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FLOODPLAIN HARVESTING IN THE NAMOI VALLEY

Wee Waa Consultation Session - 13 December 2022

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1 Introduction

Water taken through floodplain harvesting activities is the last major form of water take to be integrated into the water licensing and approval framework. Integration into this framework provides a mechanism to regulate the activity and ensure water take occurs within sustainable limits.

In 2013 the NSW Department of Planning and Environment (DPE) introduced the NSW Floodplain Harvesting Policy. The policy identifies floodplain harvesting eligibility criteria and the licensing process. Floodplain harvesting licences define the volume of water (overbank and rainfall runoff) that users can legally harvest from floodplains.

The NSW Water Sharing Plans set out the long-term diversion limits at a water source scale. These limits were volumetrically estimated at the time that water sharing plans were being prepared. These volumetric estimates are now being updated based on improved modelling and updated information developed and collected as part of implementing the NSW Floodplain Harvesting Policy.

For the Namoi Valley, a new model has been used to re estimate the long-term average annual extraction (LTAAEL) limit set in the Namoi Water Sharing Plan (the *Water Sharing Plan for the Upper Namoi and Lower Namoi Regulated River Water Sources 2016*) and the long-term diversions under current development and management levels. The modelling shows that there has been growth in some components of water take, notably supplementary access and floodplain harvesting, but no significant growth in general security. The overall growth in water use above the Water Sharing Plan long term diversion limit for the regulated river system is 12.7 gigalitres per year (5.6%). This is the difference between the long term diversion limit and the volume that can be taken with current levels of development and management.

DPE is seeking to introduce a combination of licenced entitlements and account management rules to reduce floodplain harvesting, after a period of high rainfall years. The Department's modelling shows that licensing of floodplain harvesting, accompanied by a reduction in the allocations for supplementary water, will reduce the long-term average annual diversions to within the Water Sharing Plan limit.

The purpose of the Wee Waa consultation session was to engage with floodplain harvesting licence holders and other water users about the draft rules for the Namoi Valley and to communicate about the next steps in the public exhibition process. The workshop was designed to go into some detail on the modelling as it was recognised that this is of key interest to participants.

2 Consultation Session Process

The Wee Waa consultation session involved a presentation by various DPE representatives. The presentation sequence was:

- Welcome and Acknowledgement of Country
- Context setting
 - Water management in NSW
 - The new Namoi model
 - Status of Floodplain Harvesting reforms
 - The submission process
- Namoi technical assessment
 - Model build
 - Model scenarios
 - Cumulative downstream outcomes
- Namoi technical assessment
 - Predicted environmental outcomes
- Draft Water Sharing Plan rules
 - How to make a submission
- Floodplain harvesting measuring requirements
- LTAAEL compliance assessment process
- Review and wrap up.

Each presentation or topic was interspersed with a period of facilitated questions and answers.

The presenters (DPE) were:

- Mitchell Isaacs, Chief Knowledge Officer
- Dan Connor, Director, Healthy Floodplains Project Delivery
- Michael Sugiyanto, Lead Modeller
- Allan Raine, Director Planning Implementation.

Participants were also provided a further opportunity to liaise with agency representatives and ask additional questions over lunch.

ATX Consulting facilitated the session and was responsible for recording and reporting.

3 Key Issues

Key issues identified in the consultation session are outlined below.

3.1 Confidence in the modelling

Several concerns were expressed throughout the meeting on aspects of the modelling. Participants raised some general and some specific concerns related to the assumptions used in the new Namoi modelling. One of the specific concerns related to assumptions about increases in developed area. More general concerns related to the perception that the modelling was not reflective of the on-the-ground circumstances that landholders were experiencing.

Concerns were expressed during the meeting that DPE may be trying to move too quickly with licensing. Landholders felt that any requirement for expediency should not be at the expense of the accuracy of modelling and, therefore, robustness of the policy implementation.

Participants emphasised that in order to support the reform, water users needed to have confidence that the modelling it was based on, was robust and reliable.

3.2 Unregulated rivers

There appears to be a level of both confusion and dissatisfaction with how floodplain harvesting rules and measurement requirements apply to unregulated river water users. At this meeting, this was an issue of concern for Upper Namoi Valley landholders.

Unregulated river water users felt that an additional consultation session was required to address their issues. It was also felt that an Upper Namoi Valley location for this additional meeting was required to support attendance and accessibility.

3.3 Specifically targeted information

Landholders requested a level of individually tailored information that they felt would address their unique on-farm circumstances.

In this meeting, these requests took two primary forms. Firstly, there was a desire for feedback from DPE about farm-scale validation. Water users felt it was some time since they had provided submissions and wanted to ensure that their individualised property information would be responded to.

Secondly, some participants at Wee Waa expressed concern about the practicalities of complying with measurement requirements for Floodplain Harvesting and how their particular circumstances could be addressed. Landholders expressed they were uncertain about how compliance with measurement requirements, would be assessed by the regulator.

4 Question and Comments Summary

Table 1 below provides a summary of the questions and answers discussed during the session. Due to some limitations with sound quality and other issues, these are not necessarily verbatim. Best efforts have been made to capture both questions and answers accurately.

Table 1: Summary of questions raised and responses from the department

Question	DPE Response
General/Introduction	
Why is the review of the modelling only happening now after four years?	Modelling is only now at the point where it can be effectively reviewed, it had to first pass internal review. Four model workshops have also been held with key stakeholders at different stages of model development. The independent review of the model is actually happening earlier in the model development process so that stakeholder feedback can be incorporated into the review
What if the legislation doesn't pass? I.e. the licensing regulation is disallowed by the NSW Legislative Council.	The debate has been had in Parliament so it is less likely for there to be a disallowance of the non-licensing components which are now law in NSW. The Minister is expected to re-introduce legislation on the licensing component at the end of January 2023. The Department is still working to progress licensing and any disallowance would not affect licences that have already been issued.
We appreciate you are trying to expedite things but as water users we do not want expediency to be an excuse for inaccuracy	Noted
As water users we need confidence in the modelling so that we can support the reform	Noted. Part of the purpose of today's session is to go into some detail about the modelling and get water users' feedback
Modelling	
Is the model updated in real time? Does it include the last ten weeks of flooding?	There are different types of models, such as those used for operational purposes or predicting flood heights, that do use data close to real time. This model however is not a real time model. It is a planning model that is looking at the long term over the last 120 years. The latest flooding events will be incorporated into the model at some point.
Follow up from previous question: How do you know how the magnitude of the recent events could affect the model and therefore potentially influence the policy?	Currently the model calibration does not include recent events. The recent events are potentially used for future model (and modelling exercise) When we do annual compliance versus LTAAEL and Annual Permitted Take (APT), we try to compare modelled against observed.

Question	DPE Response
	We may see deviation between model and observed if the events have significant impact and are not represented in the current model. That can trigger further checks (model improvement, investigating underlying reasons and consideration of potential implications for policy and planning as required)
Do we ever get to the point where we have enough water? Is there a model that can be more live. There are concerns that the model is not 'live' enough - is there a way to improve this so that perhaps allowances could be increased during wet times?	Water NSW uses an operational model for water in the system. We recognise that the consequence (to other users and the environment) of taking one ML of water in wet times is less than one ML of water taken in dry times. The challenge for us is how do we balance these competing needs on an event by event basis. Developing event based water sharing arrangements is where we would like to get to in the future, but we don't yet have the tools or information to justify this level of management outside of times where there are critical human and environmental needs.
The model does not appear to cater for any outside catchments - no overland flow. Data seems to be driven by dam capacity.	The issue of overland flow has been brought up in the consultation on the model we've done to date (one on one consultation as part of the farm scale validation process) and this has been incorporated into the model. The model does allow for farm storages to be drawn down more than once within a year so multiple events will be captured, depending on available airspace (time between events and usage)
The developed area figures for 1993/94 and 1999/00 that you have shown as a Valley wide figure is grossly under-estimated. The increase in developed area figure you have shown is basically what my farm on its own has increased?	Our estimates of the increase in developed area is based on the best available data. We are happy to take more input from landholders on this.
How is rainfall runoff addressed in the model? Why is it in the model and how is it calculated?	There are two components of run-off, one is exempt and one is not exempt. Man made run off from the developed area is exempt and does not get included. Run off that is from a non-developed area is not exempt and is part of floodplain harvesting.
Why isn't hydrological information for Cox's Creek and Mooki included?	The model does consider input from the Cox's and Mooki into the Namoi. However its is a regulated river model and so these catchments are inputs to the model but not part of the model area per se. Return water from these creeks that would have gone overland has been implicitly included as part of the ungauged inflow into the Namoi.
Follow up question: There has to be a question about model performance. It is garbage in, garbage out. How have you got confidence in the upper reaches?	That is part of the unregulated system where there are different rules that unregulated water users should be aware of. There are no models for the unregulated system.

Question	DPE Response
Further follow up: Why isn't there a meeting like this happening in the upper valley?	We recognise that there are different issues in the upper valley and will do what we can to extend the engagement process to cover that area. DPE commits to getting back to upper reach water users on this.
The definitions have been changed. The original Water Act just refers to water from rivers, now we are talking about rainfall also being counted towards our entitlements.	The legislation and the policy environment has changed a lot since the Water Act of 1912.
What is the process to work with individual landowners regarding farm-scale validation? Can we get access to our own farm modelling?	Any modelling submissions will receive an individual response. We have been concentrating on finalising the overall model before getting back to individuals as changes to the overall model will reflect individual results. We are not at the point where we have enough confidence in the modelling to get back to individuals.
I have never been able to access the traditional amount of supplementary water? It has never been possible.	That was the objective of the policy at the time i.e. to restrict supplementary use below 93/94 levels to provide environmental outcomes.
If the modelling is right, it should reflect what has been happening on our farms. It is not even close.	Noted. We want to hear about how the model could be improved.
Is there an allowance for the water that we put back into the system?	There are no credits. Water rights are vested in the State and you to have a licence to use it. There are no credits for letting water flow back into the river as water not taken, is considered to be the State's water rather than that of any individual landholder.
Draft Water Sharing Plan rules	
With Floodplain Harvesting on unregulated rivers we now need telemetry. On the Upper Mooki we have limited height banks that bypass unregulated meters. How can you meter the water if it goes around your infrastructure? Are there any guidelines on how to do it? Including how to do it when you have 20 different outlets?	There are a range of guidelines that are available on the Floodplain Harvesting website. It is also recognised that there are a wide range of on-farm circumstances and that some of these circumstances may require more tailored solutions and possibly exemptions. Landholders are encouraged to contact the Department to get advice on their situation and see what solutions for compliance are available.
We have tried to be proactive. A senior representative of NRAR stood on our farm and said we won't know how some things will work until they are tested in Court.	Noted that NRAR not present at the meeting to comment. DPE suggests that landowners contact NRAR or the Department to seek advice and assistance with compliance for complex situations. Landholders are also encouraged to develop property measurement plans to help plan and document their approach.
I have applied for a Floodplain Harvesting licence and was deemed ineligible. On my property, the Cox's River breaks out and floods the property then returns to the creek. This is very difficult to meter. Now in flood, I can't take	DPE to contact the landholder and see if a solution can be found.

Question	DPE Response
water from the creek - I am now in a worse situation than ever.	
The definitions under the Water Act for volumetric conversion have been changed. Originally river sources only - now includes overland flows.	Noted.
Floodplain Harvesting and LTAAEL	
Concern about slide in presentation showing 45% reduction in supplementary AWD having effect in 'only' 4 out of 19 years. It is not a minor or 'only' issue - this still has a significant impact. Need to look at the years following as they are low and it is then that we need the supplementary water	Noted
If your farm is full, then your buffers stay full for a long time. This means there is no way out of a measurement period so you can't legally take water for an extremely extended period. There needs to be a solution to this.	Noted. This issue has been raised in previous consultation and is being considered by the Department.

4 Actions from workshop

The key actions DPE Water agreed to investigate further during the session, are summarised below.

Table 2: Key actions arising from the session

Issue	Further Action/Response
Need to check key assumptions in the model such as the amount of increase in developed area	DPE will check these figures and report back
Lack of clarity for unregulated water users and a need to engage with Upper Namoi Valley water users	The Department has responded to this issue by extending the public exhibition and submission period for Namoi unregulated river water sources to end February 2023 and a meeting will be held for Upper Namoi Valley water users on 7 February 2023 in Gunnedah.
Lack of feedback on submissions for farm scale validation	Feedback will be provided to all landholders who provided submissions, now that the modelling work has progressed.
Practical implications for not being able to take any water while floodplain harvesting e.g. when buffers may still have some water	This has been raised before and is being looked at through the reform process