



Natural Resources Commission

Final report
**Audit of the implementation of the
*Water Sharing Plan for the Hunter
Regulated River Water Source 2016***

June 2021



Enquiries

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Acknowledgement of Country

The Natural Resources Commission acknowledges and pays respect to traditional owners and Aboriginal peoples. The Commission recognises and acknowledges that traditional owners have a deep cultural, social, environmental, spiritual and economic connection to their lands and waters. We value and respect their knowledge in natural resource management and the contributions of many generations, including Elders, to this understanding and connection.

In relation to the Hunter, the Commission pays its respects to the Wanaruah, Worimi, Awabakal, Biripi, Kamilaroi, Darkinjung and Geawegal traditional owners past, present and future, as well as other Aboriginal peoples for whom these waterways are significant. The Commission hopes that the involvement of Aboriginal peoples and Local Aboriginal Land Councils throughout the review process will help to shape collaborative water planning and sharing that is beneficial to Aboriginal peoples and their country.

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Acronyms and abbreviations

2004 plan	<i>Water Sharing Plan for the Hunter Regulated River Water Source 2003</i>
Act	<i>Water Management Act 2000 No 92 (NSW)</i>
AHD	Australian Height Datum
AWD	Available Water Determination
ASAE	Australian Standard on Assurance Engagements
CAIRO	Computer-aided improvements to river operations
CARM	Computer-aided River Management
Commission	the Natural Resources Commission
CIRaM	Compliance Investigation Reporting and Management system
DPIE-Water	Department of Planning, Industry and Environment – Water
DPI-Water	(former) Department of Primary Industries – Water
EWA	Environmental Water Allowance
F	Finding
GL	gigalitre
IPART	Independent Pricing and Regulatory Tribunal
IQQM	Integrated water quantity and quality simulation model
iWAS	Internet Water Accounting System
LTAAEL	Long-term average annual extraction limit
NRAR	Natural Resources Access Regulator
ML	megalitre
O	Observation
Plan	<i>Water Sharing Plan for the Hunter Regulated River Water Source 2016</i>
R	Recommendation
SA	Suggested action
Regulation	<i>Water Management (General) Regulation 2018 (NSW)</i>
WAL	Water access licence
WAS	Water Accounting System
WLS	Water Licensing System

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1 Executive summary

The Natural Resources Commission (the Commission) has audited the *Water Sharing Plan for the Hunter Regulated River Water Source 2016* ('the Plan') to ascertain whether the provisions of the Plan are being given effect to, as required under Section 44 of the *Water Management Act 2000* (the Act).¹

This water sharing plan is important as the Hunter Valley is the largest regional economy in Australia and the major water utilities access licence is held by AGL Macquarie Pty Ltd which generates 35 percent of total NSW electricity. ²

The implementation of this water sharing plan is critical and should the government not be able to meet its commitments under this Plan, there is potential for reputational and financial penalties as well as impacts to communities.

1.1 Audit conclusion

While many of the provisions of the Plan are being implemented, the Commission considers that on balance the provisions of the Plan have not been given full effect in accordance with the Act.

The audit conclusion is based on the procedures performed and the evidence obtained. The Commission is of the view that the information presented fairly reflects the implementation of the Plan.

1.2 Audit findings and recommendations

The Commission found that across most criteria, the relevant organisations generally have systems, processes and procedures in place that align with legislative requirements and support implementation of the Plan.

The audit focussed on current implementation practices to determine recommendations but also considered evidence from the full audit period, which is defined as being from Plan commencement under the Act (1 July 2016) to the date of receipt of agency comments on the draft report (May 2021).

The Commission also found that key aspects of the Plan were being implemented as outlined below:

- water access licences (WAL) and supply work approvals were generally assessed and processed in accordance with legislative requirements
- WAL management tools and processes are generally in place to manage water access licences
- dealings are being undertaken in accordance with legislative requirements

¹ Note that in this report, 'the Act' is used to refer only to the *Water Management Act 2000* and 'the Regulations' refers only to the *Water Management (General) Regulations 2018*.

² Department of Industry (2018) *Greater Hunter Regional Water Strategy*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0008/196055/greater-hunter-regional-water-strategy.pdf.

- mandatory conditions are generally translated accurately to conditions for WALs and supply work approvals
- Available water determinations (AWD) were made and generally applied to licences in accordance with legislative requirements (however, neither long-term average annual extraction limit (LTAAEL) nor maintenance of supply (Clause 30) were considered as part of this process).

Two key issues that should be urgently addressed are:

- NRAR to notify WaterNSW of mandatory conditions relating to its Statement of Approval (20WA204300)³ that reflect requirements in Part 6 (Systems Operations) and Part 9 (Daily Access Rules) of the Plan. Without this, key elements of the Plan are not required to be implemented and cannot be enforced, potentially impacting security of supply to access licence holders, environmental assets and downstream users in the tidal pool. This is covered in **Chapters 6, 11 and 13**.
- DPIE-Water to put in place a robust process to demonstrate Clause 30 can be met prior to making its next AWD announcement. Without this, there is a risk that maintenance of supply to basic landholder rights users as well as 100 percent of share components to holders of domestic and stock, local water utilities and major water utilities cannot be maintained in a period of the worst inflows on record. There is a risk that drought conditions could return. After the recent rains at the end of March 2020, Glenbawn Dam was at 55 percent, which is considerably lower than at the start of the recent drought. Should the storage reach a point where it cannot provide the required maintenance of supply, DPIE-Water will need to demonstrate its AWD process complied with Clause 30 and that preceding AWD's it reserved sufficient water. Currently this cannot be established. This is covered in **Chapter 6.3.3**.

Table 1 outlines the audit findings and recommendations against the ten audit criteria:

- **Criterion 1:** The relevant responsible parties have implemented Plan provisions relating to vision, objectives, strategies and performance (see **Chapter 5**)
- **Criterion 2:** The relevant responsible parties have implemented the system operation rules as set out in the Plan (see **Chapter 6**)
- **Criterion 3:** The relevant responsible parties have implemented Plan provisions relating to limits to the availability of water, specifically long-term average annual extraction limits (see **Chapter 7**)
- **Criterion 4:** The relevant responsible parties have implemented Plan provisions relating to limits to the availability of water, specifically available water determinations (see **Chapter 8**)
- **Criterion 5:** The relevant responsible parties have implemented Plan provisions relating to granting access licences (see **Chapter 9**)
- **Criterion 6:** The relevant responsible parties have implemented Plan provisions relating to managing access licences (see **Chapter 10**)
- **Criterion 7:** The relevant responsible parties have implemented Plan provisions relating to rules for water supply work approvals (see **Chapter 11**)

³ NSW Department of Water and Energy (2009) Statement of Approval 20WA204300 Hunter Regulated River Water Source. Available at: http://www.water.nsw.gov.au/__data/assets/pdf_file/0009/547155/utilities_state_hunterworkapproval.pdf

- **Criterion 8:** The relevant responsible parties have implemented Plan provisions relating to access licence dealing rules (see **Chapter 12**)
- **Criterion 9:** The relevant responsible parties have implemented Plan provisions relating to mandatory conditions (see **Chapter 13**)
- **Criterion 10:** The relevant responsible parties have implemented Plan provisions relating to amendments (where these are not optional) and there is evidence that identified amendments (which may include optional amendments) have been given due consideration. (see **Chapter 14**).

The Commission has raised recommendations (R) only for material findings (F) relating to gaps in the implementation of legislative requirements that result in the plan not being given full effect under Section 44 of the Act. The Commission focussed on the fundamental elements of Plan implementation. The Commission did not explore the quality of implementation in detail in this audit.

The Commission undertook detailed limited assurance sample testing and examined roles and responsibilities, systems, processes, and procedures as relevant for all criteria. Relevant information was examined against detailed legislative requirements as set out for each criterion. Implementation was found to comply with legislative requirements except where the report identifies gaps. In the interests of brevity, neither the discussion nor the tables of findings and observations list all positive findings, only identified gaps to enable future action to be taken to address them.

The Commission did not prioritise legislative provisions or recommendations in relation to gaps in implementing these provisions. The Commission has not assigned specific time frames to recommendations. However, given the findings are gaps to legislative requirements, the Commission considers that all recommendations should be implemented as soon as practicable within a maximum timeframe of 12 months.

The Commission has also raised observations (O) and suggested actions (SA) related to areas that are not specifically legislative requirements but support the implementation of these requirements.

While this report discusses specific consequences for each criterion, the overarching consequence of not giving full effect to provisions of the Plan is that the objectives of the Plan are unlikely to be achieved. These objectives are intended to support environmental, social and economic outcomes. In addition, the principles set out in Section 5 of the Act are not likely being given full effect.

Table 1: Audit findings and recommendations

Findings	Recommendations
Criterion 1 Finding: The relevant responsible parties have not implemented Plan provisions relating to vision, objectives, strategies and performance indicators	
<p>F 1 Provisions related to vision, objectives, strategies, and performance indicators under Part 2 of the Plan were not implemented in the audit period.</p>	<p>R 1 DPIE-Water to lead the monitoring and evaluation of performance indicators to measure the success of the strategies to reach the objectives set out in Part 2 of the Plan and to use generated data to support decision making for plan implementation.</p>
Criterion 2 Finding: The relevant responsible parties have partially implemented the system operation rules as set out in the Plan	
<p>F 2.1 The environmental requirements set out in clause 28(6) were not met on numerous occasions in 2017, 2018 and 2019.</p>	<p>Following implementation of Recommendation R 7.2.3 to notify WaterNSW of mandatory conditions: R 2.1 WaterNSW to operate the river to meet Clause 28 environmental targets and accurately document compliance against these targets.</p>
<p>F 2.2 There is not sufficient evidence to demonstrate that the maintenance of water supply for basic landholder rights users as well as 100 percent of share components to holders of domestic and stock, local water utilities and major water utilities set out in Clause 30 can be met through a period of the worst period of low inflows to this water source.</p>	<p>R 2.2.1 DPIE – Water to establish and implement a process to demonstrate that the maintenance of water supply for basic landholder rights users as well as 100 percent of share components to holders of domestic and stock, local water utilities and major water utilities set out in Clause 30 could be met under the current water allocation process. This should include:</p> <ul style="list-style-type: none"> - consideration of long-term average annual extraction limit (LTAAEL) compliance (see R 3). - checking the figures and assumptions including loss figures in the current resource allocations process against those in the model prior to the next Available Water Determination (AWD) announcement. - rechecking the figures against those in the model any time changes are subsequently made to the water allocation process to ensure Clause 30 can be met prior to any Available Water Determination (AWD) announcement following these changes. <p>R 2.2.2 DPIE-Water to finalise the draft Water Allocation Summary Manual for the Plan, including documenting how the figures and assumptions used align with the model and Clause 30. This should be reviewed by an independent external hydrologist and made available to stakeholders.</p>
Criterion 3 Finding: The relevant responsible parties have not implemented Plan provisions relating to limits to the availability of water, specifically long-term average annual extraction limits	
<p>F 3 Provisions related to limits to availability of water, specifically long-term average annual extraction limits (LTAAEL) set out in Clause 42 of the Plan were not implemented.</p>	<p>R 3 DPIE-Water to utilise extraction data for long-term average annual extraction limit (LTAAEL) assessment and compliance in accordance with Clause 42 of the Plan and incorporate this into the resource assessment process for Available Water Determinations (links to R 2.2.1, R 2.2.2).</p>
Criterion 4 Finding: The relevant responsible parties have partially implemented Plan provisions relating to limits to the availability of water, specifically available water determinations	
<p>F 2.2, F 3 apply</p>	<p>R 2.2.1, R 2.2.2, and R 3 apply</p>
Criterion 5 Finding: The relevant responsible parties have partially implemented Plan provisions relating to granting access licences	
<p>F 5 For former entitlements, WAL holders did not receive written notice of the mandatory conditions until January 2018 (19 months after plan commencement), giving delayed effect to sections Section 66(1A) of the Act.</p>	<p>Nil</p>

Findings	Recommendations
Criterion 6 Finding: The relevant responsible parties have partially implemented Plan provisions relating to managing access licences	
<p>F 6.1 The high flow tally under Clause 55 is not being kept and used to manage access to uncontrolled and supplementary flows under clauses 56(6) and 57(9).</p>	<p>Following implementation of Recommendation R 7.2.3 to notify WaterNSW of mandatory conditions:</p> <p>R 6.1.1 WaterNSW to keep a high flow tally in accordance with Clause 55 to manage access to uncontrolled and supplementary flows under clauses 56(6) and 57(9).</p> <p>R 6.1.2 DPIE-Water to ensure the high flow tally is being kept in accordance with Clause 55 and to ensure compliance with Clause 57(9) and 56(6).</p>
<p>F 6.2 No evidence was provided to demonstrate compliance with Clause 56(2).</p>	<p>R 6.2 DPIE-Water to ensure processes to determine uncontrolled announcements include documentation of compliance with Clause 56(2).</p>
<p>F 6.3 Uncontrolled and supplementary flow announcements do not comply with Clause 56(3) of the Plan as they do not indicate the percentage share component allowed to be taken.</p>	<p>Following implementation of Recommendation R 7.2.3 to notify WaterNSW of mandatory conditions:</p> <p>R 6.3.1 DPIE-Water to update the format of the announcements to include the percentage share component allowed to be taken under Clause 56(3).</p> <p>R 6.3.2 WaterNSW to implement the new format when making announcements to include the percentage share component allowed to be taken under Clause 56(3).</p>
<p>F 6.4 Uncontrolled flow announcements were made in April and June 2020, contrary to Clause 56(4) and 56(5) of the Plan.</p>	<p>R 6.4 DPIE-Water to ensure processes to determine uncontrolled announcements are in accordance with clauses 56(4) and (5).</p>
<p>F 6.5 Clause 56(1) and Clause 57(1) were partially given effect as WaterNSW, not the Minister, made the announcements permitting the taking of uncontrolled flows by General Security, High Security or supplementary WAL holders.</p>	<p>R 6.5 DPIE-Water to formally clarify and implement roles and responsibilities in relation to the process of approving and making announcements of uncontrolled (and supplementary access) flows to give full effect to 56(1) and 57(1). This should include a protocol developed in consultation with DPIE-EES, WaterNSW, AGL and other relevant users, to ensure that the EWA release volume reaches the intended target (delivery point) prior to any uncontrolled or supplementary announcement being made or uncontrolled or supplementary water being taken.</p>
<p>F 6.6 Clause 57(2)(b), 57(4)(b) and 57(6)(b) were not given effect as there was no active management, monitoring or reporting for determining the continuation of supplementary announcements.</p>	<p>Following implementation of Recommendation R 7.2.3 to notify WaterNSW of mandatory conditions:</p> <p>R 6.6 WaterNSW to manage periods of supplementary take to fully comply with clauses 57(2)(b), 57(4)(b) and 57(6)(b).</p>
<p>F 6.7 The supplementary water access requirements set out in clauses 57(10), 57(11) and 57(12) were not met on numerous occasions between 1 July 2016 and 30 June 2019.</p>	<p>R 9.1, R 9.2, R 9.3, SA 6.3.1 and SA 6.3.2 apply</p>
Criterion 7 Finding: The relevant responsible parties have partially implemented Plan provisions relating to rules for water supply work approvals	
<p>F 7.1 Approval holders of existing approvals granted under the <i>Water Sharing Plan for the Hunter Regulated River Water Source 2003</i> did not receive written notice of the mandatory conditions of the Plan for each Approval until January 2018 (19 months after plan commencement), giving delayed effect to section 102(4) and 102(5) and 100(1A) of the Act.</p>	<p>Nil</p>
<p>F 7.2 WaterNSW has not been notified of new mandatory conditions under Clause 67(5), Part 6 and Part 9 of the Plan (relating to the operation of Glenbawn and Glennies Creek dams under the Statement of Approval (20WA20430)) as required by Sections 102(4), 102(5) and 100(1A) of the Act.</p>	<p>R 7.2.1 NRAR to prepare conditions for WaterNSW Statement of Approval (20WA20430) in accordance with relevant Plan provisions as required by Clause 67(5) of the Plan, and sections 102(4), 102(5) and 100(1A) of the Act.</p> <p>R 7.2.2 DPIE-Water to place conditions on the WaterNSW Statement of Approval (20WA20430) in accordance with relevant Plan provisions as required by Clause 67(5) of the Plan, and sections 102(4), 102(5) and 100(1A) of the Act.</p> <p>R 7.2.3 NRAR to notify WaterNSW of its updated Statement of Approval (20WA20430) conditions that reflect relevant Plan requirements as required by Clause 67(5) of the Plan, and sections 102(4), 102(5) and 100(1A) of the Act.</p>
Criterion 8 Finding: The relevant responsible parties have implemented Plan provisions relating to access licence dealing rules	
<p>Meets criteria, no findings identified.</p>	<p>Meets criteria, no recommendations identified.</p>

Findings	Recommendations
Criterion 9 Finding: The relevant responsible parties have partially implemented Plan provisions relating to mandatory conditions	
F 7.1, F 7.2 apply	R 7.2.1, R 7.2.2, R 7.2.3 apply
F 9 AGL's supplementary WAL (10264) did not include requirements set out under Clause 57 in the Plan as required under Clause 66(9) of the Plan until 25 May 2021.	
Criterion 10 Finding: The relevant responsible parties have implemented Plan provisions relating to amendments (where these are not optional) and there is evidence that identified amendments (which may include optional amendments) have been given due consideration	
Meets criteria, no findings identified.	Meets criteria, no recommendations identified.

Table 2: Audit observations and suggested actions

Observations	Suggested actions
<p>O 1 There is no transparent reporting of plan performance in relation to progress towards achieving stated objectives.</p>	<p>SA 1 DPIE-Water to publicly report on progress towards objectives of the Plan.</p>
<p>O 2.1 WaterNSW annual compliance reports for the WaterNSW Statement of Approval (20WA204300) do not reflect all requirements under Part 6 or Part 9 in the Plan.</p>	<p>Following implementation of Recommendation R 7.2.3 NRAR to notify WaterNSW of mandatory conditions:</p> <p>SA 2.1.1 WaterNSW to align implementation and annual compliance reporting protocols to give effect to all relevant Plan provisions for WaterNSW Statement of Approval (20WA204300).</p> <p>SA 2.1.2 NRAR to update the Annual Compliance Reporting and assessment processes to ensure annual compliance reporting for the WaterNSW Statement of Approval (20WA204300) reflects all relevant Plan provisions, in consultation with DPIE-Water.</p> <p>SA 2.1.3 NRAR to ensure that any non-compliances are appropriately followed up to improve compliance with all relevant Plan provisions for the WaterNSW Statement of Approval (20WA204300).</p>
<p>O 2.2 The order of priority of take when supply capability is insufficient as required under Clause 32 is not documented.</p>	<p>SA 2.2 DPIE-Water to formally document guidance for operators to prioritise the provision of remaining supply capability under Clause 32. This should be provided to WaterNSW for implementation should Clause 32 being triggered.</p>
<p>O 2.3 Rates of release are not formally documented to guide implementation of Clause 34.</p>	<p>SA 2.3.1 WaterNSW to formally document what rate of change of release operators should adhere to in response to an order. This documentation should cover how fast the release should be, taking into considerations such as dam levels, other orders and the weather and it should be externally peer reviewed.</p> <p>SA2.3.2 DPIE-Water to establish rules in relation to the rates of change in consultation with WaterNSW.</p>
<p>O 2.4 There is no guidance in place to manage water orders when remaining allocations are low in accordance with Clause 35.</p>	<p>SA 2.4.1 WaterNSW to prepare a drought management plan documenting the required drought measures and operational procedures (including management of orders) under increasing drought conditions. This should consider the regional drought contingency plan and be developed in consultation with DPIE- EES and licence holders.SA 2.4.2 DPIE-Water to set requirements for the drought contingency plan and approve the drought contingency plan once developed.</p>

O 2.5 *Water Delivery Flood Operations Procedures Glenbawn Dam and Water Delivery Flood Operations Procedures Glennies Ck Dam* are in draft, which may compromise implementation of clauses 36 and 37 in times of a flood.

SA 2.5 WaterNSW to update and sign off the *Water Delivery Flood Operations Procedures Glenbawn Dam and Water Delivery Flood Operations Procedures Glennies Ck Dam* and ensure they are part of formal document management process. Plan updates as part of this process should ensure that the procedures align with clauses 36 and 37 in the Plan and the Statement of Approval (20WA204300).

O 3 Roles, systems and processes, including quality assurance for long-term average annual extraction limit assessment and compliance work are not documented.

SA 3 DPIE-Water to document the roles, responsibilities, systems, processes and procedures relevant to Long-Term Average Annual Extraction Limit (LTAAEL) assessment management and compliance for the Plan.

O 6.1 Roles and responsibilities in relation to keeping a high flow tally under Clause 55 are not clear.

SA 6.1 DPIE-Water to work with WaterNSW to document the process for keeping and checking the high flow tally under Clause 55.

O 6.2 High flow tally is not transparent to users.

Following implementation of Recommendation **R 7.2.3** to notify WaterNSW of mandatory conditions:

SA 6.2 WaterNSW to make the high flow tally under Clause 55 transparent to users so water users can manage compliance with Clause 56 and 57 of the Plan.

O 6.3 AGL's supplementary WAL (10264) annual compliance reports do not reflect current requirements under Clause 57 in the Plan.

SA 6.3.1 NRAR and DPIE-Water to update the annual compliance reporting and assessment processes to ensure annual compliance reporting for AGL's supplementary WAL (10264) reflects relevant Plan provisions including Clause 57.

SA 6.3.2 NRAR to ensure that any non-compliances are appropriately followed up to improve compliance with relevant Plan provisions for AGL's supplementary WAL (10264).

O 8 The NSW Water Register contains dealing related information which is incomplete and uses old terminology.

SA 8 WaterNSW to increase the accuracy and extent of the dealings information available on the NSW Water Register for improved transparency.

2 The Commission's role and audit approach

2.1 The Commission's role in auditing management plans

The Commission is an independent body with broad investigating and reporting functions that aim to establish a sound evidence base to inform natural resource management in the social, economic and environmental interests of NSW.

The Commission has a role under Section 44 of the Act to audit water management plans within the first five years of each plan to ascertain whether their provisions are being given effect to. This role began on 1 December 2018 under changes to the Act.

Water management plans include:

- **water sharing plans** – statutory documents that establish the rules for sharing water between the environment and other water users
- **floodplain management plans** – frameworks to coordinate flood work development to minimise future changes to flooding behaviour, and to increase awareness of risk to life and property from flooding.

More detail on the purpose of plans is provided in **Section 3.1**.

2.2 Audit objective

The objective of this audit was to determine, in accordance with Section 44 of the Act, whether the provisions of the Plan are being given effect to.

2.3 Audit standards

This audit was executed as a limited assurance engagement in accordance with the following standards:

- *Standards on Assurance Engagements (ASAE) 3000 Assurance Engagements other than Audits or Reviews of Historical Financial Information*
- *ASAE 3100 Compliance Engagements*
- *Auditing Standard ASQC 1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, and Other Assurance Engagements.*

In accordance with these standards, the Commission has:

- complied with applicable ethical requirements
- planned and performed procedures to obtain independent assurance about whether the relevant responsible parties have implemented the Plan, in all material respects, as evaluated against the audit criteria.

2.4 Audit criteria

Audit criteria were developed based on common parts of water sharing plans that the Commission considered warranted examination to ascertain whether provisions are being given effect to. The audit criteria were:

- **Criterion 1:** The relevant responsible parties have implemented plan provisions relating to vision, objectives, strategies and performance
- **Criterion 2:** The relevant responsible parties have implemented the system operation rules as set out in the plan
- **Criterion 3:** The relevant responsible parties have implemented plan provisions relating to limits to the availability of water, specifically long-term average annual extraction limits
- **Criterion 4:** The relevant responsible parties have implemented plan provisions relating to limits to the availability of water, specifically available water determinations
- **Criterion 5:** The relevant responsible parties have implemented plan provisions relating to granting access licences
- **Criterion 6:** The relevant responsible parties have implemented plan provisions relating to managing access licences
- **Criterion 7:** The relevant responsible parties have implemented plan provisions relating to rules for water supply work approvals
- **Criterion 8:** The relevant responsible parties have implemented plan provisions relating to access licence dealing rules
- **Criterion 9:** The relevant responsible parties have implemented plan provisions relating to mandatory conditions
- **Criterion 10:** The relevant responsible parties have implemented plan provisions relating to amendments (where these are not optional) and there is evidence that identified amendments (which may include optional amendments) have been given due consideration.

These criteria were selected for audit as they are:

- key to Plan implementation
- governed by requirements under the Act (for example, granting and managing access licences and), or
- not explicitly governed by requirements under the Act but important for determining if Plan implementation supports, or is in accordance with, the Act requirements (for example, monitoring and performance indicator assessment information can be used to inform legislated plan reviews).

2.5 Audit procedures

Audit procedures included:

- document review, including overarching frameworks, procedures, guidelines, manuals, policies and reports

- interviews with process owners, implementors and users including:
 - auditee NSW responsible organisations- Department of Planning, Industry and Environment – Water (DPIE-Water), the Natural Resources Access Regulator (NRAR) and WaterNSW
 - other organisations with an historical or current role in aspects of floodplains, but without responsibility for plan implementation – DPIE – Environment, Energy and Science (EES)
 - Land Registry Services.
- walk throughs of material activities, including key systems and processes with system implementors, owners and users
- sampling of data.

These procedures were carried out on a test basis to provide sufficient appropriate evidence to provide a limited assurance conclusion.

2.6 Limitations

This audit was a limited assurance engagement. The procedures performed in a limited assurance engagement vary in nature and timing and are of lesser extent than for a reasonable assurance engagement. As such, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained through a reasonable assurance engagement.

Further, the audit cannot be relied on to comprehensively identify all weaknesses, improvements or areas of non-compliance. Inherent limitations mean that there is an unavoidable risk that some material matters may not be detected, despite the audit being properly planned and executed in accordance with the standards outlined in **Section 2.3**.

2.7 Exclusions

The audit has not provided an assessment against all provisions or parts in the Plan. Specifically, it does not assess the:

- introduction (Part 1)
- bulk access regime and environmental water (typically parts 3 and 4)
- requirements for water (typically Part 5).

It has not examined or provided an opinion regarding:

- compliance or non-compliance of individuals
- whether the Plan is being implemented efficiently
- whether stated objectives are being achieved
- whether the Plan is effective, appropriate or in line with the Act
- compliance with any legislation unrelated to the Act.

3 Audit context

The first water sharing plan for the Hunter Regulated River Water Source under the Act was the *Water Sharing Plan for the Hunter Regulated River Water Source 2003* (referred to as the '2004 plan'). The current plan, the *Water Sharing Plan for the Hunter Regulated River Water Source 2016* (referred to as 'the Plan', the subject of this audit) replaced the 2004 plan and commenced 1 July 2016.

3.1 Purpose of water sharing plans under the Act

Water sharing plans, like all water management plans, are subject to the objects, water management principles, requirements and general provisions in the Act.⁴

The following specific principles related to water sharing are stated in Section 5(3) of the Act and are part of a broader set of water management principles.⁵ The Act specifies that:

- a) sharing of water from a water source must protect the water source and its dependent ecosystems, and*
- b) sharing of water from a water source must protect basic landholder rights, and*
- c) sharing or extraction of water under any other right must not prejudice the principles set out in paragraphs (a) and (b).*

Core provisions for water sharing plans are stated in Section 20 of the Act, which specifies matters that provisions in water sharing plans must address.

3.2 Challenges to implementing the water sharing plans

3.2.1 NSW water reforms and compliance has focussed on the Murray-Darling Basin

Responsible parties with a role in water management implementation are currently undertaking policy reforms, prioritising the implementation of the Murray-Darling Basin Plan, water resource plans and long-term environmental watering plans. This has contributed to the Plan having fewer resources assigned for implementation.

In relation to compliance and enforcement, the *Natural Resources Access Regulator Act 2017* specifically provides that NRAR's priorities are to be set independently. These regulatory priorities are reviewed on a regular basis and published.⁶ Interviews with NRAR reinforced that the northern Murray-Darling Basin has been a regulatory priority in accordance with

⁴ Objects, water management principles, requirements and general provisions for all water management plans are stated in Section 3, Section 5, Section 16 and Section 17 of the Act, respectively.

⁵ *Water Management Act 2000*, Section 5.

⁶ NRAR (2019) *Natural Resource Access Regulator Regulatory Priorities 2019 – 2021*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0020/227324/NRARs-regulatory-priorities-2019-to-2021.pdf.

NRAR's risk assessments and therefore is the focus of proactive compliance activities.^{7, 8, 9} In the Plan area, some proactive compliance work focused on specific theme areas has been undertaken in the plan areas by NRAR. However, no specific compliance information was available to inform this audit (see **Chapter 13**). NRAR monitors and inspects reactively in response to reports of alleged breaches of water laws, incidents or other intelligence received. NRAR also receives reports of suspicious water activities from members of the public and other regulators such as councils. No documented risk assessment was provided to the Commission as part of this audit. The Commission is not seeking to comment on the appropriateness of decisions regarding NRAR's compliance priorities.

3.2.2 Roles and responsibilities have changed over time

There has been a complex history of changes in government agencies dealing with water management and regulation, and their roles and governance. An investigation by the NSW Ombudsman into water compliance and enforcement reported that the high level of restructuring and moving of water administration functions and regulation between different government agencies has resulted in significant impacts on staff, loss of expertise and corporate knowledge, and disruptions to systems, strategy and continuity of service delivery.¹⁰

Roles and responsibilities for various criteria have changed during the audit period.

⁷ NRAR (2019) *Natural Resource Access Regulator Regulatory Priorities 2019 – 2021*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0020/227324/NRARs-regulatory-priorities-2019-to-2021.pdf

⁸ NRAR (n.d.) *Routine monitoring campaign map*. Available at: <https://www.industry.nsw.gov.au/natural-resources-access-regulator/monitoring-and-auditing/routine-monitoring-program/map>

⁹ NRAR's routine monitoring program is focussed on the inland water sharing plan areas.

¹⁰ NSW Ombudsman (2017) *Investigation into water compliance and enforcement 2007-17*. Available at: https://www.ombo.nsw.gov.au/__data/assets/pdf_file/0012/50133/Investigation-into-water-compliance-and-enforcement-2007-17.pdf.

4 Plan area

The Plan area is in the Hunter Catchment on the central east coast of NSW, which drains an area of approximately 17,500 square kilometres. The Plan area covers the regulated Hunter River below Glenbawn and Glennies Creek dams, and downstream to the tidal limit of the Hunter Estuary (**Figure 1**).¹¹

The Plan includes two major water storages operated by WaterNSW. These are Glenbawn, and Glennies Creek dams, which provide bulk water to licence holders via releases into rivers below the dams or via pipelines.

Most of the population in the Hunter Catchment is found on the coast, with over half the region's population in the Newcastle and Lake Macquarie local government areas (over 360,000 in 2018).¹² Other major population centres in the Plan area are Maitland, Cessnock, Denman, Aberdeen, Merriwa, Singleton, Kurri Kurri, Muswellbrook, Scone and Branxton-Greta.¹³

The Hunter Valley includes important biodiversity assets, including significant areas of national parks and nature reserves and internationally important wetlands, such as the Ramsar-listed Hunter Estuary Wetlands.¹⁴

The Hunter Valley and its water sources is an area of cultural significance to the Wanaruah, Worimi, Awabakal, Biripi, Kamilaroi, Darkinjung and Geawegal Nations.¹⁵ The Plan area contains areas of spiritual, cultural and economic importance to the people of these nations.¹⁶

The Hunter Valley has a high degree of development and industry. It is the largest regional economy in Australia, driving around 28 percent of regional NSW's total economic output and accounts for the highest share of regional employment (22 percent).¹⁷ The region's economy is diverse, including significant mining, agriculture, tourism, viticulture, thoroughbred breeding and fisheries industries.¹⁸

¹¹ DPI-Water (2016) *Water Sharing Plan for the Hunter Regulated River Water Source: Background document*. https://www.industry.nsw.gov.au/__data/assets/pdf_file/0006/166848/hunter-regulated-river-background.pdf.

¹² The sum of all LGAs which are entirely or partially included in the Plan area is 672,474, based on 2018 Australian Bureau of Statistics data.

¹³ DPI-Water (2016) *Water Sharing Plan for the Hunter Regulated River Water Source: Background document*. https://www.industry.nsw.gov.au/__data/assets/pdf_file/0006/166848/hunter-regulated-river-background.pdf.

¹⁴ NSW DPIE (2018) *Hunter Estuary Wetlands*. Available at: <https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands/hunter-estuary-wetlands>.

¹⁵ Horton, D.R. (1996) Aboriginal Studies Press, The Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS), and Auslig/Sinclair, Knight, Merz (2020) *AIATSIS map of Indigenous Australia*. Available at: <https://aiatsis.gov.au/explore/articles/aiatsis-map-indigenous-australia>.

¹⁶ DPI-Water (2016) *Water Sharing Plan for the Hunter Regulated River Water Source: Background document*. https://www.industry.nsw.gov.au/__data/assets/pdf_file/0006/166848/hunter-regulated-river-background.pdf.

¹⁷ Department of Industry (2018) *Greater Hunter Regional Water Strategy*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0008/196055/greater-hunter-regional-water-strategy.pdf.

¹⁸ Department of Industry (2018) *Greater Hunter Regional Water Strategy*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0008/196055/greater-hunter-regional-water-strategy.pdf.

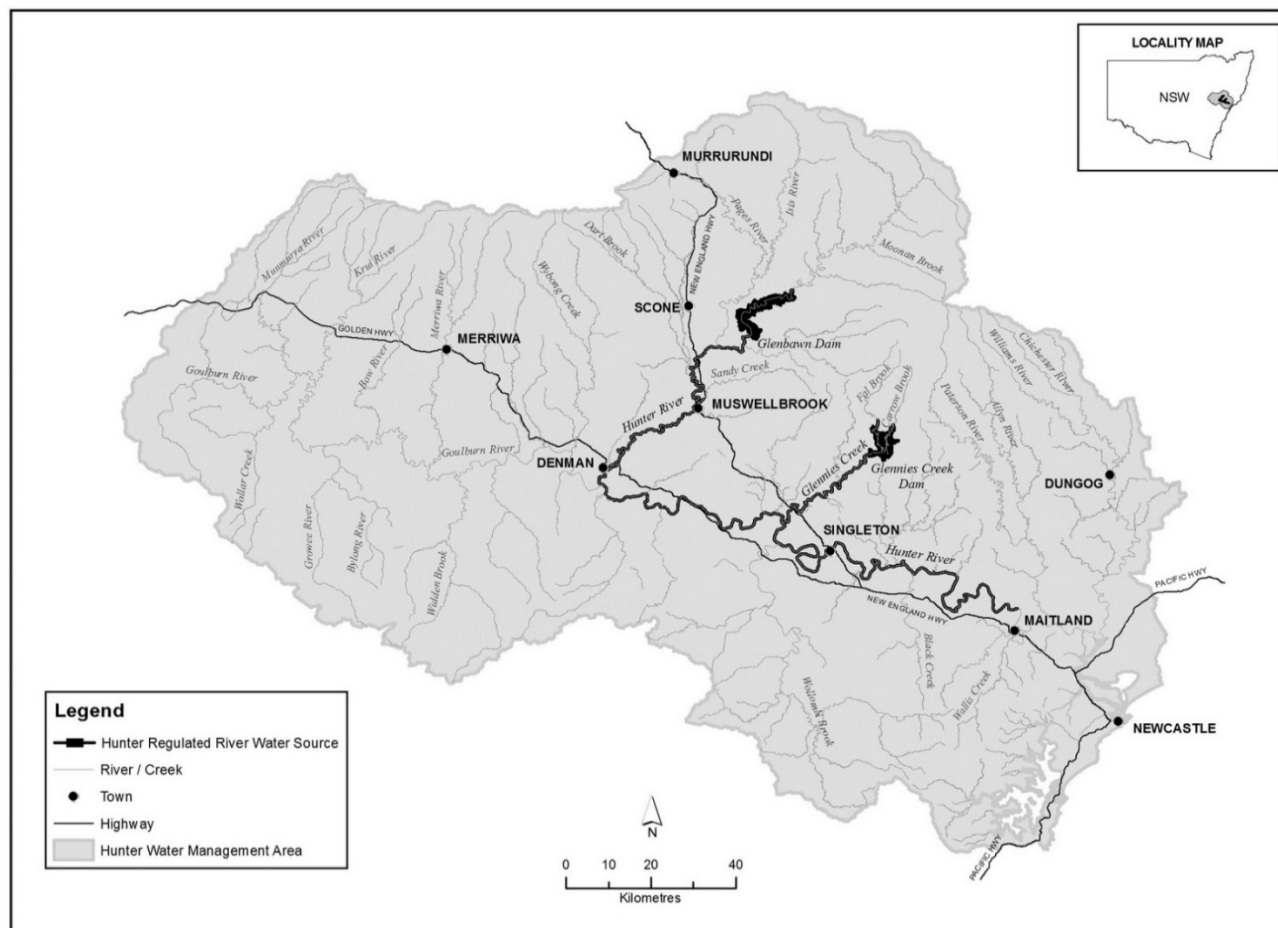


Figure 1: Plan area map for the *Water Sharing Plan for the Hunter Regulated River Water Source 2016*¹⁹

¹⁹ NSW Government (2020) *Water Sharing Plan for the Hunter Regulated River Water Source 2016*. Available at: <https://www.legislation.nsw.gov.au/view/html/inforce/current/sl-2016-0376>.

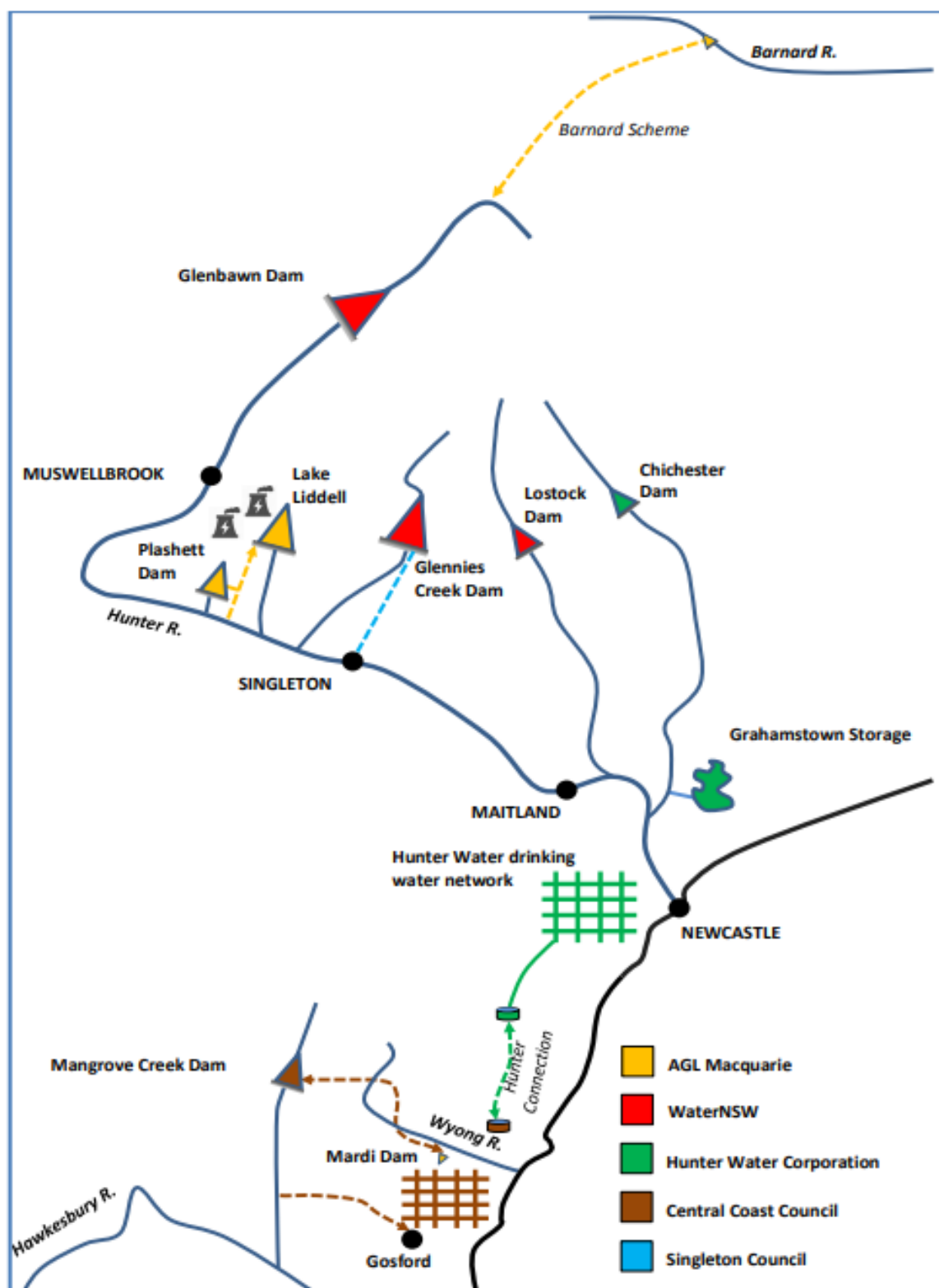


Figure 2: Hunter valley and Central Coast infrastructure schematic and ownership²⁰

²⁰ NSW Department of Industry (2018) *Greater Hunter Regional Water Strategy*. p.24 Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0008/196055/greater-hunter-regional-water-strategy.pdf

5 Criterion 1 – Vision, objectives, strategies and performance indicators

5.1 Criterion overview

Part 2 of the Plan is made in accordance with Section 35(1) the Act. This section requires water sharing plans to include a vision statement, objectives consistent with the vision statement, strategies for reaching objectives, and performance indicators to measure the success of strategies. The key clauses within Part 2 of the Plan examined for this audit were:

- Clause 10(4) – assessment of environmental performance indicators
- Clause 11(4) – assessment of economic performance indicators
- Clause 12(4) – assessment of social and cultural indicators.

These clauses require the performance indicators to be assessed by comparing the ecological condition, the economic benefits and the social and cultural use of water at plan commencement and plan expiration and considering the extent of change that can be attributed to the rules and strategies of the plan.

Whilst the clauses specify measurement should occur only at plan expiration, the Commission would expect to see at a minimum a plan for what data will be collected, how it will be collected for the purpose of undertaking this assessment and some progress towards implementing this plan.

5.2 Current roles, systems and processes

DPIE-Water is the lead agency responsible for giving effect to performance provisions, including during the audit period.²¹ This includes using performance indicators to measure the success of the strategies in meeting Plan objectives.

The Commission considers that there were no systems, processes, procedures to manage the implementation of Plan provisions relating to monitoring performance to measure the success of the strategies in meeting Plan objectives during the audit period.

5.3 Performance monitoring provisions have not been given effect to

DPIE-Water has not monitored or assessed performance indicators

While the Plan includes provisions to satisfy this requirement of the Act, the relevant responsible parties have not implemented them during the audit period.²²

DPIE-Water indicated that no active monitoring has been undertaken over the audit period and there is no formal assessment of performance indicators available or planned. While some data relevant to some performance indicators are being collected on quantity and flow, this information is not comprehensive or being used for the purpose of implementing Criterion 1.

²¹ DPIE-Water is assumed to be responsible, except where other agencies are identified to be responsible (through the WaterNSW Operating Licence and the *Natural Resources Access Regulator Act 2017*).

²² Note: there is no auditable provision in the plans that relates to achieving the vision. The vision is accepted as a statement in the plans, and it is assumed that the intent of the plan performance indicators clause is to achieve the vision through meeting the objectives.

While the Department of Planning, Industry and Environment – Environment, Energy and Science (DPIE-EES) undertakes some monitoring programs, they have not produced any relevant data to inform performance indicator evaluation for the Plan within the audit period. There is one potential monitoring project that is soon to commence that could inform review of the Plan: Annual monitoring of the Endangered Ecological Community Hunter Floodplain Red Gum Woodland in the NSW North Coast and Sydney Basin Bioregions in the Upper Hunter.²³

DPIE-EES led the monitoring of the Environmental Water Allocation (EWA) release that occurred in June 2020 for 21 days in Hunter River with the objective of assisting downstream migration of Australian bass to reach their spawning grounds and supporting ecosystem resilience and overall riverine health.²⁴ The results are not yet available and are still undergoing analysis.

The lack of implementation of these provisions is likely due in part to the lack of a robust monitoring, evaluation and reporting (MER) framework for the Plan. Without this:

- the linkages between performance indicators and objectives are not clear
- the performance indicators are not specific, measurable, achievable, relevant and time-bound (SMART), and no metrics and targets have been set to better define these performance indicators.

The lack of MER is a significant and recurring issue across NSW that has been repeatedly highlighted by stakeholders, in previous Commission reviews,²⁵ by the National Water Commission²⁶ and in Section 44 implementation audits undertaken in 2019 for other water sharing plans.²⁷

5.4 Potential impacts

Performance indicators are key to measuring the success of plan strategies in meeting Plan objectives. Potential impacts of not using performance indicators include having:

- no ability to determine and demonstrate if plan implementation aligns with the objects and principles of the Act (including to inform Section 43A plan reviews)
- no ability to benchmark or identify good practices that could be adopted in other water sharing plan areas
- no ability to transparently report on the achievement of plan outcomes

²³ Office of Environment and Heritage (n.d.). *Hunter Floodplain Red Gum Woodland in the NSW North Coast and Sydney Basin BioRegions-profile*. Available at:

<https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=20141>

²⁴ DPIE-EES (2020). *Water to deliver boost for Australian bass in Hunter River*. Available at:

<https://www.environment.nsw.gov.au/news/water-to-deliver-boost-for-australian-bass-in-hunter-river>

²⁵ Natural Resources Commission (n.d.) *Water sharing plan reviews*. Available at:

<https://www.nrc.nsw.gov.au/wsp-reviews>.

²⁶ National Water Commission (2014) *The National Water Planning Report Card 2013*, p. 11. Available at:

<http://www.agriculture.gov.au/SiteCollectionDocuments/water/2013-national-water-planning-report-card.pdf>; DPIE-Water (2018) *Audits of water sharing plans under Section 44 of the Water Management Act 2000*. Available at: <https://www.industry.nsw.gov.au/water/plans-programs/water-sharing-plans/water-sharing-plan-audits>.

²⁷ DPIE-Water. (n.d.) *Audits of water sharing plans under Section 44 of the Water Management Act 2000*. Available at: <https://www.industry.nsw.gov.au/water/plans-programs/water-sharing-plans/audits>.

- insufficient information to make evidence-based decisions, apply adaptive management, or continually improve implementation
- no ability to measure the consequence of the partial or non-implementation of Plan provisions (see remaining chapters in this report).

5.5 DPIE-Water is making efforts to improve MER

DPIE-Water indicated that MER implementation has not been a focus in the Plan area during the audit period. Instead, MER efforts have been prioritised in the Murray-Darling Basin, with several MER plans being developed to satisfy *Basin Plan 2012* requirements.

DPIE-Water staff indicated that work is progressing to improve inland MER planning that is intended to be rolled out to coastal areas as plans are replaced. The Commission is supportive of this and is of the view that DPIE-Water should lead the monitoring and evaluation of performance indicators and use generated data to support decision making for Plan implementation. It should also ensure that planning efforts are comprehensive and associated funding accounts for implementation arrangements. For example, MER planning funding should not be allocated without measures to fund the implementation of MER plans.

5.6 Recommendations and suggested actions

The Commission makes one recommendation and raises one suggested action.

R 1	The Commission recommends that DPIE-Water lead the monitoring and evaluation of performance indicators to measure the success of the strategies to reach the objectives set out in Part 2 of the Plan and to use generated data to support decision making for plan implementation.
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Although not a specific requirement of the Plan or the Act, public reporting is becoming increasingly important in relation to water sharing. It was a key theme in reports such as Ken Mathews' *Independent investigation into NSW water management and compliance*²⁸ and in the NSW Government's *Water Reform Action Plan*.²⁹

Data accessibility to support transparency is consistent with the NSW Government's *Open Data Policy*³⁰ and its importance is highlighted in DPIE-Water's statement that '*we provide transparent stewardship of water resources, and deliver services and reforms which support sustainable and healthy environments, economies and societies*'.³¹

SA 1	The Commission suggests that DPIE-Water publicly report on progress towards objectives of the Plan so that all stakeholders (including community stakeholders) are informed on the extent to which Plan objectives are being met.
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²⁸ Ken Mathews (2017) *Independent investigation into NSW water management and compliance*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0016/120193/Matthews-interim-report-nsw-water.pdf.

²⁹ NSW Government (2017) *Securing our water NSW Government water reform action plan*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0015/312144/nsw-government-water-reform-action-plan.pdf

³⁰ NSW Department of Finance, Service and Innovation (2016) *NSW Government Open Data Policy*. Accessed 25 September 2020 at: <https://data.nsw.gov.au/nsw-government-open-data-policy>.

³¹ DPIE-Water (n.d.) *Water*. Available at: <https://www.dpie.nsw.gov.au/our-work/water>.

6 Criterion 2 – System operation rules

6.1 Criterion overview

Part 6 of the Plan sets out system operations rules relevant to the Plan. This section includes provisions for environmental flows, operations during floods and times of insufficient supply capability, it also importantly sets out maintenance of supply rules. Clauses examined in this part were:

- Clause 28(6) – Clause 28 sets out environmental flow targets for normal and dry conditions and sets compliance rules where flows are less than targets. Clause 28(6) was examined in detail, the other sub clauses were either not triggered or were not auditable.
- Clause 29- sets out the rules for managing the 20,000 ML environmental water allowance.
- Clause 30- sets out requirements for maintaining security to supply of basic rights and maintaining 100 percent of share components for local water utilities, and major water utilities in a period of the worst inflows on record.
- Clause 31- sets out rules for managing capacity constraints.
- Clause 32- sets out rules to prioritise supply by access licence type when supply capability is insufficient to satisfy water requirements.
- Clause 34- sets out rules for changing release rates.
- Clause 35- sets out rules for grouping the release of orders when remaining allocations are low.
- Clause 36- sets out rules for the operation of Glenbawn and Glennies Creek dams during floods and spills.
- Clause 37- sets out flood mitigation zone rules for Glenbawn Dam.

In the instance where a clause was not triggered in the audit period, it was unable to be tested and therefore findings or recommendations were not made. In some of these cases, the Commission examined processes and procedures in place to manage the system should the clause be triggered. Observations and suggested actions were made in some cases to reduce potential future risks of non-compliance, and risks to the environment and water users.

Clause 33 sets out rules for managing the impacts in the case of physical supply constraints. Clause 33 remains inactive given there has been no order under Section 68 of the Act to trigger an amendment to extraction components and no licences have associated mandatory conditions under Clause 66(1)(d) in the Plan.

6.2 Current roles, systems and processes

A summary of agency roles is as follows:

WaterNSW is responsible for:

- running river operations
- operating (“capture, store and release water”) the dams and ensure the system is operated to meet requirements set out in its Statement of Approval (20WA20430) concerning the operation of Glenbawn and Glennies Creek dams
- implementing its Statement of Approval

- providing input to the resource allocations process for DPIE-Water's use in making AWDs
- preparing draft drought contingency plans to DPIE-Water.

NRAR is responsible for issuing and managing compliance with WaterNSW's Statement of Approval (20WA204300).

DPIE-Water is responsible for:

- the resource allocations process and ensuring that the Environmental Water Allowance is available.
- reviewing annual compliance reports against WaterNSW's Statement of Approval (20WA204300)
- setting priorities for take when supply capability is insufficient
- setting requirements for drought contingency plans and approving drought contingency plans prepared by WaterNSW.

DPIE- Environment Energy Science (EES) provides advice to DPIE-Water as required and is responsible for:

- management of environmental water
- planning for the use of the environmental water allowance via environmental water advisory group.

The main systems and processes to operate the system are:

- **Computer-aided River Management (CARMLite)**- maintained by WaterNSW. This system transitioned from **Computer-aided improvements to river operations (CAIRO)**, which is a computer system (based on Microsoft Excel) which is a tool for River Operations. By the entry of known factors such as Water Orders and Water Taken, and by using empirical data such as Actual Unaccounted Differences and climatic data, it assists in the calculation of available flows at various points along a Stream.
- **Realtime data** website- maintained by WaterNSW, which makes publicly available relevant data such as release volumes from the dams, flow gauge data, and dam levels³².
- **Resource assessment spreadsheet- maintained by WaterNSW**, used to support the resource allocations process, maintain the Environmental Water Allowance and ensure essential supplies are provided view. It is reviewed by DPIE-Water and used to make AWD orders.
- **Water Accounting System (WAS)** maintained and used by WaterNSW to manage accounts.
- **Integrated water quantity and quality simulation model (IQQM)** model for the Plan- this is maintained by DPIE-Water and underpins the Plan rules including Clause 30.
- **Compliance Investigation Reporting and Management System (CIRAM) system**, maintained and used by NRAR for compliance purposes.

³² WaterNSW (n.d.) *Realtime data*. Available at: <https://realtimedata.watnsw.com.au/>

- **Compliance assessment templates** – maintained and used by NRAR guide assessment annual compliance reports submitted by WaterNSW and major water utilities and other entities as required.

Relevant procedures are discussed in the sub-sections below.

The Commission considers that there are opportunities to improve systems, processes or procedures to support the implementation of Plan provisions relating to Systems Operations.

6.3 Systems operations provisions have partially been given effect to

Provisions of the Plan set out in Part 6 have not been included in the WaterNSW Statement of Approval (20WA204300) for Glenbawn and Glennies Creek dams (see **Chapter 11** and recommendation **R 7.2.3**). Nor are these provisions considered as part of current Annual Compliance Reporting processes. This is a likely cause for partial implementation of Criterion 2- Systems Operations and should be urgently addressed.

The Commission raises three suggested actions, following the implementation of **R 7.2.3**: NRAR to notify WaterNSW of mandatory conditions:

SA 2.1.1	WaterNSW to align implementation and annual compliance reporting protocols to give effect to all relevant Plan provisions for WaterNSW Statement of Approval (20WA204300).
SA 2.1.2	NRAR and DPIE-Water to update the Annual Compliance Reporting and assessment processes to ensure annual compliance reporting for the WaterNSW Statement of Approval (20WA204300) reflects all relevant Plan provisions, in consultation with DPIE-Water.
SA 2.1.3	NRAR to ensure that any non-compliances are appropriately followed up to improve compliance with all relevant Plan provisions for the WaterNSW Statement of Approval (20WA204300).

6.3.1 Environmental flow provisions under Clause 28 were not given effect

Clause 28 of the Plan requires that the system is managed to ensure specified target environmental flows are met. Using data available from the WaterNSW Real Time data website,³³ the Commission performed an analysis of flows against Plan targets set out in Clause 28. For the entire audit period we found multiple instances where flows were below environmental targets and there were no instances of paying back these deficits when flows were above target. This analysis has found the following instances where the targets were not met:

- Greta (gauge 210064):
 - 109 instances where daily flow was less than 75 percent of the target occurring in 2017, 2018, 2019 and 2020

³³ WaterNSW (n.d.) *Realtimedata*. Available at: <https://realtimedata.waternsw.com.au/>

- two instances where flows were within 25 percent for 10 separate days over a one - month period. These occurred in August 2017 and October 2019.
- Liddell (gauge 210083):
 - 63 instances where daily flow was less than 75 percent of the target occurring in 2017, 2018 and 2019
 - one instance where flows were within 25 percent for 7 consecutive days or more. This event occurred between 15 and 22 August 2018.

Clause 28(8) requires that only excess flows up to 125 percent of the target can be used to “pay back” water under Clause 28(6). These excess flows equated to 225 ML at Liddell and 516 ML at Greta. The remaining deficit, taking into account this “paid back” water is 1,253 ML at Liddell and 2,389 ML at Greta.

Clause 28(6) is considered met if any deficit is made up in subsequent months by “paid back water”. However, “paid back” water was not adequate to make up the deficits in calendar years 2017, 2018 and 2019.

These environmental flow targets were changed from the previous plan to include dry condition targets to achieve two key benefits:

- water is maintained in the dam for slightly longer when entering a drought
- natural drying cycle occurs which improves ecological conditions.³⁴

Not complying with these targets means that the intended benefits of the Plan are not being achieved. WaterNSW staff indicated one complication in this system is that water users do not always order water prior to pumping, which makes operation of the system to achieve any target difficult. This was supported by NRAR’s *Progress Report 2019-20*.³⁵ The Commission has not investigated this issue further, but if it is an issue impacting the achievement of environmental targets, WaterNSW should report this issue and it should be investigated, and appropriate action taken by NRAR.

WaterNSW annual compliance reports do not reflect Plan targets in accordance with clauses 28(1-3).

The Commission makes one recommendation and raises no suggested actions:

R 2.1	Following implementation of R 7.2.3 NRAR to notify WaterNSW of mandatory conditions, WaterNSW to operate the river to meet Clause 28 environmental targets and accurately document compliance against these targets.
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³⁴ DPI-Water (2016). *Water Sharing Plan for the Hunter Regulated River Water Source Background Document*. P.24. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0006/166848/hunter-regulated-river-background.pdf

³⁵ NRAR (2020). *The Natural Resource Access Regulated Progress Report 2019-20*. p.23 Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0009/324909/nrar-progress-report-2019-20.pdf

6.3.2 Rules under Clause 29 regarding the Environmental Water Allowance were given effect

Clause 29 of the Plan sets out the requirements for maintaining and using an Environmental Water Allowance. Water Allocation Statements provided more information in relation to the Environmental Water Allowance (EWA) over the audit period. The Water Allocation Statements for 2019,³⁶ 2020,³⁷ and 2021³⁸ make reference to the Environmental Water Account and refer to it as an essential supply. The 2020 statement indicates the EWA is allocated the required 20,000 ML at the beginning of the water year. Previous years water allocation statements did not mention the EWA.^{39,40,41} However, the resource assessment spreadsheets and interviews with WaterNSW confirmed that the EWA of 20,000 ML was maintained in the audit period under Clause 29(1) and 29(2). Resource assessment spreadsheets over the audit period align with Clause 29(5) in that they do not show any carryover of the EWA during the audit period.

One release from the EWA was made in the audit period, this was confirmed through interviews with DPIE-EES and WaterNSW annual compliance reports. The release began in June 2020. The purpose of the release was to "improve the overall health of the river system and help Australian Bass to reach their spawning grounds in the downstream Hunter wetlands".⁴² This purpose aligns with Clause 29 (3)(b) to provide flows to maintain ecosystem health, including for facilitating fish migration or stony bed scouring. This release was appropriately acknowledged in the resource assessment per Clause 29(4).

The Commission concludes that this provision was given effect and makes no recommendations, nor does it suggest any actions relating to Clause 29.

The Commission notes that no monitoring is available to determine the effectiveness of this release (see **Chapter 5.3**). The effectiveness of this release was potentially compromised as the Plan does not include prohibitions of supplementary water take during the EWA release. Water could potentially be taken under Clause 57 if flow thresholds are met and one announcement was made during the period of take on 22 June 2020 (see **Chapters 10.3.4 and 10.3.5 and Recommendation R 6.5**). In addition, the Commission notes that in response to draft findings, NRAR has drafted discretionary conditions for WaterNSW dam operations approval and AGL Macquarie's supplementary WAL with the objective of preventing supplementary take during an EWA release.

³⁶ WaterNSW (2019) *Water Allocation Statement Hunter Regulated River*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0008/280178/WAS-hunter-191014.pdf. The allocation statement from 2019 mentioned the EWA in a footnote that says it is included in the calculations under essential supplies.

³⁷ WaterNSW (2020) *Water Allocation Statement Hunter Regulated River*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0005/295736/WAS-hunter-20200422.pdf

³⁸ WaterNSW (2021) *Water Allocation Statement Hunter Regulated Water Source*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0019/352432/WAS-hunter-20210215.pdf

³⁹ Department of Primary Industries Water (2016) *Water Allocation Statement Water Allocations for Hunter Users*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0010/149581/water-allocation-statement-Hunter-160701.pdf

⁴⁰ Department of Primary Industries Water (2017) *Water Allocation Statement Water Allocations for Hunter Users*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0009/149742/AWD-allocation-statement-Hunter-June-2017.pdf

⁴¹ Department of Primary Industries Water (2018) *Water Allocation Statement Water Allocations for Hunter Users*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0007/165589/WAS-Hunter-180701.pdf

⁴² NSW Government (2020) *Water to deliver boost for Australian bass in Hunter River*. Available at: <https://www.environment.nsw.gov.au/news/water-to-deliver-boost-for-australian-bass-in-hunter-river>.

6.3.3 There is insufficient evidence to demonstrate that the maintenance of water supply set out in Clause 30 can be met through a period of the worst period of low inflows to this water source.

Clause 30 specifies that the system should be managed to maintain supply to ensure basic landholder rights can be met and that AWDs guarantee 100 percent share components to access licence holders, including major water utilities. Whilst commitments were met during the audit period under Clause 30, the dam levels at the commencement of the 2017-2019 drought were approximately 80 percent full in comparison to levels in March 2021 of approximately 55 percent full (56.9 percent Glennies and 54.6 percent Glenbawn at 26 March 2021).⁴³ There is a risk that sustained droughts may reoccur, coinciding with dams already at low storage levels. This increases the importance of the resource assessment process that underpins AWD orders and subsequent extraction by users.

It is a requirement of the Clause 30 that water supply commitments are maintained through a repeat of the worst period of low inflows to this water source, as represented in flow information held by the Department when the first water sharing plan for this water source made under the Act came into force. DPIE-Water's draft *Water Allocation Summary Manual* currently states that the loss figures are based on recent years losses. DPIE-Water staff could not confirm whether the resource assessment process uses loss figures that are equal to or more conservative than the loss figures in the model (which holds the flow information held by the Department when the first water sharing plan for this water source made under the Act came into force).

Should the resource assessment process be using loss figures that are less conservative than those in the model, there is a risk that should a drought hit at a time when dam levels are low, security of supply required by Clause 30 might not be able to be met. Given loss figures are in the order of magnitude of the major water users annual take, they are an important assumption underpinning the resource assessment.

The system should be managed so that water supply meets the needs of basic landholder rights users, as well as providing 100 percent of share components to holders of domestic and stock, local water utilities and major utilities access licences. Water users set out in 30(1)(b) need confidence their needs will be met to ensure residential towns water and electricity commitments are able to be met for customers.

The major water utilities access licence is held by AGL. Electricity from Bayswater and Liddell power station together produce approximately 23,000 GWh of electricity annually, which powers approximately three million Australian family homes or 35 percent of NSW electricity.⁴⁴ A reliable supply of water provided for under Clause 30 of this Plan and AGL major utility licence is critical for its ability to reliably supply electricity to its customers. Should the government not be able to meet this commitment, there may be reputational and financial penalties.

DPIE-Water should establish and implement a process to demonstrate that Clause 30 could be met under the current water allocation process, this should include consideration of long term annual average extraction limit (LTAAEL) compliance (see **R 3**), re-running the model prior to the AWDs being announced.

⁴³ Data from WaterNSW (n.d.) *realtimedata*. Available at: <https://realtimedata.waternsw.com.au/>

⁴⁴ AGL (n.d.) *AGL Macquarie Power Stations*. Available at: <https://www.agl.com.au/about-agl/how-we-source-energy/agl-macquarie>

Any time there are changes to the water allocation process, the changes should be tested using the model to ensure Clause 30 can be met prior to an AWD being announced. This should ensure that commitments made at Plan commencement can still be met each year.

DPIE-Water is currently drafting the *Water Allocations Summary Manual* (see **Chapter 6.3.3**). Although current staff have adequate understanding of these systems to implement them, there are opportunities to document procedures to ensure knowledge is not lost in the future and improve transparency of AWD calculations.

Operating only to a spreadsheet with no other guidance as was the case throughout the audit period, the resource assessment process is open to individual interpretation and the methodology could be altered, potentially adversely impacting the ability to meet Clause 30 requirements.

To ensure a repeatable and robust process is in place, DPIE-Water should finalise the draft *Water Allocation Summary Manual* for the Plan. This should include LTAAEL compliance and assessment, documentation of assumptions underpinning figures used including loss figures, a discussion of how the process meets Clause 30 and how the process links back to the model.

Given the importance of the resource assessment process and the potential impact on stakeholders, this manual should be reviewed by an independent external hydrologist. It should also be made available to stakeholders for transparency. This will improve confidence in the process and ensure consistency of application and alignment with the Plan.

The Commission makes two recommendations and raises no suggested actions:

<p>R 2.2.1</p>	<p>DPIE – Water to establish and implement a process to demonstrate that the maintenance of water supply for basic landholder rights users as well as 100 percent of share components to holders of domestic and stock, local water utilities and major water utilities set out in Clause 30 could be met under the current water allocation process. This should include:</p> <ul style="list-style-type: none"> ▪ consideration of long-term average annual extraction limit (LTAAEL) compliance (see R 3) ▪ checking the figures and assumptions including loss figures in the current resource allocations process against those in the model prior to the next Available Water Determination (AWD) announcement ▪ rechecking the figures against those in the model any time changes are subsequently made to the water allocation process to ensure Clause 30 can be met prior to any Available Water Determination (AWD) announcement following these changes.
<p>R 2.2.2</p>	<p>DPIE-Water to finalise the draft <i>Water Allocation Summary Manual</i> for the Plan, including documenting how the figures and assumptions used align with the model and Clause 30. This should be reviewed by an independent external hydrologist and made available to stakeholders.</p>

6.3.4 Rules under Clause 31 to manage capacity constraints were given effect

Clause 31(1) was not triggered or tested as there were no orders from the Barnard scheme during the audit period.

There was no guidance available for determining "from time to time" in Clause 31(2) the maximum water delivery or operating channel capacity in this water source will be determined by the Minister from time to time. The Commission did not pursue this further.

Compliance with Clause 31(3) was examined through looking at the WaterNSW *Realtime data* website:⁴⁵

- Glenbawn Dam (210097): Average over the audit period 1 July 2016 to 22 February 2021 was reported as 256 ML per day and the maximum over this same period was reported as 6,061 ML per day
- Glennies Creek Dam (210117): Average over the audit period 1 July 2016 to 22 February 2021 was reported as 75 ML per day and the maximum over this same period was reported as 354ML per day.

The dam releases are well below any constraints.

The Commission concludes that Clause 31 was given effect in the audit period and makes no recommendations nor raises any suggested actions.

6.3.5 Rule under Clause 32 to prioritise supply by access licence type when supply capability is insufficient to satisfy requirements were not triggered, however guidance to support decision making should be documented

Clause 32 sets out prioritisation rules in the case of insufficient supply capability. The Commission reviewed the AWD orders and associated allocation statements for the audit period and confirmed that the AWD was not reduced in such a way to compromise planning for supply to meet essential requirements. Clause 32 was therefore not triggered or tested in the audit period.

The Commission did not find any guidance to support rapid decision making by WaterNSW operators should Clause 32 be triggered. For example, should a situation emerge where Glennies Creek Dam is full and Glenbawn Dam is low. It might be difficult to provide water to users in one part of the river (upstream of Glennies Creek Dam- see **Figure 2**).

The Commission makes no recommendations and raises one suggested action:

SA 2.2	DPIE-Water to formally document guidance for operators to prioritise the provision of remaining supply capability under Clause 32. This should be provided to WaterNSW for implementation should Clause 32 being triggered.
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⁴⁵ Data from WaterNSW (n.d.) *Realtime data*. Available at: <https://realtimedata.waternsw.com.au/>

6.3.6 Rules in relation to changing release rates under Clause 34 are not auditable, however guidance to support decision making should be documented

Clause 34(1) is un-auditable, given neither “release rate” nor “change” is defined in the Plan. There is no documentation setting out these rates, nor are they listed in the WaterNSW Hunter Statement of Approval (20WA204300). Thus, there is no implementation guidance that sets out release rate parameters from which one should not deviate unless instructed to by the Minister.

Regardless of Clause 34(1) not being specific or auditable and works approval being silent, there should be documented guidance for operators in relation to what rate of change of release they should operate to in response to an order. This guidance should cover how fast the release should be, taking into considerations such as both dam levels, other orders, and the weather.

The risk of not having release rates documented is that the operating protocols are open to interpretation by dam operators. The potential impact of not setting release rates and then making changes to release rates could result in damage to riverbanks causing downstream damage to properties, public safety issues, or constrain the banks interrupting supply passage. In addition, not making releases in relation to the natural hydrograph and making releases in blocks for example may result in stranding of aquatic organisms.

The Commission makes no recommendations and raises one suggested action:

SA 2.3.1	WaterNSW to formally document what rate of change of release operators should adhere to in response to an order. This documentation should cover how fast the release should be, taking into considerations such as dam levels, other orders and the weather and it should be externally peer reviewed.
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SA 2.3.2	DPIE-Water to establish rules in relation to the rates of change in consultation with WaterNSW.
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6.3.7 Rules under Clause 35 for grouping the release of orders when remaining allocations are low were not triggered, however operational guidance should be documented

Clause 35 provides for periodic release of orders when remaining allocations are low. Clause 35 was not triggered in the audit period, however proactive planning would assist rapid decision making should Clause 35 be triggered in future.

The importance of this planning is alluded to in:

- the Annual Operations Plan for the Hunter Valley 2019-20,⁴⁶ which states that:
“The system continues to experience low inflows to Glenbawn and Glennies Creek Dams and downstream tributaries. Over the last 10 years, good inflows occurred only in three years: 2010-11, 2011-12 and 2012-13. Extremely low inflows also occurred in the recent three years: 2013-14, 2017-18 and 2018-19...”

⁴⁶ WaterNSW(n.d.). Annual Operations Plan for the Hunter Valley 2019-20. Available at: https://www.waternsw.com.au/_data/assets/pdf_file/0019/151840/Hunter-Annual-Operations-Plan-Water-Year-2019-20.pdf.

- the Greater Hunter Regional Water Strategy,⁴⁷ which states the following:
 - “Drought security was confirmed as the primary economic risk facing the Upper Hunter. This risk extends to all sectors, including urban, agriculture, mining and power generation.
 - Analysis of historical rainfall patterns shows that droughts have been under-estimated in the Upper Hunter and a stronger variation in rainfall occurs across the Greater Hunter region.
 - A repeat of the 1940s drought (the worst on record) would see general security water allocations reduced to zero for approximately 12 consecutive years.
 - Analysis of the variability of climate indicates that the 1940s drought may occur on average 1 in 40 years”.

The dam levels at the commencement of the 2017-2019 drought were approximately 80 percent full in comparison to levels in March 2021 of approximately 55 percent full (56.9 percent Glennies Creek Dam and 54.6 percent Glenbawn Dam at 26 March 2021).⁴⁸ There is a risk that sustained droughts may reoccur, coinciding with dams already at low storage levels. This increases the importance of drought contingency planning. Proactive planning and management would assist in reducing the risk of not being able to meet supply requirements and increase the likelihood of reducing the impacts of a drought in the Hunter region.

Drought management guidance should include documentation of current operating rules during known droughts, as well as operating rules for beyond the worst drought on record. This guidance should consider the regional drought contingency plan once developed (identified in the Greater Hunter Regional Strategy).⁴⁹ This regional drought contingency plan is intended to incorporate and review existing arrangements and allow for the movement of water to mitigate drought if infrastructure is built.

The Commission makes no recommendations and raises two suggested actions:

SA 2.4.1	WaterNSW to prepare a drought management plan documenting the required drought measures and operational procedures (including management of orders) under increasing drought conditions. This should consider the regional drought contingency plan and be developed in consultation with DPIE- EES and licence holders.
SA 2.4.2	DPIE-Water to set requirements for the drought contingency plan and approve the drought contingency plan once developed.

⁴⁷ NSW Department of Industry (2018). *Greater Hunter regional water strategy*. p.2. Available at: https://www.industry.nsw.gov.au/_data/assets/pdf_file/0008/196055/greater-hunter-regional-water-strategy.pdf

⁴⁸ Data from WaterNSW (n.d.) *realtimedata*. Available at: <https://realtimedata.watarnsw.com.au/>

⁴⁹ NSW Department of Industry (2018). *Greater Hunter regional water strategy*. p.3. Available at: https://www.industry.nsw.gov.au/_data/assets/pdf_file/0008/196055/greater-hunter-regional-water-strategy.pdf

6.3.8 Rules governing dam operations in floods under clauses 36 and 37 were not triggered, however guidance should be documented

Clauses 36 and 37 provide for dam operation during floods and spills and flood mitigation zones. Available information from WaterNSW Realtime data website indicates that there was no time since 1 July 2016 to 21 February 2021 (time analysis was undertaken) when:⁵⁰

- Glenbawn Dam was above 276.25 metres Australian Height Datum (AHD) (flood mitigation zone). The maximum during this period was 274.467 (res level m) that occurred on 22 November 2016.
- Glennies Creek Dam was above 186.0m (Full supply level). The maximum during this period was 183.605 m that occurred on 25 September 2016.

Given the flood and spilling of water was not reached for either dam in the audit period, clause 37 was not triggered and therefore could not be tested. Two procedures have been drafted in 2011 by WaterNSW. These are:

- Draft *Water Delivery Flood Operations Procedures Glenbawn Dam*
- Draft *Water Delivery Flood Operations Procedures Glennies Ck Dam*.

If there are no formally documented flood manuals that operators have been trained on, there is a risk that the operator in charge may not make the right decisions in line with the Plan. There are slight differences between the Plan and the WaterNSW Statement of Approval (20WA204300) and the procedures. If dams are not operated according to the Plan rules there is a risk to the government’s reputation, public safety and financial penalties.

In the 2011 Brisbane flood “More than 6,800 victims of the 2011 Brisbane flood have won a historic class action against Seqwater, Sunwater and the Queensland government over the management of the Wivenhoe Dam”.⁵¹ “The dams weren’t operated according to the rules, exacerbating downstream flooding when a deluge of “biblical” proportions fell after days of earlier rain, Justice Robert Beech-Jones found in November”.⁵²

Recently, a partial settlement of \$440 million was paid to victims of these floods by the Queensland government.⁵³ Whilst this is not the same scenario, there are risks when procedures are not clear and if they are inconsistent with the Plan.

The Commission makes no recommendations and raises one suggested action:

SA 2.5	WaterNSW to update and sign off the <i>Water Delivery Flood Operations Procedures Glenbawn Dam</i> and <i>Water Delivery Flood Operations Procedures Glennies Ck Dam</i> and ensure they are part of formal document management process. Plan updates as part of this process should ensure that the procedures align with clauses 36 and 37 in the Plan and the Statement of Approval (20WA204300).
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⁵⁰ Analysis of data downloaded from realtime data site for Glenbawn Dam and Glennies Creek Dam over the audit period. WaterNSW (n.d.) *Realtime data*. Available at: <https://realtimedata.watarnsw.com.au/>

⁵¹ Brisbane Times (2019) *Queensland 2011 flood victims win class action*. Available at: <https://www.brisbanetimes.com.au/national/queensland/queensland-2011-flood-victims-win-class-action-20191129-p53fd9.html>

⁵² Brisbane Times (2020) *Dam operator Seqwater will appeal 2011 flood class action finding*. Available at: <https://www.brisbanetimes.com.au/national/queensland/dam-operator-seqwater-will-appeal-2011-flood-class-action-finding-20200221-p5434n.html>

⁵³ The Guardian (2021) *Queensland 2011 flood victims win partial \$440 m payout in class action*. Available at: <https://www.theguardian.com/australia-news/2021/feb/26/queensland-2011-flood-victims-win-partial-440m-payout-in-class-action>

7 Criterion 3 – Long-term average annual extraction limits

7.1 Criterion overview

Part 7, clauses 38 to 42 of the Plan establish LTAAEL volumes by water source in accordance with the Act⁵⁴ and require:

- an assessment of current levels of annual extraction against the LTAAEL at the end of each water year (clauses 41(1) and (2))
- compliance with the long-term extraction limits to be assessed annually (Clause 42), whereby if extraction exceeds LTAAEL by 3 percent or more then the water taken or assigned will be reduced from supplementary WALs and then general security access licences from the maximum AWD (Clause 42).

The Commission has only assessed reported extraction data related to the LTAAEL during the audit period and has not assessed how the LTAAEL was originally determined.

7.2 Current roles, systems and processes

A summary of agency roles is as follows:

- **DPIE-Water** is responsible for implementing LTAAEL provisions in water sharing plans, including the assessment of compliance of take in accordance with plan provisions. According to DPIE-Water, this includes developing procedures to implement LTAAEL provisions and providing associated modelling services. DPIE-Water has no documented systems or established processes or procedures for managing LTAAELs in coastal systems including the Hunter.
- **WaterNSW** is responsible for managing water accounts. It uses the WAS to implement its account management responsibilities. The *WaterNSW Operating Licence 2017-2022* states that WaterNSW must determine the volume of water extracted by, or supplied to, each of its customers, at least annually, for the purpose of accurate account management, billing and reporting.⁵⁵ WaterNSW's Determining Water Take procedure outlines the critical steps and processes used by WaterNSW staff when determining a customer's water take.⁵⁶ It is relevant to determining take for all water licence holders.

The Commission considers that there were no systems, processes or procedures in place to support the implementation of Plan provisions relating to LTAAEL during the audit period.

⁵⁴ Relevant sections of the Act relating to LTAAELs include: Section 8F, which requires the auditing of compliance with the long-term extraction limit under a plan; Section 20(2)(a), which requires the bulk access regime established by a plan to recognise and be consistent with any limits to the availability of water that are set (whether by the relevant management plan or otherwise) in relation to the water sources to which the regime relates; and Section 8(1A)(b), which requires a plan to commit water as planned environmental water in at least two ways, including by reference to the long-term average annual commitment of water as planned environmental water.

⁵⁵ State of NSW (n.d.) *Water NSW Operating Licence 2017-2022*, Clause 6.3.1, p.16. Available at: https://www.watarnsw.com.au/__data/assets/pdf_file/0004/126607/July-2020-WaterNSW-Operating-Licence.pdf.

⁵⁶ WaterNSW (n.d.), *Determining Water Take Procedure*, ARK Ref: 2019/80.

7.3 LTAAEL provisions have not been given effect to

DPIE-Water has not assessed LTAAEL compliance

DPIE-Water has not implemented Plan provisions relating to limits to the availability of water, specifically LTAAELs. DPIE-Water advised that there are currently no systems, processes and procedures in place to manage LTAAELs.

No alternative method has been developed to enable an assessment of LTAAEL compliance in lieu of comprehensive extraction data.

7.4 Potential impacts

By not implementing LTAAEL provisions, DPIE-Water is not monitoring annual extraction in relation to LTAAEL and not able to determine whether extraction adjustments are required as part of the resource assessment process.

The consequence of not undertaking LTAAEL compliance and assessment during the audit period was low

Assessment of LTAAEL compliance requires accurate measurement and reporting of water use by all water users, or an alternative assessment methodology.

In the Hunter Regulated River WSP area a large proportion of the licence holders are metered, and usage data is recorded in the WAS. This is due to requirement on water supply work approvals 67(1)(a) which requires metering equipment to be installed across all licence categories, unless exempted by the Minister by notice in writing.

In absence of any LTAAEL compliance assessment, the Commission has undertaken an analysis to assess the materiality of not implementing this part of the Plan. The Commission used data provided by WaterNSW and data available on the Water Register:⁵⁷

- **Domestic and Stock (three licence categories)** – 162 of 246 WALs issued are reporting (65 percent)
- **Local Water Utility** – 5 of 5 WALs are reporting (100 percent of WALs)
- **Major Water Utility** – 1 of 1 WAL is reporting (100 percent of WALs)
- **Regulated (General Security)** – 612 of 826 WALs are reporting (74 percent of WALs)
- **Regulated (High Security)** – 115 of 156 WALs are reporting (74 percent of WALs)
- **Supplementary** – 199 of 239 WALs issued are reporting (83 percent of WALs).

There are 379 WALs in the Plan that currently do not report usage. However, this usage is considered immaterial, given the major categories of licence are reporting usage. The Commission's analysis of WAL share components using NSW Water Register data indicates that there are 495 WALs with a share component of 10 ML or below. The Commission assumes that the smaller licences are the majority of the ones not reporting. Even if all of these are using water at their full share component, this equates to 3,790 ML, which would not increase the extraction above the LTAAEL.⁵⁸

⁵⁷ WaterNSW (n.d.) *NSW Water Register*. Available at: <https://waterregister.watarnsw.com.au/water-register-frame>

⁵⁸ WaterNSW (n.d.) *NSW Water Register*. Available at: <https://waterregister.watarnsw.com.au/water-register-frame>

Table 3 shows reported usage provided by WaterNSW since July 2016. Since Plan commencement 1 July 2016, an average of just over 133,000 ML is reported as being extracted per year. The highest level of annual extraction in the audit period (163,547 ML in 2020) was still below the LTAAEL of 217,000 ML. Based on available extraction data, the impact of not undertaking the LTAAEL compliance not being undertaken during the audit period was low.

Table 3: Reported extraction since Plan commencement

Financial year (year ending June 30)	Reported usage (ML)	Reported basic landholder rights usage (ML)	Total reported usage
2017	102,163	501	102,664
2018	140,262	739	141,001
2019	124,791	1,026	125,817
2020	162,567	980	163,547
		Average	133,257

The risk of not undertaking LTAAEL compliance and assessment into the future is uncertain

Although the Plan’s reported usage (133,000 ML on average) is well below LTAAEL (217,000 ML⁵⁹), the current water allocation across all WALs issued under the Plan is 247,451 ML,⁶⁰ which is above the LTAAEL. In the audit period, WAL holders have not activated full use of their WAL entitlement to take total extraction above LTAAEL.

The *Greater Hunter Regional Water Strategy* identified the Hunter Valley as having high drought risk, with full allocation but low water utilisation. It indicates that this is due to a combination of holding water in reserve for drought security and market restriction.⁶¹

Should LTAAEL assessment and compliance continue not to be implemented in the future, there is a risk that usage patterns change, and usage goes above LTAAEL. This may occur should user behaviour change from not using their water allocation to using their water allocation. One scenario is outlined below:

AGL plans to close Liddell power station in 2022 and upgrade Bayswater Power Station, which is planned to run until 2035. This change will not involve any significant change in water management or demand for water. As part of the transition plans for the Upper Hunter, AGL formed the Hunter Energy Transition Alliance to work with the community to identify opportunities for new energy investment, future jobs and skill requirements to re-equip the thermal generation workforce.⁶²

⁵⁹ Clause 39(2) of the Plan.

⁶⁰ WaterNSW (n.d.) *NSW Water Register*. Available at: <https://waterregister.waternsw.com.au/water-register-frame>

⁶¹ DPIE-Water (2018) *Greater Hunter Regional Water Strategy*, pp. 2, 40, 73. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0008/196055/greater-hunter-regional-water-strategy.pdf

⁶² NSW Department of Industry (2018) *Greater Hunter Regional Water Strategy*. pp. 61-62. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0008/196055/greater-hunter-regional-water-strategy.pdf

This transition phase away from coal fired power to other industries means that there is a risk of peak water use in the coming years whilst Bayswater remains fully operational and transitional industries are starting up.

Should extraction go above LTAAEL, the potential consequences would be:

- Adverse environmental impacts to ecosystems and downstream users. The Note below Clause 39(2) in the Plan states *“By limiting long-term average annual extractions to 217,000 ML/year, this Plan ensures that approximately 80% of long-term average flow in this water source (estimated to be 1,040,000 ML/year) will be preserved and will contribute to the maintenance of basic ecosystem health.”*
- Needed adjustments to AWDs may not be identified and executed. Should a drought recur coinciding with already low dam levels,⁶³ water user security of supply may be impacted. These water users include basic landholder rights users, and holders of access licences under domestic and stock, local water utilities and major utilities categories.

Potential consequence of not undertaking LTAAEL assessment and compliance

However, given the current allocation is above the LTAAEL, the potential for extraction to exceed the LTAAEL remains, if all users were to use their water. Given there is adequate data to undertake this assessment, LTAAEL compliance should be implemented by DPIE-Water for the Plan.

This data is available to DPIE-Water through the WAS. This indicates that LTAAEL assessment and compliance management could occur with a fairly low level of effort.

7.5 DPIE-Water is making efforts to improve

DPIE-Water is piloting a process to develop and document steps to inform the assessment and compliance of LTAAEL in the northern Murray-Darling Basin. DPIE-Water advised that LTAAEL compliance assessment in coastal systems would be delayed to a focus on compliance in inland plan areas.

However, as previously mentioned, there is already adequate data available to undertake LTAAEL compliance for the Plan.

7.6 Recommendations and suggested actions

The Commission makes one recommendation and raises one suggested action.

R 3	DPIE-Water to utilise extraction data for Long Term Average Annual Extraction Limit (LTAAEL) assessment and compliance in accordance with Clause 42 of the Plan and incorporate this into the resource assessment process for Available Water Determinations.
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⁶³ According to the WaterNSW RealtimeData Website, dam levels at 26 March 2021 are: 56.9% Glennies and 54.6% Glenbawn at 26 March 2021. Available at: <https://realtimedata.waterrsw.com.au/>

While DPIE-Water staff understand that LTAAEL compliance work is the responsibility of DPIE-Water, they advised that these roles and responsibilities are not documented. Documents provided by DPIE-Water were outdated, referring to agencies that no longer exist, and did not cover current roles and responsibilities.

Multiple departmental restructures before and during the audit period resulting in the creation of new water management bodies may have contributed to the lack of clearly documented roles and responsibilities for LTAAEL compliance work.

DPIE-Water staff advised that an implementation program is being developed for LTAAEL provisions, which will document DPIE-Water's role and responsibilities. However, this is currently focussed on inland and regulated systems and will likely not be able to be directly applied in coastal areas. The Commission suggests that this work be used as a foundation to develop a program suitable for coastal systems and should include documentation of systems, processes and procedures.

SA 3	DPIE-Water to document the roles, responsibilities, systems, processes and procedures relevant to Long-Term Average Annual Extraction Limit (LTAAEL) assessment management and compliance for the Plan.
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8 Criterion 4 – Available water determinations

8.1 Criterion overview

As discussed above, AWDs are critical to giving effect to Clause 30 of the Plan. The discussion, findings and recommendations raised in **Chapter 6.3.3** are relevant to AWDs. This chapter focuses only on clauses 43 to 50 of the Plan, which establish rules for AWDs, as required under sections 20(2)(b), 59 and 60 of the Act and Clause 7 of the Water Management Regulation (Regulation).

The AWD in the Hunter River Water Source is limited to either 100 percent of access licence share component or 1 ML per unit share component, except for AWD for the Barnard Access licence for major utility. The Plan includes provisions for AWDs to be adjusted based on compliance with LTAAEL assessments.

8.2 Current roles, systems and processes

AWDs are given effect to by a statutory water order, which is authorised by the delegated authority in DPIE-Water. The order authorises WaterNSW to credit the accounts of licensed water users with the available water specified in the order.⁶⁴ It also allows licensed users to take that additional water in accordance with their account balance and license conditions.⁶⁵

A summary of agency roles is as follows:

- **DPIE-Water** – is responsible for:
 - making AWDs by order in writing, on 1 July of each water year and periodically throughout the year in accordance with section 59(1)9a) of the Act
 - publishing AWD orders in accordance with Clause 7 of the Regulation
 - the resource allocation process underpinning AWD orders
 - preparing and publishing water allocation statements associated with AWD orders⁶⁶
 - reducing AWDs if the LTAAEL compliance assessment shows that the LTAAEL has been exceeded in accordance with the water sharing plan provisions (see **Chapter 7** - Criterion 3 - Long term average annual extraction limits).
- **WaterNSW** – is responsible for:
 - maintaining water allocation accounts for water access licenses (WAL).⁶⁷ On 1 July every year (and subsequently from time to time), DPIE-Water provides WaterNSW with quantities of water or percentages of share component to be applied to each licence category and sub-category, water source and plan.

⁶⁴ DPIE-Water (n.d.) *Available Water Determinations*. Available at: <https://www.industry.nsw.gov.au/water/allocations-availability/allocations/determinations>.

⁶⁵ DPIE-Water (n.d.) *Available Water Determinations*. Available at: <https://www.industry.nsw.gov.au/water/allocations-availability/allocations/determinations>.

⁶⁶ DPIE-Water (n.d.) *Water Allocation Statements*. Available at: <https://www.industry.nsw.gov.au/water/allocations-availability/allocations/statements>

⁶⁷ State of NSW (n.d.) *Water NSW Operating Licence 2017-2022*. Clause 6.2.1. p.15. Available at: https://www.watnsw.com.au/__data/assets/pdf_file/0004/126607/July-2020-WaterNSW-Operating-Licence.pdf

- collecting and providing information to DPIE-Water to inform water resource assessments, including determinations of available water.

The main systems used to manage AWDs are the:

- **DPIE-Water resource assessment spreadsheet** – for regulated water sources, the DPIE-Water uses this spreadsheet to calculate AWDs based on forecast information provided by WaterNSW. The spreadsheet covers the essential supplies, replenishment, evaporation, dam storages, minimum flows, committed water, available water, water take and operational loss. However, the spreadsheet has changed from year to year and assumptions behind key figures are not clear (see **Chapter 6.3.3**).
- **Water Accounting System** – used by WaterNSW to keep account information for each WAL holder and adjust the accounts each year as required by the AWD order for the relevant plan.
- **NSW Water Register** – WaterNSW also publish water allocations and AWDs on the NSW Water Register.

The Commission considers there were adequate systems, processes, procedures in place to support implementation of Plan provisions relating to AWDs in the audit period.

8.3 Provisions relating to AWDs have been implemented

The Commission assessed all AWD orders made by DPIE-Water during the audit period against the requirements of the Act, Regulation and Plan. AWD orders were published and retained on DPIE-Water's website in accordance with these requirements.

The Commission notes the findings in **Chapter 7** that DPIE-Water has not undertaken LTAAEL assessment and compliance activities for the Plan during the audit period. As such, while AWD reductions occurred during the audit period, these were not triggered by an LTAAEL compliance assessment. However, given extraction did not go above LTAAEL during the audit period, an AWD reduction due to LTAAEL compliance was not triggered (see **Chapter 7.4**).

The Commission reviewed WaterNSW's application of AWD limits on water allocation accounts on the publicly available NSW Water Register, which represents account data in the WAS. WaterNSW applied AWDs to water allocation accounts consistent with the orders made by DPIE-Water.

8.4 Recommendations and suggested actions

The Commission makes no additional recommendations nor raises any suggested actions.

9 Criterion 5 – Granting access licences

9.1 Criterion overview

Part 8 of the Plan sets out the rules for granting WALs in accordance with the provisions of the Act and Clause 10 of the Regulation in relation to:

- granting a zero-share WAL applied for under Section 61(1)(b) of the Act
- specific purpose access licences applied for under Section 61(1)(a) of the Act
- granting of access licences applied for and granted under Section 61(1)(c) of the Act in relation to a controlled allocation order.

This audit has focussed on the following in relation to WALs applied for and granted in the audit period:

- Section 61 of the Act (application for granting of WALs), except Section 61(3)⁶⁸
- Section 63 of the Act (determination of applications)
- Section 64 of the Act (notice of decision)
- Section 65 of the Act (controlled allocation of WALs)
- Section 66 of the Act (mandatory conditions included in the terms of the licence)
- Section 71B of the Act (giving effect to WALs through recording on WAL Register)
- Clause 10 of the Regulation (specific purpose access licences)
- Schedule 3 of the Regulation (categories and subcategories of licences).

The following sections were also examined in relation to access licences which were granted under the 2004 plan, which were subject to amended conditions when the Plan commenced:

- Section 67(4) and (5) of the Act (notification of revised mandatory conditions for WALs granted under the 2004 plan)
- Section 71B of the Act (when matters required to be recorded in General Division of Access Register have effect).

Schedule 10, clauses 20(1) and (2) were not assessed as former entitlements under the *Water Act 1912* were converted for licence and approval holders when the 2004 plan commenced.

Section 62 of the Act (objections to granting of WALs) was not examined as part of this audit as the majority of licences granted sampled did not include objections.

9.2 Current roles, systems and processes

A summary of agency roles is as follows:

NRAR and WaterNSW are currently responsible for granting WALs. NRAR is responsible for public authorities,⁶⁹ while WaterNSW is responsible for rural landholders, rural industries and

⁶⁸ Section 61(3) of the Act was not examined as it relates to applications outside of water sharing plan areas.

⁶⁹ NRAR is responsible for water access licences required by or for; government agencies, including NSW and Commonwealth government agencies and councils; state-owned corporations; major water utilities, water supply authorities and licensed network operators under the *Water Industry Competition Act 2006*; entities who

developments that are not state significant development or state significant infrastructure. Prior to the establishment of NRAR in April 2018, DPIE-Water predecessors granted licences for public authorities and state significant developments.

WaterNSW is responsible for notification of all holders of former entitlements under the 2004 plan upon the commencement of a new water sharing plan under the Act.

Land Registry Services is responsible for registering new WALs on the WAL register and performing any required updates in accordance with advice provided by WaterNSW or DPIE-Water.

In water sources that are not fully committed, the right to apply for WALs can be provided through a controlled allocation order.⁷⁰ DPIE-Water determines and organises controlled allocation orders, which are published in the NSW Government Gazette and announced on DPIE-Water's website.⁷¹ Given, there were no controlled allocation orders in the audit period, and therefore no access licences granted as a result of controlled allocations, this was not examined any further.

WALs specify mandatory conditions, which are requirements the licence holder must comply with. Section 66(1A) of the Act requires that mandatory conditions be included in the terms of the licence for them to have effect. Since September 2019, DPIE-Water is largely responsible for creating, entering and coding the mandatory conditions into the WLS (this was previous the responsibility of NRAR from April 2018 and before that DPIE-Water predecessors). NRAR still can provide the function of assisting DPIE-Water with creating mandatory conditions for its customers. NRAR and WaterNSW are responsible for imposing mandatory conditions on licences.

The main systems used to grant access licences are the:

- **Water Licencing System (WLS)** – used by WaterNSW and NRAR to process all applications and record applications, assessments, communication with stakeholders, and decisions. The system generates the statement of approval, statement of conditions, the notice of decision and the cover letter that are sent to the WAL holders.
- **NSW Water Register** – operated by WaterNSW to make some information regarding WALs available to the public.⁷²
- **WAL Register** – provides an online record of every WAL in NSW. Land Registry Services is responsible for operating and maintaining the WAL Register.⁷³

are carrying out activities under the *Mining Act 1992*, *Offshore Minerals Act 1999*, *Petroleum (Onshore) Act 1991* or *Petroleum (Offshore) Act 1982*; irrigation corporations; public schools and public hospitals; entities who hold or are eligible to hold an Aboriginal commercial, Aboriginal community development, Aboriginal cultural or Aboriginal environmental subcategory of access licence; entities undertaking major developments (state significant developments and state significant infrastructure); those engaged in floodplain harvesting (NRAR (n.d.) *Licensing and approvals*. Available at: <https://www.industry.nsw.gov.au/natural-resources-access-regulator/licensing-and-approvals>).

⁷⁰ DPIE-Water (n.d.) *Controlled allocations*. Available at: <https://www.industry.nsw.gov.au/water/allocations-availability/controlled>.

⁷¹ *Ibid.*

⁷² WaterNSW (n.d.) *NSW Water Register*. Available at: <https://waterregister.waternsw.com.au/water-register-frame>.

⁷³ Land Registry Services (n.d.) *Water Access Licence Register*. Available at: <https://www.nswlrs.com.au/Public-Register/WAL-Register>.

The main procedural and process documents used by WaterNSW, NRAR and DPIE-Water to support the granting of access licences are:

- **The Licensing Procedure Manual – Operations Section** – which sets out requirements for receiving, assessing and determining an application for a WAL.
- **Assessment summary sheets** – which set out the assessment process that is followed by WaterNSW and NRAR when determining whether to grant or decline an application.

The Commission considers that there were adequate systems, processes and procedures in place to support the implementation of Plan provisions relating to granting access licences within the audit period.

9.3 Granting access licences provisions were partially implemented

Legislative provisions relating to granting water access licences were given effect, with some exceptions relating to notification of mandatory conditions granted under the 2004 plan

To assess if Plan provisions were given effect, the Commission assessed a sample of WALs processed during the audit period, as well as a sample of notifications for those former entitlements converted to WALs under the Act during the audit period.

This analysis found that the sampled access licences were generally compliant with the legislative requirements set out above, with the key exception that revised mandatory conditions for WALs granted under the 2004 plan had delayed implementation after the commencement of the Plan.

WALs granted under the 2004 plan and *Water Act 1912*⁷⁴ were recorded in the WAL Register in 2005, giving effect to these WALs under Section 71B of the Act.⁷⁵ However, when the Plan commenced, WAL holders did not receive written notice of the revised mandatory conditions until January 2018 (19 months after the Plan commenced). This is required under Section 67(4) of the Act, which states that 'The Minister must cause written notice of any conditions imposed, amended, revoked or suspended under this section to be served on the holder of the access licence concerned'. Section 67(5) of the Act states that 'a condition imposed or a change referred to in subsection (4) takes effect on the day on which the notice referred to in that subsection is served on the holder of the access licence or on such later day as may be specified in the notice in that regard', as such this gave delayed effect to Section 66(1A) of the Act.

To assess risks around timeliness of notification under remakes going forward, the Commission considered the process for remaking plans by sampling a bulk notification for a recently made plan (the Namoi Alluvial Groundwater Sources 2020). The Commission has confidence in the broader process going forward for timely notifications.

9.4 Recommendations and suggested actions

The Commission makes no recommendations nor raises any suggested actions.

⁷⁴ Former entitlements are addressed under Schedule 10 of the Act.

⁷⁵ Section 71B of the Act states that matters required to be recorded in the Access Register take effect on being recorded.

10 Criterion 6 – Managing access licences

10.1 Criterion overview

Section 85 of the Act requires water allocation accounts for access licences to be kept. Clause 17 of the Regulation sets out requirements in relation to debiting water allocations for WALs and carry over of water allocations to the next water year. Part 9 of the Plan establishes rules for managing access licences in line with the Act and Regulation, including:

- water allocation account management rules (Clause 53)
- daily access rules, including:
 - flow reference points and flow thresholds for access to uncontrolled flows (Clause 54)
 - annual high flow tally (Clause 55)
 - access to uncontrolled flows by regulated river (high security) access licences and regulated river (general security) access licences (Clause 56)
 - access to uncontrolled flows under supplementary WALs (Clause 57).

Note that the following clauses were not tested:

- Clause 53(4), as the Barnard Scheme was not operational during the audit period.
- Clauses 53(8) and 53(9), as the Commission was not able to ascertain whether any action was taken by the Minister in relation to these clauses.
- Clauses 53(14-22), as there were no spills in the audit period to trigger these clauses: ⁷⁶
 - Available information indicates that there was no time since 1 July 2016 to 21 February 2021 when Glenbawn Dam was above 276.25 metres AHD (flood mitigation zone). The maximum during this period was 274.467 (res level m) that occurred on 22 November 2016.
 - Available information at the time of analysis indicates that there was no time since 1 July 2016 to 22 February 2021 when Glennies Creek Dam was above 186.0m (Full supply level). The maximum during this period was 183.605 m that occurred on 25 September 2016.

10.2 Current roles, systems and processes

A summary of agency roles is as follows:

DPIE-Water is responsible for:

- setting standards and outputs (including policies) for water take measurement that are implemented by WaterNSW
- making uncontrolled and supplementary flow announcements as the Minister's delegated authority
- ensuring the high flow tally is kept and appropriately used to manage access to uncontrolled and supplementary flows

⁷⁶ Analysis of dam level data for Glenbawn and Glennies Creek dams. WaterNSW (n.d.) *Realtime data*. Available at: <https://realtimedata.watarnsw.com.au/>

- determining water allocation through AWDs each year, which inform licensed water users how much water they can extract (see **Chapter 8** - Criterion 3 - Available Water Determinations).

WaterNSW is responsible for administering water allocation accounts including the:

- development of database configuration rules for accounts
- implementation of WAL account management rules in the WAS
- The *WaterNSW Operating Licence 2017-2022* requires the following:
 - maintenance of gauges under Section A6, Table A.14 states that WaterNSW is responsible to “372(1)(a),(a1), (b) and (c) *Construct, maintain and operate water management works, gauging stations and other monitoring equipment, ... in relation to water management...*”
 - Clause 6.2 of the Operating Licence requires WaterNSW to ‘*maintain a Water Allocation Account for each Customer that holds a Water Licence*’⁷⁷
 - Clause 6.3.1 of the Operating Licence requires WaterNSW to ‘*determine the volume of water Extracted by, or Supplied to, each of its Customers, at least annually, for the purpose of accurate account management, billing and reporting*’.⁷⁸

NRAR is responsible for:

- administering licences and approvals to major utilities and to WaterNSW for the operation of Glenbawn and Glennies Creek dams (Statement of Approval 20WA204300)⁷⁹
- monitoring and enforcing compliance with the Act,⁸⁰ in particular WaterNSW dam operations under its Statement of Approval and major water utility access licences.

The main systems used to manage access licences are outlined below:

- **Water Accounting System (WAS)**- operated and maintained by WaterNSW. This is used to apply water allocation account management rules to individual WAL accounts. For all metered users in regulated systems, meter readings are entered along with all customer water orders into WAS to help determine the daily release of water from dams and storages for all customers downstream. For all metered users in regulated systems, meter readings are entered along with all customer water orders into WAS to help determine the daily release of water from dams and storages for all customers downstream.

⁷⁷ State of NSW (n.d.) *WaterNSW Operating Licence 2017-2022*. Available at: https://www.watnsw.com.au/__data/assets/pdf_file/0004/126607/July-2020-WaterNSW-Operating-Licence.pdf

⁷⁸ State of NSW (n.d.) *WaterNSW Operating Licence 2017-2022*. Available at: https://www.watnsw.com.au/__data/assets/pdf_file/0004/126607/July-2020-WaterNSW-Operating-Licence.pdf

⁷⁹ NRAR (n.d.) *Licensing and approvals*. Available at: <https://www.industry.nsw.gov.au/natural-resources-access-regulator/licensing-and-approvals/licensing-and-approvals> states that NRAR is responsible for granting approvals to government agencies, including other NSW Government agencies, local councils and the Commonwealth; state owned corporations; major water utilities, water supply authorities, and local water utilities; licensed network operators under the *Water Industry Competition Act 2006*; mining companies; irrigation corporations; Aboriginal communities and businesses; floodplain harvesting; major developments (State significant developments and State significant infrastructure); schools and hospitals; and that WaterNSW is responsible for granting approvals to rural; landholders; rural industries and developments which are not State significant development or State significant infrastructure.

⁸⁰ Section 10(a) of the *Natural Resources Access Regulator Act 2017* requires NRAR to *ensure effective efficient transparent and accountable compliance and enforcement measures for the natural resource management legislation*.

- **Internet WAS (iWAS)**- an online customer portal, which makes WAS account data available to all registered WaterNSW regulated river customers. It enables them to undertake a range of activities including entering and amending water orders, upload meter readings, access water account statements and allocation assignment register.⁸¹
- **Hydstra**- is the main software used by WaterNSW to manage all the field data from gauges, equipment, instrumentation, capturing data, filling gaps, data editing, quality assurance. These systems and processes are all certified under ISO9001. HydroTel is a telemetry system, software that collects telemetered data and feeds these data into Hydstra. Interviews with WaterNSW staff indicated that hydrographers do regular field visits to ensure the gauge data is providing reliable flow data. The data is available on the WaterNSW Realtime data website.⁸² Hydstra is integrated with CAIRO and CARMLite (see **Chapter 6- Criterion 2- Systems Operations**) so that river operations staff can access and use this data for river operations.
- **Compliance Investigation Reporting and Management System (CIRAM)** – maintained and used by NRAR for compliance purposes. It maintains compliance assessment templates to guide assessment of each Annual Compliance Report submitted by WaterNSW, major utilities and other entities as required.

The main procedural and process documents used by WaterNSW, NRAR and DPIE-Water to support the management of access licences are:

- **Water Accounting Rules for Water Sharing Plans procedure** – this sets out the process for administering all the account management rules in accordance with a water sharing plan
- **Determining Water Take procedure** – this sets out the process used by customer field officers when determining customers’ water take.

Whilst DPIE-Water described a process as to how supplementary and uncontrolled flow announcements occur, no procedures or spreadsheets or process documents including roles for responsible organisations were provided to the audit. DPIE-Water staff indicated that WaterNSW propose announcements, DPIE-Water staff recommend these announcements to DPIE-Water management, who approve the announcements prior to WaterNSW making the announcements.

The *WaterNSW Operating Licence 2017-22* specifically states that WaterNSW role is to manage access to daily flows “other than supplementary water” and makes no mention of uncontrolled flows.⁸³ The 2016 *Deed of Business Transfer between the Department of Industry, Skills and Regional Development and WaterNSW* and the Water Management Act 2000 delegation are silent on roles and responsibilities regarding the management of uncontrolled flows and supplementary flows.

The Commission considers that there are opportunities to improve systems, process and procedures in place to manage access licences in the audit period. Suggested improvements are outlined in **Chapters 10.3** and **10.5**.

⁸¹ WaterNSW (n.d.): *Internet Water Accounting System (iWAS)*: Available at: <https://www.watnsw.com.au/customer-service/ordering-trading-and-pricing/ordering/iwas>

⁸² WaterNSW (n.d.) *Realtime data*. Available at: <https://realtime.watnsw.com.au/>

⁸³ *WaterNSW Operating Licence 2017-2022*. Table A.4 page 50. Available at: https://www.watnsw.com.au/_data/assets/pdf_file/0004/126607/July-2020-WaterNSW-Operating-Licence.pdf

10.3 Managing access licence rules have partially been given effect to

Provisions of the Plan set out in Part 9 have not been included in key licences and approvals. These are contributing factors to the partial implementation of Criterion 6 - Managing Access Licences and urgently need to be addressed. Specifically:

- the WaterNSW Statement of approval for Glenbawn and Glennies Creek dams (20WA204300). This is addressed in **Chapter 11** and by recommendation **R 7.2.3**
- the major utilities supplementary WAL to give effect to Clause 57. This is addressed in **Chapter 13** and by recommendation **R 9.3**.

10.3.1 Individual access licence account management rules under Clause 53 were given effect

Clause 53 sets out individual access licence account management rules. The Commission reviewed a copy of the water accounting rules as configured into the WAS for the Plan provided by WaterNSW as well as through a walkthrough of the WAS for several key accounts to verify the configuration of key accounting rules and some historical transactions in relating to these rules. The Commission did not find any material gaps in the configuration of accounting rules relating to Clause 53.

The Commission makes no recommendations nor raises any suggested actions.

10.3.2 Gauge data set out in Clause 54 was available to support implementation of daily access rules under Division 2

Clause 54 provides for flow reference points and flow thresholds critical to support implementation of daily access rules in Division 2. For this clause to be given effect the following flow gauges need to have been operational in the audit period. The relevant flow reference point gauges are:

- Hunter River at Liddell gauge (210083)
- Hunter River at Singleton gauge (210001)
- Hunter River at Greta gauge (210064).

The Commission confirmed that flow data for all the flow reference point gauges were available for the audit period online using available data at WaterNSW's Real-time water data website,⁸⁴ giving effect to Clause 54.

The Commission makes no recommendations or suggested actions.

10.3.3 Rules relating to the high flow tally under Clause 55 were not given effect

Clause 55 mandates that a high flow tally is kept and sets out the formula for keeping the tally. It is not clear which agency is responsible to keep the high flow tally under Clause 55. The Plan or other documentation does not make this clear. However, evidence provided to the audit indicated that WaterNSW kept the high flow tally under the 2004 plan. This has not continued under the Plan. Given WaterNSW has the operational data it makes sense that it keeps the tally and DPIE-Water ensures it is current and is being done in accordance with Clause 55.

⁸⁴ WaterNSW – *Rivers and Streams / Real Time Data/ Rivers and Streams / 210-Hunter River Basin*. Available at: <https://realtimedata.waternsw.com.au/>

Roles and processes in relation to keeping the tally, and checking the tally should be documented by DPIE-Water in consultation with WaterNSW.

The high flow tally was set up to calculate water available per event, ensuring no more than 30 percent of annual moderate to high flows are extracted and total take of uncontrolled flows are not more than 30 percent of annual river reach inflows. This rule allows for better operational efficiency and reduces complexity in the AWD process.⁸⁵

The Plan requires that this tally is kept under Clause 55, and the dependent requirements in clauses 56 and 57 of the Plan implemented. The tally should be made transparent so users can manage compliance with clauses 56 and 57 of the Plan. This responsibility most efficiently sits with WaterNSW as the keeper of the tally.

The Commission makes two recommendations and raises two suggested actions:

Following implementation of Recommendation **R 7.2.3 NRAR** to notify WaterNSW of mandatory conditions:

R 6.1.1	WaterNSW to keep a high flow tally in accordance with Clause 55 to manage access to uncontrolled and supplementary flows under clauses 56(6) and 57(9).
R 6.1.2	DPIE-Water to ensure the high flow tally is being kept in accordance with Clause 55 and to ensure compliance with Clause 57(9) and 56(6).
SA 6.1	DPIE-Water to work with WaterNSW to document the process for keeping and checking the high flow tally under Clause 55.
SA 6.2	WaterNSW to make the high flow tally under Clause 55 transparent to users so water users can manage compliance with Clause 56 and 57 of the Plan.

10.3.4 Uncontrolled flow access rules set out in Clause 56 were partially given effect

Announcements to permit taking of water under Clause 56(1) were partially implemented

Clause 56(1) requires that the taking of water from uncontrolled flows under regulated river (general security and high security) will only be permitted in accordance with announcements made by the Minister.

Announcements were made by WaterNSW.⁸⁶ DPIE-Water do not currently approve these announcements as the delegated authority under Clause 56(1) for coastal systems including the Hunter.

The Commission concludes Clause 56(1) was partially given effect makes one recommendation (see Recommendation **R 6.5** below).

⁸⁵ NSW DPIE Water (2017). *Background document. Water Sharing Plan for the Hunter Regulated River Water Source*. pp.24, 53, 56. Available at: https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0007/708613/Hunter-regulated-river-background-document.pdf

⁸⁶ WaterNSW (n.d.) *Supplementary Announcements*. Available at: <https://www.watnsw.com.au/supply/regional-nsw/supplementary>

No evidence was provided demonstrating that announcements considered environmental flows and other users under Clause 56(2)

Clause 56(2) requires that environmental flow rules, basic landholder rights, and higher priority access licences as well as losses are considered when making announcements permitting the taking of uncontrolled flows. No evidence was provided to the audit to show whether Clause 56(2) was considered by agencies undertaking the calculations and making decisions in relation to an uncontrolled flow announcement.

The Commission concludes that there was an inadequate documented process to demonstrate that Clause 56(2) was given due consideration and therefore given effect, however that the impact of this was likely immaterial in the audit period.

The Commission makes one recommendation and raises no suggested actions.

R 6.2	DPIE-Water to ensure processes to determine uncontrolled announcements include documentation of compliance with Clause 56(2).
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Announcements did not include a percentage to guide take as required under Clause 56(3)

Clause 56(3) requires that uncontrolled flow announcements should be expressed as a percentage of each access licence share component.

The announcements made in the audit period do not provide any guidance for licence holders as to how much water they should take, and only state whether customers can or cannot take within each reach with either a start or end date.⁸⁷

The Commission recommends that the format of the announcements should be updated to include the percentage of each access licence share component (as required under Clause 56(3)) so users have a better guide for what they can take in such events. This should include consideration of the high flow tally calculations so that water is shared appropriately between users and environmental flows are also met.

The Commission makes two recommendations and no suggested actions. Following implementation of Recommendation **R 7.2.3** to notify WaterNSW of mandatory conditions:

R 6.3.1	DPIE-Water to update the format of the announcements to include the percentage share component allowed to be taken under Clause 56(3).
R 6.3.2	WaterNSW to implement the new format when making announcements to include the percentage share component allowed to be taken under Clause 56(3).

⁸⁷ WaterNSW (n.d.) *Supplementary Announcements*. Available at: <https://www.watnsw.com.au/supply/regional-nsw/supplementary>

Clauses 56(4) and 56(5) were not given effect on two occasions in 2020

Clauses 56(4) and 56(5) set out thresholds that must be met prior to permitting uncontrolled flow take that relate to AWDs for regulated river (high security and general security) WALs.

The Commission undertook an analysis of announcements made and AWD orders over the audit period.^{88, 89} Prior to 29 June 2020, Regulated River (General Security) was above the minimum threshold set out in clauses 56(4-5) of 0.75.

We conclude uncontrolled flow announcements on 27 October 2020 and 21 December 2020 were not in compliance with clauses 56(4) and 56(5) of the Plan as the AWD for Regulated River (General Security) was below threshold of 0.75.⁹⁰

The Commission makes one recommendation and no suggested actions:

R 6.4	DPIE-Water to ensure processes to determine uncontrolled announcements are in accordance with clauses 56(4) and (5).
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The limit to total volume of uncontrolled flows take under Clause 56(6) was not given effect

Clause 56(6) requires that at any point in the water year the total volume of uncontrolled flows taken by regulated river (high security and general security) access licences must not exceed 11 percent of the annual high flow tally calculated under Clause 55.

No evidence was provided to the audit to demonstrate compliance with Clause 56(6). Given that the high flow tally is not being implemented, it follows that this dependent Clause cannot be implemented.

The Commission recommended as part of Clause 55 (Recommendation R6.1.1 and R6.1.2) that the high flow tally is kept up to date and used to manage compliance with Clause 56(6).

The Commission makes no additional recommendations or suggested actions.

Rules requiring no more than 50 percent of uncontrolled flow take as a percentage of total inflows under Clause 56(7) was given effect

Clause 56(7) requires that uncontrolled flows in each management zone will be managed to ensure that the total volume of water taken on any day under all access licences including basic landholder rights does not exceed 50 percent of the total inflows to that management zone.

⁸⁸ WaterNSW (n.d.) *Supplementary Announcements*. Available at: <https://www.waternsw.com.au/supply/regional-nsw/supplementary>

⁸⁹ DPIE-Water (n.d.) *Available Water Determinations*. Available at: <https://www.industry.nsw.gov.au/water/allocations-availability/allocations/determinations>

⁹⁰ On 29 June 2020 an AWD order was made for 0.3 for Regulated River (General Security) and 0.9 for Regulated River (High Security) access licence holders. On 14 August 2020, the Regulated River (High Security) AWD was incrementally increased back to 100 percent with an AWD of 0.1 being ordered together with a General Security increment of 0.23, taking Regulated River (General Security) to 0.53. On 15 December a further increment was made through an AWD of 0.04 to General Security, taking General Security to 0.57. On 15 February 2021, a further increment of 0.22 was granted to General Security access licence holders, taking the AWD to 0.69. The Regulated River (General Security) AWD was less than 0.75 as the result of an announcement on 29 June 2020.

The Commission reviewed WaterNSW annual compliance reports from 1 July 2016 to 1 July 2019. Note that the 2019-20 annual compliance report was requested but not provided to the audit prior to finalisation of the final report. This provision was present in the 2004 plan and so it is currently a requirement (item 13) on its Statement of Approval (20WA204300). The compliance reports presented information to show compliance with this Clause 56(7).

The Commission concludes that Clause 56(7) has been given effect and makes no recommendation or suggested action.

10.3.5 Supplementary flow access rules set out in Clause 57 were partially given effect

Clause 57 sets out the rules for access to supplementary flows.

The Commission concludes Clause 57(7) has been given effect given Clause 57(7) reads exactly the same as Clause 56(7) (see **Chapter 10.3.4**).

Announcements to permit taking of water under Clause 57(1) were partially implemented

Clause 57(1) requires that the taking of water from uncontrolled flows under supplementary water access licenses under regulated river (general security and high security) will only be permitted in accordance with announcements made by the Minister.

Announcements were made by WaterNSW.⁹¹ DPIE-Water do not currently approve these announcements as the delegated authority under Clause 57(1) for coastal systems including the Hunter.

An announcement was made on 22 June 2020, which occurred during the Environmental Water Allowance release (see **Chapter 6.3.2**). Whilst the Plan does not specifically prohibit supplementary take during an Environmental Water Allowance release and the criteria for making such announcements relate to flow thresholds, the Clause 29(3) clearly intends for the Environmental Water Allowance to be released for the achievement of environmental or cultural outcomes. No information was provided to the audit, so it is not clear what was the basis for this supplementary announcement. A more formal process signed off by the Minister, including a communications protocol to ensure water released under an Environmental Water Allowance is not taken as supplementary water.

The Commission concludes Clause 57(1) was partially given effect makes one recommendation.

DPIE-Water needs to formally clarify and implement these roles and responsibilities. It could consider making the uncontrolled flow (and supplementary access) announcement, formally approve these announcement recommendations made by WaterNSW or formally delegate this function to WaterNSW to give effect to clauses 56(1) and 57(1).

⁹¹ WaterNSW (n.d.) *Supplementary Announcements*. Available at: <https://www.watnsw.com.au/supply/regional-nsw/supplementary>

DPIE-Water should liaise with DPIE-EES to develop a protocol to support operations and communications with respect to making these announcements during an EWA. This protocol should:

- include operational and communication protocols between DPIE-EES, DPIE-Water, WaterNSW, AGL and other users in relation to uncontrolled and supplementary announcements and take
- provide guidance as to what should happen in the event of rain during an EWA
- consider EWA purpose, target location and timing.

R 6.5	<p>DPIE-Water to formally clarify and implement roles and responsibilities in relation to the process of approving and making announcements of uncontrolled (and supplementary access) flows to give full effect to 56(1) and 57(1).</p> <p>This should include a protocol developed in consultation with DPIE-EES, WaterNSW, AGL and other relevant users, to ensure that the EWA release volume reaches the intended target (delivery point) prior to any uncontrolled or supplementary announcement being made or uncontrolled or supplementary water being taken.</p>
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Clauses 57(2-6) in relation to access to supplementary water were partially implemented

Clauses 57(2-6) set out flow thresholds above which a supplementary event can be announced.

WaterNSW annual compliance reports provide evidence that the flow targets were exceeded in years 2016-17 to 2018-19. Note that the 2019-20 annual compliance report was requested but not provided to the audit prior to finalisation of the final report. The Annual Compliance report did not provide any commentary on the clauses 57(2)(b), 57(4)(b) or 57(6)(b), which provide rules in relation to the continuation of a supplementary flow announcement. These sub-clauses did not appear in the 2004 plan and therefore have not been included in the WaterNSW Statement of Approval (20WA20430) for the operation of Glenbawn and Glennies Creek dams.

The Commission did not perform any further analysis on these clauses and cannot conclude whether or not these were given effect in the audit period. We can only state that there was no documented consideration of these clauses provided to the audit.

The Commission makes one recommendation and raises no suggested actions:

R 6.6	<p>WaterNSW to manage periods of supplementary take to fully comply with clauses 57(2)(b), 57(4)(b) and 57(6)(b).</p>
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The limit to total volume of supplementary take under Clause 57(9) was not given effect

Clause 57(9) requires that at any point in the water year the total volume of uncontrolled flows taken by supplementary WALs must not exceed 19 percent of the annual high flow tally calculated under Clause 55.

No evidence was provided to the audit to demonstrate compliance with Clause 57(9). Given that the high flow tally is not being implemented, it follows that this dependent Clause cannot be implemented.

The Commission recommended as part of Clause 55 (Recommendation R6.1.1 and R6.1.2) that the high flow tally is kept up to date and used to manage compliance with Clause 57(9). The Commission makes no additional recommendations nor raises any suggested actions.

Access rules for major water utilities to supplementary flows under clauses 57(10,11,12) were partially given effect

AGL's supplementary WAL did not require compliance with these clauses until 25 May 2021. AGL did not include in its annual compliance reports any data in relation to compliance with Clause 57 (10-12). In absence of any data demonstrating compliance with clauses 57(10-12), the Commission performed an analysis using publicly available flow data⁹² and AGL supplementary take data provided through WaterNSW Annual Compliance reports for 2016-2019 water years to determine compliance with clauses 57(10-12).

The Commission found many instances where Plan provisions were not given effect between 1 July 2016 and 30 June 2019:

Clause 57(10) sets out conditions which allow AGL Macquarie Pty Ltd to take water in the absence of a supplementary flow announcement by WaterNSW. In relation to Clause 57(10c), analysis was undertaken sampling one of the three gauges (Liddell gauge 210083) and adequate data and given the absence of access to hourly extraction data from AGL compliance reports we were only able to make a conclusive finding for the 2016-17 water year. We found:

- three instances of take when minimum thresholds were not met in March 2017 (total extraction equated to 524 ML).

Clause 57(11) requires that there is no supplementary take unless the Liddell gauge (210083) measures 50 percent of the flow immediately upstream of the water supply work. In relation to Clause 57(11), between 1 July 2016 and 30 June 2019 the Commission found:

- one instance on 31 March 2019 where there was supplementary take despite the daily flow at Liddell gauge (210083) being 27 percent, which was less than the required 50 percent (total supplementary extraction on this day equated to 755 ML)
- one instance on 30 March 2017 where there was supplementary take despite the daily flow at Liddell gauge (210083) being 49 percent, which was less than the required 50 percent (total supplementary extraction on this day equated to 266 ML).

Clause 57(12) provides flow thresholds to guide when supplementary take by AGL Macquarie Pty Ltd should cease. In relation to clause 57(12a) between 1 July 2016 and 30 June 2019 the Commission found:

- 24 instances of take when river flow was below minimum thresholds in 2016-17 (total extraction over the 24 instances was 4,048 ML)
- 5 instances of take when river flow was below minimum thresholds in 2018-19 (total extraction over the 5 instances was 1,330 ML).

⁹² Data from WaterNSW (n.d.) *realtimedata*. Available at: <https://realtimedata.waterrsw.com.au/>

The Commission suggests that NRAR and DPIE-Water update compliance processes to ensure compliance and that NRAR should follow up any non-compliances appropriately to improve performance against Plan provisions.

The Commission makes no additional recommendations and raises two suggested actions. Following the implementation of R9.3 to notify AGL of its mandatory conditions:

SA 6.3.1	NRAR and DPIE-Water to update the annual compliance reporting and assessment processes to ensure annual compliance reporting for AGL's supplementary WAL (10264) reflects relevant Plan provisions including Clause 57.
SA 6.3.2	NRAR to ensure that any non-compliances are appropriately followed up to improve compliance with relevant Plan provisions for AGL's supplementary WAL (10264).

10.4 Potential Impacts

Potential impacts of not managing the daily access rules in accordance with the rules set out in the Plan include:

- an inability to provide transparency that the WAL accounts are managed in accordance with the rules established by the Plan
- an inability to manage cumulative extraction and provide users transparency to allow them to make decisions about their own take of uncontrolled and supplementary flows
- an inability to manage take of uncontrolled and supplementary flows in accordance with the intent of the Plan to enable a more efficient (timely) system
- potential adverse impacts to reduced flows to the environment if intended flows during supplementary events and uncontrolled flow events are not being achieved

10.5 Further Opportunities to improve

It is not clear whether the database configuration rules developed by WaterNSW were reviewed by DPIE-Water at plan commencement in 2016 to ensure they reflect the account management and dealings rules (see **Chapter 12**). The Commission understands that DPIE-Water participate in the development and review of these rules informally. There is no current formal process for DPIE-Water to check the WAS database configuration rules prior to implementation.

The Commission considers that DPIE-Water should be a part of this process to ensure rules are adequately coded into the WAS to support account management and dealings. This issue was a suggested action in the Commission's coastal groundwater audit report and has not been re-explored as part of this audit.

11 Criterion 7 – Rules for water supply work approvals

11.1 Criterion overview

Provisions in the Act establish rules for water supply work approvals:

- Section 92 (applications for approvals)
- Section 93 (objections to applications)
- Section 95 (determinations of applications)
- Section 96 (matters for consideration in relation to granting approvals)
- Section 98 (notification of approval holders)
- Section 100 (imposing mandatory and discretionary conditions on approvals)
- Section 102(4) (Minister must cause written notice of any conditions imposed, amended, revoked or suspended under this section to be served on the holder of the approval concerned)
- Section 102(5) (a condition imposed or a change referred to in subsection (4) takes effect on the day on which the notice referred to in that subsection is served on the holder of the approval or on such later date as may be specified in the notice in that regard).

The relevant clauses of the Regulation include:

- Clause 25(1)(a), which requires the application to be in approved form
- Clause 25(1)(b), which requires an application to include or to be accompanied by an assessment of the likely impact of the water use, water or activity concerned (if required by the Minister)
- Clause 26(7), which requires the application for approval to be published.

11.2 Current roles, systems and processes

WaterNSW, NRAR and DPIE-Water administer the Act, the Regulation and individual plan rules for the Plan related to the granting or amending of water supply work approvals.

Roles and responsibilities for giving effect to plan provisions have been documented broadly for the public on the WaterNSW and NRAR websites.⁹³ In addition, the *WaterNSW Operating Licence 2017-2022* and other internal documents outline various functions, including the Deed of Business Transfer between WaterNSW and the former DPIE-Water and delegations. In addition, audit interviews indicate that roles in relation to approvals are well understood between the two organisations. Any gaps in documentation or understanding are considered immaterial.

⁹³ NSW Government (2018) *Roles of water management agencies in NSW*. Available at: https://www.watnsw.com.au/__data/assets/pdf_file/0020/133940/Water-Roles-and-Responsibilities.pdf; NRAR (n.d.) *Licensing and approvals*. Available at: <https://www.industry.nsw.gov.au/natural-resources-access-regulator/licensing-and-approvals>.

There have been several restructures impacting agency roles and names since 2015. Prior to 2015, the NSW Office of Water held the broad assessment role for water supply approvals. This changed to the Department of Primary Industries – Water (DPI-Water) in 2015/16. From July 2016, this role transferred to WaterNSW. From April 2018, NRAR commenced their role for approvals assessments and compliance and enforcement, taking the responsibility for granting approvals for a subset of customers.

A summary of agency roles is as follows:

- **WaterNSW** is responsible for assessing and granting water supply work approvals to landholders, industries and developments that are not State significant development or State significant infrastructure.⁹⁴ WaterNSW is also responsible for notification of all holders of former entitlements under the *Water Act 1912* upon the commencement of a new water sharing plan under the Act.
- **NRAR** is responsible for assessing and granting water supply work approvals to government agencies, including other NSW Government agencies, local councils and the Australian Government; state-owned corporations; major water utilities, water supply authorities, and local water utilities; licensed network operators under the *Water Industry Competition Act 2006*; mining companies; irrigation corporations; Aboriginal communities and businesses; floodplain harvesting; major developments (State significant developments and State significant infrastructure); schools and hospitals. NRAR also has a role to monitor and audit compliance with approvals, specifically detecting instances of non-compliance in a timely manner.⁹⁵

The main systems used to grant access licences are the:

- **WLS - Approvals Transaction Module** – this is an automated workflow and storage system. It captures all applications, including water supply work approvals and supports the assessment officers to undertake the assessments of the application in line with the requirements.
- **NSW Water Register** – this is set up under Section 113 of the Act, which requires the register to be available for public inspection and record every application and every approval granted, extended, amended, transferred, surrendered, suspended or cancelled. The register can be found at the WaterNSW website.⁹⁶
- **ArcGIS** – used by assessment officers to map key environmental and infrastructure assets, conduct environmental assessments, and check licences and landholder details.

The main procedural and process documents used by WaterNSW, NRAR and DPIE-Water to support the granting of access licences are:

- **The Licensing Procedure Manual – Operations Section** – which sets out requirements for operationalising the Act and Regulation requirements for the water supply works approval process.

⁹⁴ State of NSW (n.d.) *WaterNSW Operating Licence 2017-2022*, pp 50-51. Available at: https://www.watarnsw.com.au/__data/assets/pdf_file/0004/126607/July-2020-WaterNSW-Operating-Licence.pdf, *NRAR Act 2017* cl. 11 Functions of the Regulator and Schedule 2 Additional functions of the Regulator.

⁹⁵ NRAR (n.d.) *Licensing and approvals*. Available at: <https://www.industry.nsw.gov.au/natural-resources-access-regulator/licensing-and-approvals>.

⁹⁶ WaterNSW (n.d) *NSW Water Register*. Available at: <https://waterregister.watarnsw.com.au/water-register-frame>

- **Assessment summary report** – this provides a framework for officers to document their application assessment and decision, designed to ensure the relevant administrative and environmental checks stated in the Act and Regulation are undertaken by the assessing officer and includes space to capture the relevant signatures.
- **Approval assessment checklist** – this is a checklist for use by the officer to ensure they have undertaken the required processes (administrative and environmental checks and impact assessment of the activity) under the Licensing Procedure Manual, the Act and the Regulation.

The Commission considers there were adequate systems, processes and procedures in place to support implementation of Plan provisions relating to water supply work approvals within the audit period.

11.3 Rules for water supply work approvals were partially implemented

Provisions relating to supply work approvals (for approvals applied for and granted in the audit period) were given effect

To assess if plan provisions were given effect in relation to approvals applied for and granted in the audit period, the Commission assessed WaterNSW's four most recent work approvals processed under the Plan. NRAR was asked to provide recent approvals but advised it did not process any approvals during the audit period.

This analysis found that the sampled water supply work approvals for approvals applied for and granted in the audit period were compliant with the legislative requirements set out above.

WaterNSW has not been notified of relevant mandatory conditions to reflect requirements set out in Clause 67 of the Plan relating to the operation of Glenbawn and Glennies Creek dams.

NRAR staff confirmed that WaterNSW has not been formally notified of its mandatory conditions from the WLS under Part 6 and Part 9 of the Plan since Plan commencement as required under Clause 67 of the Plan. NRAR indicated that this delay has been caused by a number of factors, including a lack of delineation of roles and responsibilities in relation to the drafting of mandatory conditions for the WALs and water supply work approvals held by the major water utilities between DPIE-Water and NRAR when water sharing plans were remade. These factors also include technical issues with the WLS (owned and managed by WaterNSW) as well as limited resources. In addition, NRAR does not have access to create mandatory conditions in the WLS.

Without an up to date Statement of Approval (20WA20430), key elements of the Plan are not required to be implemented and NRAR cannot undertake enforcement activities.

This may adversely impact security of supply to access licence holders, environmental assets and downstream users in the tidal pool (see **Chapters 6.3, 10 and 13**).

Specifically, the following aspects of Part 6 are not included in the WaterNSW Statement of Approval 20WA204300):

- Clause 28 relating to dry conditions targets
- Clause 29(3)(c) enabling the environmental water allowance to be used for supporting water-dependent Aboriginal Cultural Values

- Clause 30 relating to the maintenance of 100 percent of major utility access licences share component through a repeat of the worst period of inflows
- Clause 32 relating to the prioritisation of remaining resources if supply capability is insufficient
- Clause 34 relating to dam release rates from which a variation requires rules established by the Minister
- Clause 55 relating to the high flow tally and linked clauses 56(6) and 57(9)
- Relevant aspects of Clause 56 and 57 relating to announcements of supplementary and uncontrolled flows
- Clauses 57(2)(b), 57(4)(b) and 57(6)(b) relating to thresholds for continuation of supplementary events
- Clause 57 relating to AGL's supplementary take in the absence of an announcement.

NRAR staff also indicated that they are not managing non-compliances with the Plan. Non-compliances indicated in the section below have not yet been addressed (see **SA2.1.3**).

The Commission recommends that NRAR notify WaterNSW of mandatory conditions relevant to its Statement of Approval (20WA204300) that reflect all relevant Plan requirements in Part 6 (Systems Operations) and Part 9 (Daily Access Rules) (see also **Chapter 13**).

Approval holders (other than WaterNSW dam operations approval) for existing supply work approvals granted under the 2004 plan were not notified until 19 months after the current Plan commenced

An example commencement notice was reviewed to confirm if approval holders were provided written notice of any conditions imposed, amended, revoked or suspended under the remake of the 2004 plan in accordance with sections 102(4) and 102(5).

The Commission found that approval holders did not receive written notice of the mandatory conditions until January 2018 (19 months after the current Plan commenced and therefore these requirements were not given effect until this time). As such, these access licences were operating unconditionally for the first 19 months of the audit period.

The Commission compared the mandatory conditions in the 2004 plan and the Plan and found there was a material difference between the conditions. Mandatory conditions found in the current Plan not found on 2004 plan include:

- requirements to have metering installed unless exempt (the 2004 plan conditions required 'flow measurement devices' to be installed and maintained)
- requirements for the decommissioning of works
- logbook conditions (the 2004 plan required water extraction, infrastructure and cropping details to be provided on request)
- breach of condition notification requirements.

11.4 Potential Impacts

When water supply work approval holders operate without conditions, they are not obligated to comply with the Plan. The specific gaps to requirements are set out above.

Without mandatory conditions on water supply work approvals, NRAR (and its predecessors) cannot undertake enforcement activity should there be instances of non-compliance. The Plan is primarily implemented through water users complying with mandatory conditions. Without notification of mandatory conditions, the Plan cannot be given effect.

11.5 Recommendations and suggested actions

In response to draft findings, NRAR has drafted conditions for WaterNSW Statement of Approval (20WA20430) and is progressing towards notifying WaterNSW of conditions that give effect to the required Plan provisions. The Commission recommends that NRAR continue to finalise these conditions and notify WaterNSW of these conditions. The Commission makes three recommendations and raises no suggested actions.

R 7.2.1	NRAR to prepare conditions for WaterNSW Statement of Approval (20WA20430) in accordance with relevant Plan provisions as required by Clause 67(5) of the Plan, and sections 102(4), 102(5) and 100(1A) of the Act.
R 7.2.2	DPIE-Water to place conditions on the WaterNSW Statement of Approval (20WA20430) in accordance with relevant Plan provisions as required by Clause 67(5) of the Plan, and sections 102(4), 102(5) and 100(1A) of the Act.
R 7.2.3	NRAR to notify WaterNSW of its updated Statement of Approval (20WA20430) conditions that reflect relevant Plan requirements as required by Clause 67(5) of the Plan, and sections 102(4), 102(5) and 100(1A) of the Act.

To assess risks around timeliness of notification under remakes going forward, the Commission considered the process for remaking plans by sampling a bulk notification for a recently made plan (the Namoi Alluvial Groundwater Sources 2020). The Commission has confidence in the broader process going forward and therefore makes no recommendations or suggested actions in relation to the bulk notification of supply work approvals.

12 Criterion 8 – Access licence dealing rules

12.1 Criterion overview

The rules and requirements applicable to WAL dealings are set out in:

- the Act, primarily Division 4, sub-sections 71L-71Z
- parts 2 and 3 of the *Access Licence Dealing Principles Order 2004*⁹⁷
- clauses 12 and 22 of the Regulation
- Part 10 of the Plan.

The Act sets out the types of dealings that may occur, including:

- transfer of WALs (Section 71M) – *these dealings are out of the scope of the audit*
- term transfers of entitlements under WALs (Section 71N)
- conversion of access licence to new category (Section 71O) – *no dealings of this type have occurred as they are dependent on conversion factors, which have not yet been developed*
- subdivision and consolidation of WALs (Section 71P)
- assignment of rights under WALs (Section 71Q)
- assignment of individual daily extraction component (Section 71QA)
- amendment of share component of WAL (Section 71R)
- amendment of extraction component of WAL (Section 71S) – *WaterNSW advised that no dealings of this type were undertaken in this Plan, as it is dependent on the amendment of extraction component which has not yet been developed*
- assignment of water allocations between WALs (Section 71T)
- interstate transfer of WALs (Section 71U) – *no dealings of this type have occurred as they are dependent on conversion factors, which have not yet been developed*
- interstate assignment of water allocations (Section 71V) – *no dealings of this type have occurred as they are dependent on conversion factors, which have not yet been developed*
- WAL may nominate water supply and extraction points (Section 71W).

12.2 Current roles, systems and processes

A summary of agency roles is as follows:

- **WaterNSW** – since July 2016, responsible for administering dealings in accordance with the WaterNSW Operating Licence. Specifically processing dealings under sections 71O, 71P, 71Q, 71QA, 71R, 71S, 71U, 71T and 71V and 71W of the Act.⁹⁸

⁹⁷ NSW Government (2004) *Access Licence Dealing Principles Order 2004*. Available at: <https://www.legislation.nsw.gov.au/view/whole/html/inforce/current/sl-2004-0433>.

⁹⁸ State of NSW (n.d.) *Water NSW Operating Licence 2017-2020*, p. 4. Available at: https://www.watnsw.com.au/__data/assets/pdf_file/0004/126607/July-2020-WaterNSW-Operating-Licence.pdf.

- **Land Registry Services** – responsible for maintaining the WAL Register on behalf of the Minister administering the Act;^{99, 100, 101} registering general WAL dealings on the WAL Register (WAL dealings only take effect when registered);¹⁰² printing and issuing WAL certificates;¹⁰³ processing Section 71M and Section 71N dealings.

Land Registry Services staff indicated that once the dealing is approved, WaterNSW provide the applicant with a notification dealing form for lodgement with Land Registry Services (pre-populated by WaterNSW) and supply notification and instructions to Land Registry Services on how to register the dealing. The applicant completes the form (and includes the lodging party details), submits to Land Registry Services with the required payment. Land Registry Services receives a separate instruction from WaterNSW with similar information. Land Registry Services only register the dealing on the WAL when information is revived from both WaterNSW and the applicant.¹⁰⁴

- **DPIE-Water** – since July 2016, provide hydrogeological advice as required. Prior to this, this role was undertaken by predecessor agencies, including the NSW Office of Water and DPI.

The main systems used to administer dealings are the:

- **WLS** – WaterNSW uses the WLS to process dealings under sections 71O, 71P, 71Q, 71QA, 71R, 71S, 71U and 71W of the Act. The WLS has varied levels of access and functionality for officers. Review processes are in place for WAL dealings by the water regulation officer and the determining officer before the dealing is sent to Land Registry Services for processing.
- **WAS** – WaterNSW uses the WAS to process dealings (temporary allocation assignments) under sections 71T and 71V of the Act.¹⁰⁵ The WAS is coded with specific plan rules, water source and category of licence, which are automatically assigned to the WAL. The WAS can be coded so that dealings prohibited under plan rules cannot occur. Access and functionality to process allocation assignments in the WAS is restricted to authorised officers (customer service officer levels 1 and 2).
- **NSW Water Register** – WaterNSW includes some dealings information in the register but it uses terminology from the *Water Act 1912*, which is not consistent with the terminology used in the current Act. Despite this, the information currently in the register does add an element of transparency in relation to dealings under sections 71P, 71Q, 71R and 71T of the Act.¹⁰⁶

⁹⁹ Land Registry Services (n.d.) *Water Access Licence Register*. Available at: <https://www.nswlrs.com.au/Public-Register/WAL-Register>.

¹⁰⁰ In July 2004, the Department of Infrastructure, Planning and Natural Resources delegated the function to maintain the WAL register to Department of Lands – Lands and Property Information Division. (Department of Lands – Lands and Property Information Division (2004) *Circular - Commencement of Water Access Licence Register*. Available at: <https://nswlrs.com.au/getattachment/5f918b7d-ea44-4cb7-8172-75e24e71f213/attachment.aspx>).

¹⁰¹ Division 3A of the Act states what must be recorded in the WAL Register, including dealings and other matters.

¹⁰² WaterNSW (n.d.) *Dealings and Trade*. Available at: <https://www.watarnsw.com.au/customer-service/water-licensing/dealings-and-trade>.

¹⁰³ Land Registry Services (n.d.) *Water Access Licence Register*. Available at: <https://www.nswlrs.com.au/Public-Register/WAL-Register>.

¹⁰⁴ *Ibid.*

¹⁰⁵ WaterNSW (n.d.) *Water Accounting System*. Available at: <https://www.watarnsw.com.au/customer-service/ordering-trading-and-pricing/ordering/WAS>.

¹⁰⁶ WaterNSW (n.d.) *NSW Water Register*. Available at: <https://waterregister.watarnsw.com.au/water-register-frame>

- **Water Access Licence Register** – Land Registry Services uses the WAL Register to register all dealings.¹⁰⁷

The main procedural and process documents are used by WaterNSW, Land Registry Services and DPIE-Water to support the administration of dealings are:

- **Licensing Procedure Manual – Operations section: Water access licence dealings** outlines how the applications of dealing used by WaterNSW are processed. WaterNSW documents the dealing allocation and processing process on its website.¹⁰⁸ The webpage provides information and downloadable documents for the applicant's information and use, such as pre-application searches, submitting applications, how the application is processed, registration of WAL dealings and registration of water allocation assignments.
- **Assessment summary sheet checklists** – used by WaterNSW to document assessment of dealings applications.
- **Water accounting rules for WMA 2000**–sets out the detailed process and the rules for the accounting requirement of the Plan and how the accounting rules are applied in the WAS. This document is used to manage the water ordering, water usage and licence dealings under the Act. Individual plan provisions are coded into the WAS by WaterNSW.
- **Registrar General's Guidelines – Water dealings** – these are used by Land Registry Services and outline when sections 71M and 71N transfers can take place and sets out the requirements for applicants lodging dealings with Land Registry Services.¹⁰⁹ It documents high-level procedures for staff in processing dealings, including for correspondence and delivery, evidence, lost documents, minute papers, production of documents, rejection of WAL dealings and requisitions. The guidelines also outline the process to be used by Land Registry Services staff when processing, entering and recording transfers on the WAL Register.

The Commission considers there were adequate systems, processes, procedures in place to support implementation of Plan provisions relating to dealings within the audit period. The Commission has made some observations to strengthen these in **Section 12.4**.

12.3 Rules for access licence dealing rules were implemented

The relevant responsible parties implemented plan provisions relating to access licence dealing rules set out in Part 10 of the Plan within the audit period

To assess if plan dealing rules were given effect, the Commission assessed a sample of dealings that occurred under the Plan during the audit period.

¹⁰⁷ Land Registry Services. (2020). *Water Access Licence Register*. Available at: <https://www.nswlrs.com.au/Public-Register/WAL-Register>

¹⁰⁸ WaterNSW (n.d) *Water Dealings and Trade – dealings process*. Available at: <https://www.watarnsw.com.au/customer-service/water-licensing/dealings-and-trade/dealings-process>.

¹⁰⁹ NSW Registrar General Guidelines (n.d.) *NSW Land Registry Services – Water Dealings s.71M*. Available at: https://rg-guidelines.nswlrs.com.au/water_dealings/dealing_requirements/transfers/transfer; NSW Registrar General Guidelines (n.d.) *NSW Land Registry Services – Water Dealings s. 71N*. Available at: https://rg-guidelines.nswlrs.com.au/water_dealings/dealing_requirements/transfers/term_transfer; NSW Registrar General Guidelines (n.d.) *NSW Land Registry Services – Water Dealings*. Available at: <https://rg-guidelines.nswlrs.com.au/>.

Overall, the Commission found no gaps to legislative requirements set out above in the dealings that were sampled. Specific findings include:

- assignment of rights dealings under Section 71Q of the Act were processed in accordance with Part 10, Clause 60 of the Plan
- prohibited dealings under sections 71R, 71U and 71V of the Act did not occur during the audit period, in accordance with Part 10 clauses 61 and 63 of the Plan respectively
- assignment of water allocations dealings under Section 71T of the Act were processed in accordance with Part 10, Clause 62 of the Plan
- nomination of water supply works dealings under Section 71W of the Act were processed in accordance with Part 10, Clause 64 of the Plan
- no dealings occurred under sections 71O and 71S of the Act during the audit period, as they are dependent on conversion factors, which have not yet been developed.
- no dealings occurred under sections 71N, 71P and 71QA of the Act during the audit period, so these dealings types could not be tested.

12.4 Recommendations and suggested actions

The Commission found that implementation of Plan provisions relating to implementing dealings met criteria and makes no recommendations, and raises one suggested action.

One suggested action is raised:

- The NSW Water Register contains dealing related information that is incomplete and uses old terminology. WaterNSW is not required to maintain and update the NSW Water Register with respect to dealings information. However, dealings information is currently included on the NSW Water Register in relation to dealings under sections 71P, 71Q, 71R and section 71T of the Act. The register is incomplete as it does not include active dealings under sections 71M, 71N and 71W of the Act. It is not expected that dealings under sections 71M and 71N of the Act would be included, as these are processed by Land Registry Services. In addition, the register uses old terminology from the *Water Act 1912* (for example, dealings under Section 71T of the Act are referred to as 'temporary trades'). For improved transparency for the public, more comprehensive information across all dealings on the register would be beneficial.

SA 8	WaterNSW to increase the accuracy and extent of the dealings information available on the NSW Water Register for improved transparency.
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13 Criterion 9 – Mandatory conditions

13.1 Criterion overview

Part 11 of the Plan set out provisions describing the mandatory conditions that WALs and water supply work approvals must include (where required):

- Mandatory conditions for access licences generally relate to water allocation and access rules including access to supplementary and uncontrolled flows, taking of water, notification of breaches, and keeping of logbooks and other conditions on licence holders (Clause 66)
- Mandatory conditions for water supply work approvals generally relate to rules for appropriate installation of works metering equipment, decommission of a work, notification of breaches of conditions and logbook requirements (Clause 67)
- Mandatory conditions for WaterNSW water supply work approvals to give effect to system operations rules and daily access rules as set out in Part 2 and Part 9 of the Plan (Clause 67(5)).

Enforcement requirements are set out in the Act, specifically:

- Part 2 Division 1A, sections 61A to 60I (offences relating to WALs)
- Part 3 Division 1A, sections 91A to 91N (offences relating to water supply work approvals)¹¹⁰
- Section 78 (WAL suspension)
- Chapter 7 (enforcement for example stop work orders, removal of unlawful water management works).

To be given effect, mandatory conditions rely on:

- adequate registering of WALs and notifying landholders of mandatory conditions
- mandatory conditions reflecting the correct provisions in the plan on a licence or water supply work approval (approval)
- a compliance and enforcement regime promoting compliance by approval and WAL holders with the obligations set out in the conditions on the approvals and WALs.

In relation to the first dot point above, registering WALs and notifying landholders of mandatory conditions were considered critical components of previously assessed criterion and issues around these provisions are discussed in **Chapter 9** (Criterion 5 - Granting access licences) and **Chapter 11** (Criterion 7 – Rules for water supply work approvals). In particular, the assessment of Criterion 5 and Criterion 7 found that notification of mandatory conditions had been delayed or had not occurred in the Plan area, meaning the provisions were not given effect or were given delayed effect.

This chapter focusses on the second two dot points above: the accuracy of the mandatory conditions themselves in reflecting Plan provisions, as well as the enforcement regime.

¹¹⁰ Note that offences under sections 91C, 91D and 91E of the Act are not relevant to the Plan.

13.2 Current roles, systems and processes

A summary of agency roles is as follows:

- **DPIE-Water** – currently responsible for creating, entering and coding the mandatory conditions into the WLS (since September 2019) and placing conditions on licences and approvals. This includes identifying the licences and water sources rules apply to and assessing if a condition is required to give effect to the rules. Prior to this, the function was at various times carried out by NRAR and DPIE-Water predecessor organisations (DPI-Water, Department of Industry – Lands and Water and Department of Industry – Water).
- **WaterNSW** – responsible for imposing mandatory conditions on a WAL and approval holders in accordance with sections 66(1)¹¹¹ and 100¹¹² of the Act for its customers.¹¹³ Also currently responsible for notifying licence and approval holders upon the commencement of a new plan under the Act, conversions of rights under Schedule 10(2) or changes to or remakes of water sharing plans under the Act. Prior to this, this was the responsibility of DPIE-Water predecessors or NRAR.
- **NRAR** - responsible for ensuring WALs and approvals for major water utilities and WaterNSW reflect Plan provisions including drafting and coding conditions as required (together with DPIE-Water). NRAR is also responsible for enforcement of WALs and water supply work approvals that give effect to plan provisions through their mandatory conditions. NRAR took over these responsibilities in April 2018, prior to this, DPI-Water and WaterNSW were responsible. Regardless of compliance behaviours, in a particular plan area, it has been recognised as important to have adequate enforcement capabilities and arrangements in place by the NSW Ombudsman (2018). The *Natural Resources Access Regulator Act 2017* objects are to: 10(a) to ensure effective, efficient, transparent and accountable compliance and enforcement measures for the natural resources management legislation, and 10(b) to maintain public confidence in the enforcement of the natural resources management legislation.
- **Land Registry Services** – maintains the WAL register under Section 71 of the Act, which provides an online record of every WAL in NSW and its associated dealings including the activation of any water supply work approval under a specific WAL. This gives effect to WALs and water supply works approvals, a pre-requisite for mandatory conditions to be assigned and given effect.

¹¹¹ State of NSW (n.d.) *WaterNSW Operating Licence. 2017-2022*, p. 41. Available at: https://www.waterrns.com.au/__data/assets/pdf_file/0004/126607/July-2020-WaterNSW-Operating-Licence.pdf.

¹¹² *Ibid*, p. 53.

¹¹³ NRAR (n.d.) *Licensing and approvals*. Available at: <https://www.industry.nsw.gov.au/natural-resources-access-regulator/licensing-and-approvals/licensing-and-approvals> states that NRAR is responsible for granting approvals to government agencies, including other NSW government agencies, local councils and the Commonwealth; state owned corporations; major water utilities, water supply authorities, and local water utilities; licensed network operators under the *Water Industry Competition Act 2006*; mining companies; irrigation corporations; Aboriginal communities and businesses; floodplain harvesting; major developments (state significant developments and state significant infrastructure); schools and hospitals; and that WaterNSW is responsible for granting approvals to rural; landholders; rural industries and developments which are not state significant development or state significant infrastructure.

The following systems are used to administer and manage the implementation of mandatory conditions:

- **WLS** – used by WaterNSW and NRAR to apply mandatory conditions to WALs and water supply work approvals. It generates the statement of approval, statement of conditions, the notice of decision and the cover letter that are sent to the licence and approval holders. These documents include the relevant mandatory conditions.
- **NSW Water Register** – operated by WaterNSW, this system makes WALs and work approvals available to the public including their respective mandatory conditions.
- **WAL Register** – operated by Land Registry Services, this system is used to register WALs under Section 71 of the Act.
- **Compliance Investigation Reporting and Management System (CIRaM)** – used by NRAR for compliance purposes.

The main procedural and process documents used by WaterNSW, DPIE-Water and NRAR to implement mandatory conditions are:

- **The Licensing Procedure Manual**, specifically:
 - Chapter 8 Conditions - this provides information in relation to translating provisions into mandatory conditions in WLS for use by approval officers in WaterNSW and NRAR.
 - Section 3.4.1 – relates to processing and assessing an application for a water supply work and states that WAL must include mandatory conditions which are those set by the Minister through the Act or relevant water sharing plans.
 - Section 1.5.2 – relates to issuing approvals and states that mandatory conditions will display on screen (in WLS) and be automatically added to the statement of approval based on the location and the rules within the relevant water sharing plan.
- **The Compliance Investigations Manual** - used by NRAR to respond to compliance allegations. It is the primary reference for NRAR investigations staff and sets out the approved processes, procedures, authorities, instruction and guidance for investigating alleged breaches of water regulations. It is not clear what procedures were followed by agencies responsible for compliance before NRAR was established in April 2018.

The Commission considers there were adequate systems, processes and procedures in place to support implementation of Plan provisions relating to WALs and water supply work approvals within the audit period.

13.3 Rules for mandatory conditions have been partially implemented

Mandatory conditions provisions were accurately translated to WALs, except for Clause 66(9) relating to AGL Macquarie Pty Ltd’s take of supplementary water, which was corrected 25 May 2021.

To assess if Plan provisions were given effect, the Commission sampled a range of WALs applied for and granted in the audit period.

Plan provisions were largely translated across to mandatory conditions in WALs accurately to give effect to requirements, with the exception of 66(9).

Clause 66(9) requires AGL to comply with clauses 57(10-12) in taking supplementary water in the absence of a supplementary announcement made by the Minister (see **Chapter 10.3.5**). This issue was raised as part of the draft recommendation as urgently needing to be addressed and AGL should be notified of the Plan mandatory conditions relating to the supplementary WAL 10264 and Clause 57 as required by Clause 66(9) in the Plan. Whilst AGL was notified in 2018 together with the rest of the delayed WALs (see **Chapter 9**), the mandatory conditions do not reflect the Plan, in particular those required by Clause 66(9).

NRAR staff confirmed that AGL had not been formally notified of its mandatory conditions under the Plan from the WLS, although there has been semi formal communications in relation to changing conditions. NRAR indicated that this delay has been caused by a number of factors, including a lack of delineation of roles and responsibilities in relation to the drafting of mandatory conditions for the WALs and water supply work approvals held by the major water utilities between DPIE-Water and NRAR when water sharing plans were remade. These factors also include technical issues with the WLS (owned and managed by WaterNSW) as well as limited resources. In addition, NRAR does not have access to create mandatory conditions in the WLS. In response to draft report findings, NRAR drafted appropriate conditions to reflect requirements of Clause 57 the Plan and DPIE-Water coded the conditions in WLS. NRAR sent an updated Statement of Conditions to AGL containing appropriate conditions on 25 May 2021.

Mandatory conditions provisions were accurately translated to water supply work approvals, except for Clause 67(5) relating to WaterNSW Statement of Approval (20WA204300 to operate Glenbawn and Glennies Creek dams.

To assess if Plan provisions were given effect, the Commission sampled a range of supply work approvals applied for and granted in the audit period.

Plan provisions relating to clauses 67(1) to 67(4) were largely translated across to mandatory conditions in water supply work approvals accurately to give effect to requirements.

Clause 67(5) relating to the inclusion of mandatory conditions on WaterNSW water supply work approvals to give effect to Part 2 and Part 9 of the Plan was not implemented. Mandatory conditions were not applied to the WaterNSW Statement of Approval (20WA204300) to reflect Plan provisions set out in Part 6 and Part 9 of the Plan. Some conditions are carried over from the 2004 plan and are still applicable, however updated provisions were not given effect. This issue urgently needs to be addressed and WaterNSW should be notified of the Plan mandatory conditions set out in Clause 67(5) of the Plan relating to the implementation of Part 6 (Systems Operations- see **Chapter 6**) and Part 9 (Daily Access Rules- see **Chapter 10**) of the Plan (also see **Chapter 11**).

A proactive and reactive compliance and enforcement regime is in place

There is an enforcement regime in place to support implementation of the Plan:

- monitoring of offenses under the Act (sections 91A-91N of the Act as applicable) and associated enforcement of mandatory conditions is undertaken for approvals in accordance with section 78 and 78A and Chapter 7 of the Act
- monitoring of offenses under the Act (sections 60A-60I of the Act as applicable) and associated enforcement of mandatory conditions is undertaken for WAL (extraction) in accordance with Chapter 7 of the Act.

In relation to compliance and enforcement, the *Natural Resources Access Regulator Act 2017* specifically provides that NRAR's priorities are to be set independently. These regulatory priorities are reviewed on a regular basis and published.¹¹⁴

Since March 2019, the Hunter has been a priority area for NRAR in relation to unauthorised water extraction and authorised controlled activities and has been subject to a proactive compliance regime.¹¹⁵ Proactive compliance programs undertaken in the audit period have focused on routine monitoring on expired approvals, cease-to-pump rules, and review of major and local water utilities annual compliance reports.

NRAR staff provided information in relation to a proactive compliance program that NRAR undertook in September 2019 in an area of irrigated landholdings near the Hunter River, between Glenbawn Dam and the confluence of the Goulburn River. It focussed on surface WAL and work approvals, in both the regulated and unregulated water sources. The program known as Campaign Dhirridhirri found only 10 out of 61 properties inspected were fully compliant. Non-compliances related to for logbook requirements, logbook data requirements, not ordering water prior to pumping and non-compliant pumps.¹¹⁶ It is not known what action was taken to improve compliance, nor what was the outcome of these efforts.

The Plan area is also subject to a reactive compliance regime that has been publicly reported since 2018. **Table 4** shows enforcement activity for the Plan area between April 2018 and April 2020.

Publicly available information does not indicate if there is a good or poor level of compliance in the plan areas. The fact that there is a low level of alleged breaches provides some information in relation to the level of compliance, but it is unclear if community awareness is high enough for this to be a reliable indicator. The Commission notes that proactive compliance work undertaken in the Hunter suggests a low level of compliance.

¹¹⁴ NRAR (2019) *Natural Resource Access Regulator Regulatory Priorities 2019 – 2021*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0020/227324/NRARs-regulatory-priorities-2019-to-2021.pdf.

¹¹⁵ NRAR (2019) *Natural Resource Access Regulator Regulatory Priorities 2019 – 2021*. Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0020/227324/NRARs-regulatory-priorities-2019-to-2021.pdf.

¹¹⁶ NRAR (2020). *The Natural Resource Access Regulated Progress Report 2019-20*. p.23 Available at: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0009/324909/nrar-progress-report-2019-20.pdf

Table 4: Publicly reported enforcement activity for the Plan (April 2018 – April 2020) ^{117, 118}

Type	Number
Inspections	9
Alleged breach notifications	32
Investigations finalised	21
Advisory letters issued	0
Formal warnings	0
Statutory notices	1
PINs	0
Prosecutions finalised	0

13.4 Potential impacts

Not including the correct mandatory conditions in the terms of the water supply work approvals and WALs risks uncontrolled take and installation and use of works that may impact directly on other water users and the environment (see **Chapter 6** and **Chapter 10**).

Without mandatory conditions in place, WAL and approval holders are not obligated to comply with the Plan. NRAR (and its predecessors) cannot undertake enforcement activity should there be instances of non-compliance.

The Plan provisions are primarily implemented through water users complying with mandatory conditions. Without mandatory conditions, the Plan cannot be given effect. The Commission notes that it was out of scope for this audit to comment on the adequacy of the provisions for mandatory conditions in the Plan.

13.5 Recommendations and suggested actions

In response to draft recommendations to notify AGL of mandatory conditions to reflect requirements of Clause 57 of the Plan, NRAR and DPIE-Water addressed these prior to the finalisation of this report. Therefore, the Commission makes no recommendations and raises no suggested actions.

The Commission notes that recommendations have already been raised in **Chapter 11** in relation to notifying WaterNSW of Plan mandatory conditions for the operation of Glenbawn and Glennies Creek dams. These recommendations are applicable to this criterion, but not repeated here.

¹¹⁷ This audit did not seek to establish the quality of the enforcement regime or how these incidents were finalised.

¹¹⁸ NRAR (n.d.) *How we're doing. Compliance activities and outputs*. Available at: <https://www.industry.nsw.gov.au/natural-resources-access-regulator/reports-data/how-were-doing>

14 Criterion 10 – Amendments

14.1 Criterion overview

Section 45(1) of the Act allows for water sharing plans to be amended under specific conditions. Part 12 the Plan includes amendment provisions. While none of the plans contain mandatory amendment provisions, they all contain provisions that allow the plans to be amended for specified reasons (non-mandatory amendments). As such, the Commission has focused on non-mandatory amendment provisions and assessed if they have been given due consideration.

14.2 Current roles, systems and processes

DPIE-Water is responsible for implementing amendment provisions and updating plans as required under Section 42 of the Act. The Minister for the Environment must concur with proposed amendments as required under Clause 45(3) of the Act.

There are currently no documents, procedures, systems or process used to track amendments identified in water sharing plans. There is no trigger identified for documenting decisions made, studies undertaken or required actions for implementation. DPIE-Water use a spreadsheet to track amendments that have been gazetted.

The Commission considers there are not adequate systems, processes or procedures in place to support implementation of amendment provisions within the audit period. However, there were no instances where amendments were triggered and not implemented in the audit period and so this was not material.

14.3 Non-mandatory amendment provisions were likely given due consideration

The Commission reviewed the non-mandatory amendment provisions and evidence of non-mandatory amendments that occurred during the audit period. Three non-mandatory amendments were made, which were largely administrative.

The Commission considered that some of these provisions did not warrant further examination in this audit. For example, amendment provisions related to provisions that have not been triggered such as major utility (Barnard) access licences and native title claims.

The Commission did not identify any instances where non-mandatory amendments should have been made but were not implemented. As such, the Commission cannot conclude that these provisions were not given due consideration.

14.4 Recommendations and suggested actions

The Commission makes no recommendations nor raises any suggested actions.

The Commission however, notes that its previous audit of coastal groundwater sharing plans found instances where potentially relevant amendments were not implemented due to a lack of clear systems, processes and procedures to trigger and track non-mandatory conditions. In this case, the Commission recommended that DPIE-Water formalise and implement a process to:

- document the decision-making process underpinning if and how to implement potential amendment provisions
- document the status of potential amendment provisions.

While there were no material findings in relation to amendments to repeat this recommendation in this audit, future Plan implementation is likely to benefit if this recommendation is implemented, as it is likely to reduce the risk that relevant Plan amendments are not implemented in the future.