (Rules for managing access licences – daily flow sharing) for details of required actions for water use measurement.</i></p>

Table 20: Accounting for bulk water transfers

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
All years	Always implemented	Licences for HWC include requirements to report and account for bulk transfers to or from Gosford Wyong.		

Table 21: Daily flow sharing

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Not implemented	Full daily flow sharing (TDELS and IDELS) has not been introduced in any water source.	The systems required to implement daily flow sharing above the CtP have not been rolled out as anticipated.	

Table 22: Management of surface/groundwater connectivity

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Always implemented	As required by the plan, no distinction is made in specified water sources between extraction from surface water or groundwater.		

## Part 12 – Access licence dealing rules

Table 23: Minister's dealing principles

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
All years	Always implemented	Minister's dealing principles have been implemented  Additional restrictions on temporary trade have also been imposed due to the lack of metering.	The absence of water use monitoring, has introduced further constraints on trade, as temporary trades require information on account water balances. As a result, temporary trades are generally only possible if a water user has installed a metering device.	See Report Cards for Part 11 (Rules for managing access licences – water allocation account management) for details of required actions for water use measurement.

Table 24: Constraints within water source

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
All years	Always implemented	Constraint rules have been implemented to restrict allowable trades as per plan rules.		

Table 25: Change of water source

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
All years	Always implemented	Rules regarding trades resulting in change of water source have been complied with.	The majority of water sources allow trade out of the source, but no trade in. As a result, no trades between water sources have occurred.	

Table 26: Conversion of access licence category

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
All years	Always implemented	Rules regarding conversion of licence category have been complied with.	Very few applications for conversion have been received.	

Table 27: Water allocation assignments between water sources

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Always implemented	<p>The plan allows for water allocation assignments between a number of water sources. The clauses have been complied with.</p> <p>Additional restrictions on water allocation assignments (temporary trade) have also been imposed due to the lack of metering.</p>		<p><i>See Report Cards for Part 11 (Rules for managing access licences – water allocation account management) for details of required actions for water use measurement.</i></p>

## Part 13 – Mandatory conditions

Table 28: Mandatory conditions on access licences and water supply works approvals

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years – For Basic Landholder Rights and Access Licences, Other than Major Utility licences held by Hunter Water Corporation</i>	Not implemented	Conditions have not been placed on access licence or works approval within the plan area.	<p>The NSW Office of Water has undertaken to review licence and approval conditions state-wide. This has ensured the clear intent of conditions to assist licence holders to be compliant.</p> <p>The plan requires that some conditions (pre-existing CtP established by land board hearings) are retained. Determining which CtP conditions from WA licences are retained, and replacing the plan CtP requirements has delayed the rollout of licence conditions.</p>	The issuing of access licence and water supply works approval conditions should be completed as soon as possible.
<i>All years – For Major Utility licences held by Hunter Water Corporation</i>	Always implemented	Conditions have been placed on Hunter Water Corporation's access licences and work approvals		

## Part 14 – System operation rules

Table 29: Release rules for major utilities

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Always implemented	Release rules in relation to provision of environmental flows from Chichester Dam have been complied with.	One of the rules in this section allows the Minister to amend conditions for Hunter Water Corporation regarding releases from Seaham Weir. Release rules have been agreed to under this process, but amendments have not currently been made.	Amendments to reflect the agreed release rules should be made.

## Part 15 – Plan amendments

Table 30: Tidal pool

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>Year 5</i>	Not required	Minister did not exercise discretion.	Rules may be established in the Hunter River Tidal Pool management zone to establish a CtP based on salinity levels. A number of salinity monitoring stations have been installed and data is currently being collected to progress this requirement.	The Office of Water to review data available to determine if CtP can be established.

Table 31: Pool protection

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>By year 6</i>	Not required	Minister did not exercise discretion.	No pools have specifically been identified for protection.	The Office of Water to review data from River Styles to identify any critical pools requiring protection.

Table 32: Floodplain harvesting

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Not required	Minister did not exercise discretion.	There were no changes to the plan or its relevant provisions to account for floodplain harvesting for the first five years of the plan as the NSW Floodplain Harvesting Policy only commenced in May 2013.	The Office of Water to incorporate floodplain harvesting provisions into the plan as required.

Table 33: Amendments due to the construction and/or operation of Tillegra Dam

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Not required	Government decision resulted in Tillegra Dam not being built.	At the time of plan development, Tillegra Dam was being considered for construction. Subsequent to plan commencement, a decision was made to not proceed with this dam.	An amendment to the plan is required, to remove references to Tillegra Dam

Table 34: Alluvial aquifers downstream of the tidal limit

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Not required	Minister did not exercise discretion.	Inclusion of alluvial aquifers downstream of the tidal limit will be undertaken at the plan term review in line with NSW Office of Water policy as specified in Macro water sharing plans – the approach for groundwater.	

Table 35: Stormwater harvesting

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Not required	Minister did not exercise discretion.	Provision not implemented to date. The Office of Water is formulating an urban stormwater harvesting policy to outline the regulatory framework and likely changes to the plan.	

Table 36: Exemption to allow access to very low flow class

Subject of assessment	Assessment	Explanation of assessment	Comment	Required action
<i>All years</i>	Not required	Minister did not exercise discretion.	The plan provides for a number of licences to be exempt from very low flow provisions. These licences are listed at schedule 2. The Minister has not exercised discretion to add or remove any licences to this schedule. However, augmentation of the Murrurundi Local Water Utility system has recently been undertaken on the Pages River. The very low flow provisions have not been reviewed following this augmentation	Review Very Low Flow provisions in light of increased security of supply for Local Water Utility