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Managing Groundwater Compliance in the Long Term:

Key Principles on the preferred approaches by the NSW irrigation industry

Discussion Paper

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Aim

To develop key principles on preferred approaches to managing compliance over the longer term, where groundwater usage exceeds the extraction limit.

Reason

The NSW Department of Planning, Industry & Environment (DPIE) are currently developing principles for implementing compliance mechanisms, which will be on public consultation in the second half of 2020, for implementation as required on 1 July 2021.

NSWIC seeks to develop a set of agreed principles to contribute to this process, at the earliest opportunity.

Background

Water Sharing Plans (WSPs) limit the amount of water that can be taken from a groundwater source by establishing a long-term average annual extraction limit, measured on a rolling annual average basis. WSPs have flexibility to temporarily allow groundwater extraction above the annual limit, for a set period of time. This is important for a number of reasons, such as to provide for climatic variability where surface water availability may be reduced. However, once average annual extraction exceeds the compliance triggers (outlined in the WSP), groundwater access is then reduced until extraction is below the annual limit. This ensures compliance with the long term average Sustainable Diversion Limit (SDL).

Compliance is assessed in accordance with the relevant WSP rules, and this varies between plans. Annual average extraction is measured using either a three or five-year rolling period. The exceedance allowed also varies between plans but is usually five or ten per cent above the plan's annual limit.

Non-compliance occurs when this calculated average annual extraction exceeds the long-term average annual extraction limit by either 5% or 10% (depending on the WSP).¹

If non-compliance occurs, reductions to access can occur by:

- *Restricting the water allocations that can be taken, assigned (transferred) under section 71T of the Water Management Act 2000, or otherwise debited or withdrawn from a water allocation account in the following water year;*
- *Announcing available water determinations of less than 100% (or 1 ML/unit share) for lower-priority access licences in the following year.*²

In many of the new WSPs (from 1 July 2020), the time period / compliance triggers in which extraction can exceed the annual limit has been changed. These changes come into effect for the 2020-21 water year.

NSWIC Positions

NSWIC has previously advocated that: *there should be no more than minimal impact, and the method should be guided by the recommendation of each groundwater source authority. The method to address overallocation must be valley specific and formed on the basis of local expertise.*³

¹https://www.industry.nsw.gov.au/_data/assets/pdf_file/0005/175937/Compliance-with-sustainable-diversion-limits-for-groundwater-fact-sheet.pdf

² Ibid.

³ Note: This is not a formal policy position (but was developed through teleconference discussions during submission development). The development of a formal policy position is preferred.

Current Status

DPIE provided a Water Allocation Statement (WAS) in May 2020⁴. This outlined that 2 groundwater sources had already reached their WSP compliance trigger, and thus allocations for 2020-21 were foreshadowed to be reduced. Other groundwater sources were also foreshadowed to be in a similar situation. This is shown in Table 1 (sourced from the NSW DPIE WAS, May 2020).

Table 1: Groundwater sources that could expect reduced allocations on 1 July 2020.

Compliance	Groundwater source
Compliance trigger exceeded. Can expect reduced allocations on 1 July.	Great Artesian Basin Eastern Recharge Lower Murrumbidgee Deep
Close to exceedance of compliance trigger, reduction in allocations dependent on final metering data	Upper Namoi Zone 3, Mooki Valley (Breeza to Gunnedah)
Potential compliance trigger exceedance and reduced allocation. May not eventuate depending on final metering data.	Lower Namoi Upper Macquarie Alluvial Upper Namoi Zone 2, Cox's Creek (Mullaley to Boggabri) Upper Namoi Zone 8 Mooki Valley (Quirindi - Pine Ridge Road to Breeza)

This then came to fruition on 1 July, with the AWD Order for NSW Groundwater Sources⁵ indicating:

⁴https://www.industry.nsw.gov.au/_data/assets/pdf_file/0005/301838/WAS-groundwater-20200519.pdf?utm_source=Water+Availability+Updates&utm_campaign=3028324354-EMAIL_CAMPAIGN_2018_11_14_05_47_COPY_01&utm_medium=email&utm_term=0_c09f71d9dd-3028324354-93562961

⁵https://www.industry.nsw.gov.au/_data/assets/pdf_file/0013/313042/Water-Order-Groundwater-200701.pdf

COLUMN 1 Water Source	COLUMN 2 Applicable Water Sharing Plan	COLUMN 3 Category of access licence	COLUMN 4 Megalitre per unit of access licence share component
HUNTER REGULATED RIVER ALLUVIAL WATER SOURCE	HUNTER UNREGULATED AND ALLUVIAL WATER SOURCES 2009	AQUIFER	0.90
LOWER MURRUMBIDGEE DEEP GROUNDWATER SOURCE	MURRUMBIDGEE ALLUVIAL GROUNDWATER SOURCES 2020	AQUIFER	0.65
EASTERN RECHARGE GROUNDWATER SOURCE	NSW GREAT ARTESIAN BASIN GROUNDWATER SOURCES 2020	AQUIFER	0.25
UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER SOURCE	NAMOI ALLUVIAL GROUNDWATER SOURCES 2020	AQUIFER	2.30
UPPER NAMOI ZONE 3 MOOKI VALLEY (BREEZA TO GUNNEDAH) GROUNDWATER SOURCE	NAMOI ALLUVIAL GROUNDWATER SOURCES 2020	AQUIFER	0.88
MANILLA ALLUVIAL GROUNDWATER SOURCE	NAMOI ALLUVIAL GROUNDWATER SOURCES 2020	AQUIFER (GENERAL SECURITY)	0.85
PEEL ALLUVIUM WATER SOURCE	NAMOI ALLUVIAL GROUNDWATER SOURCES 2020	AQUIFER (GENERAL SECURITY)	0.51
GUNDAGAI ALLUVIAL GROUNDWATER SOURCE	MURRUMBIDGEE ALLUVIAL GROUNDWATER SOURCES 2020	AQUIFER (HIGH SECURITY)	0.984

For background, a 0.65 megalitre per unit of access licence share component is a 65% allocation. All other groundwater sources remain on a 100% allocation⁶.

NSWIC Actions (to date):

NSWIC wrote to Minister Pavey on 20 March 2020 on this subject.

In response, Minister Pavey noted (in reply correspondence of 7 April 2020) that [excerpts]:

- “The draft groundwater sharing plans include the change from a 3 to 5 year rolling average compliance period in all groundwater sources in the Basin. However, the compliance trigger percentages will remain unchanged from the original water sharing plans. I am advised that an increase in the compliance trigger percentage would result in the water source being able to extract in excess of the LTAAEL more often and to a greater extent. This would be inconsistent with the “no net reduction in Planned Environmental Water” test under the Basin Plan and is likely to impact on accreditation of the groundwater WRPs.”
- “I can confirm that your suggestion that there be two options for compliance actions to manage to the extraction limit (i.e. a reduced available water determination and a reduced maximum water account debit) has been included in the draft groundwater WSPs.”
- “I understand that on several occasions, the Department has publicly undertaken to work with each valley to come to the optimal solution to implement compliance actions based on valley use profiles and preferences. Principles for implementing the compliance mechanisms are being developed and will be used to guide the proposed approach in a plan area.”
- “Note that in the coming water year the Department’s approach to managing compliance will be to apply a reduced AWD if necessary and as required under the current water sharing plans. I am advised that there is likely to be disparate views within each valley on the choice and mix of compliance mechanisms. Consultation needs to be thorough and meaningful, and I

⁶ <https://www.industry.nsw.gov.au/water/allocations-availability/allocations/summary>

have asked the Department to undertake this in the second half of this year, for implementation as required on 1 July 2021.”

NSWIC also wrote to DPIE in May 2020:

- a) Thanking them for the WAS;
- b) Requesting clarification on whether compliance for 2020/21 will be managed over a glide path, or within 1 year;
- c) Seeking whether they can provide clarity on possible AWD for 2020/21;
- d) Clarifying how BLR usage is treated in assessing compliance.

We are still awaiting a response.

Key Principles for Discussion

The below questionnaire seeks the views of NSWIC Members for their preferences on managing groundwater compliance.

Each valley will likely have unique preferences based on unique circumstances – usage patterns, access to surface water, WSP rules, past management practices, etc. Thus, we anticipate that NSWIC will be advocating for Government to develop distinct approaches for each valley in consultation with water users in each valley.

However:

- I. Where there are consistent views it would be valuable for NSWIC to identify those, and advocate those specifically to Government too.
- II. Whilst specific preferred approaches may vary between valleys, there are likely high-level principles which could be agreed upon;
- III. It may also be possible to identify a preferred method for how to consult licence holders on the compliance approach

This questionnaire seeks to identify these.

Questionnaire

Please identify your valley:

1) Mechanism to address non-compliance (Use Limit v AWD)

As above, there are two options for addressing non-compliance with either the WSP long term average annual extraction limit or the Basin Plan SDL.

1. Use Limit – i.e. allocate water to all licenses and then reduce the allowable water account debit to limit usage; or
2. AWD – i.e. reduce the AWD across all licences.

There remains a question as to whether Use Limit or AWD is the preferred method to manage compliance, and how this should be determined. Both options ultimately have winners and losers. For example:

1. Use Limit

- Benefits the more active users;
- Allows all licence holders the capacity to use or trade a known volume of their entitlement.

2. AWD

- Disadvantage to more active users, particularly in groundwater areas where there is significant over-allocation (such as the Upper Lachlan where entitlement is approximately 2x the use limit), because it would need to allow for carryover, and would assume that all allocation would be tradeable. In these circumstances the AWD would need to be significantly reduced to ensure compliance with the use limit.

1) Please indicate your preference:

- Use Limit
 AWD
 Other (specify)

Reasons why:

2) *Time period over which compliance is assessed*

Generally, groundwater sources where average extraction is calculated over a longer time period are likely to require a longer period of reduced allocation to get back under the limit, or may be hit with a bigger allocation reduction. We understand that all groundwater WSPs commencing 1 July 2020 apply a 5 year assessment period for calculating compliance against LTAAEL, so that a change will require WSP amendment.

2) Please indicate the preferred approach of your valley for the time period over which compliance is managed:

- 3 years
- 5 years
- Other

Reasons why:

3) *Time period over which compliance measures are implemented*

Based on discussions, there is a general preference for a glide path over more than 1 year, although it remains a question as to whether compliance management should be within 1 or 2 years.

3) Please indicate the preferred approach of your valley for the time period over which compliance measures are implemented:

- 1 year
- 2 years
- Other

Reasons why:

4) *Method for consulting licence holders on preferred compliance approach (noting that DPIE-Water expect to undertake this within next 6 months).*

4) Please indicate the preferred approach of your valley for consultation on how the compliance approach is determined:

- Jointly managed by DPIE-Water and valley-based water user organisation
- Led by valley-based water user organisation
- Other

Reasons why:

Draft Principles for consideration

Valley-Specific

Principle 1

The method to determine SDL compliance must be based on the specific circumstances of each valley, and thus will need to vary between valleys. Consistency of methodology is not as important as ensuring accuracy and appropriateness of the method in each individual circumstance.

A process should be established which allows the development of management options in each valley, tailored to the circumstances of each valley, but based on shared principles and processes.

Developing compliance approaches

Principle 2

Management approaches are to be determined in collaboration with local water users, to ensure approaches are workable, suitable and agreeable.

Maintaining compliance approaches

Principle 3

Once the suitable compliance mechanism approaches have been determined, this should be locked-in to provide certainty, as water users will manage in accordance with that approach.

Engagement

Principle 4

DPIE to ensure early engagement to provide forewarning for groundwater resources at risk of compliance breach (such as through a WAS). DPIE to provide guidelines to water users to provide additional clarity on the possible vicinity of availability (on the understanding they are indicative only).

Reviews

Principle 5

Periodic (annual) reviews of extraction data against compliance triggers are required.

Water users should be encouraged to enter their groundwater meter readings into iWAS.

WaterNSW to prioritise meter readings for groundwater zones at risk of breaching.

Other principles (or modifications):

Please specify:

Further points for discussion:

- What is the situation for those with access licence for both surface and groundwater?
- Others? *Please specify.*

Next Steps:

- NSWIC to finalise principles based on feedback:
 - Where questionnaire responses are in agreement: that position will be brought forward to a principle.
 - Where questionnaire responses are not in agreement: it will be noted that varying approaches in each valley will be required.
- There will be a Discussion Item on Groundwater Compliance at our **August General Meeting**. This will include questionnaire responses.
- The Groundwater Policy Committee will review questionnaire responses and discussions from the general meeting to inform finalization of the principles.
- The Final Principles will be provided to DPIE to assist in their work (and the Minister).
- NSWIC will participate in the public consultation in coming months, expressing these principles, and responding to any draft principles put forward by DPIE.

Please provide your responses by Tuesday 28th July 2020.