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FLOODPLAIN HARVESTING LICENSING AND MEASUREMENT FRAMEWORK

Macquarie Valley - Warren Workshop

23 February 2023

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Author	Steve Rossiter
Contact	Steve@atxconsulting.com.au
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● 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.

An important part of this framework is rules that enforce how water taken during a floodplain harvesting event is measured, recorded and reported. These rules are specified in the Water Management (General) Regulation 2018 (the Regulation) and ensure that all water taken is measured by accurate, auditable and tamper-proof meters.

To assist landholders and water users to understand their obligations under the floodplain harvesting measurement rules, the NSW Department of Planning and Environment (DPE) Healthy Floodplains Project is conducting workshops throughout New South Wales. Implementation of the licensing and measurement framework enables floodplain harvesting to be accurately measured and water taken in accordance with the individual licensed volumes and legal limits prescribed in the Murray-Darling Basin Plan 2012 and NSW water-sharing plans.

For the Macquarie Valley, the licensing and measurement framework commenced on 1 March 2023, with crediting of allocations to Macquarie Floodplain Harvesting water accounts. There is a 'transitional period' of one year to enable water users to comply with the primary metering equipment requirements.

This report summarises the outcomes of a landholder workshop conducted in Warren on 23 February 2023.

2 Consultation Session Process

The Warren consultation session involved a presentation by DPE, the Natural Resources Access Regulator (NRAR) and Water NSW representatives. The presentation sequence was:

- Welcome and Acknowledgement of Country
- Initial Joint Agency Presentation to explain the various roles of key agencies
 - DPE
 - NRAR
 - Water NSW
- Measurement Methods and Metering Equipment
- Nominating Your Measurement Period
- Approvals, Dealings and Billings
- Review and wrap up
 - Key insights and actions

Each presentation or topic was interspersed with a period of questions and answers. Questions were also asked throughout each of the presentation sessions.

The presenters were:

1. Dan Connor, Director, Healthy Floodplain Management
2. Camila Ridoutt, Manager, Governance and Coordination, Metering and Measurement Reform
3. Keeley Reynolds, Director Education and Engagement, NRAR
4. Amanda Fuller, Manager Customer Assessments and Approvals, Water NSW

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.

• Key Issues

Key issues identified in the consultation session are outlined under the headings below.

1.1 Compliance Approach

Participants were concerned about the consistency between the acknowledged complexities around compliance (full storages, access to surveyors, availability of DQPs, etc.) within the required timelines and how the rules would be enforced by the regulator.

Participants stressed that, given there were some difficulties for many water users in being able to comply, it was important for NRAR to be aware of these challenges and respond accordingly.

Many participants' concerns were based on anecdotal experiences with or perceptions of NRAR's past compliance approach. NRAR clarified it was a firm and fair regulator who understood the challenges facing water users. While participants understood what NRAR was now saying about its compliance approach, landholders still had concerns about whether the 'pathway to compliance' method would be recognised by NRAR and incorporated into their enforcement timing and approach.

Landholders requested that DPE and NRAR work together to ensure the compliance approach reflected the identified complexities and likely timing of implementation of the requirements.

1.2 On farm complexity

Concerns were expressed with what is seen by some landowners as a 'one size fits all' approach that is failing to capture some of the unique farm operation circumstances that exist in the valley. Participants felt that the rules were framed in such a way that exemptions would be the norm rather than exceptions.

In recognising the complexity of some of these situations, DPE Water acknowledged it is open to reviewing elements of regulations where necessary. However, DPE stressed the importance of landholders taking a problem-solving approach. Staff encouraged irrigators to ensure they know the rules, examine their own farm situations and solutions available to them. Where they are still uncertain, they could propose solutions as to how they could comply or get as close to compliance as reasonably possible. It was clearly communicated that just saying this is too hard or does not work, will not be acceptable.

It may be the case that with the right advice and a thorough understanding of on-farm circumstances, solutions can be found. Some landholder participants requested DPE Water staff visit their farms to see first-hand their circumstances.

DPE Water expressed its commitment to working constructively with landholders on solutions, but that there are significant resource implications for DPE Water of taking a more individualised approach to assisting irrigators to develop a compliance solution. There appeared to be a certain level of reluctance from irrigators on the use of individual online sessions to work with DPE staff to identify compliance solutions and a preference for individual face to face site visits. However, site visits to multiple landowners is unlikely to be practical, requiring significant time and human resources.

In other areas, on farm visits by DPE Water staff to a sample of farms in the area with 'representative' or 'typical' irrigation situations have occurred. Some form of this approach may be worth considering for the Macquarie Valley.

1.3 Simultaneous irrigation and pumping

As has been expressed in other landholder sessions, participants at Warren expressed concern about the FPH rules not permitting irrigation and floodplain harvesting (watering and pumping) to occur at the same time. This was described as a common practice and something that was seen by irrigators as essential to the functioning of their farms and management of their crops.

It is important to note that the measurement rules do provide some flexibility regarding this issue. Landholders who use point-of-intake metering equipment are not subject to any limitations on how they use water during measurement periods.

This issue only applies to landholders using storage metering equipment. Water cannot be taken from a storage for use during a measurement period with that method, as it is based on measuring changes in storage, to accurately measure water taken.

However, the department acknowledged that this may create challenges for farm management as storage metering equipment is anticipated to be the most used primary metering equipment type.

1.4 Request for greater flexibility

The view was expressed that trying to separate out the different forms of water that entered and/or were used on a farm was impractical. It was felt that doing so was creating some perverse outcomes and unintended consequences of applying the FPH regulations.

It was suggested that one way to solve this issue was the idea of an overall water allocation, combining the allocations for supplementary, general use, floodplain

harvesting, etc. The view was the irrigator would then be given an overall allocation based on their cumulative water entitlements. Irrigators would not be able to exceed that allocation but would have the flexibility to use that overall allocation in the way that they felt was best for their own farm circumstances.

It was suggested that this use would need to be metered but could be metered and measured in a simpler way that didn't require the separation of different types of water. Participants felt that the separation of the water, and the restrictions associated with it, was not practical and made some common farm practices non-compliant.

2 Question and Comments Summary

The following is a summary of the questions and answers discussed during the session. These are not necessarily verbatim. Best efforts have been made to capture both questions and answers accurately.

Question/Comment	Response
Joint Agency Presentation	
Can you explain the change in mentality from NRAR? Previously it has been a very heavy handed with a focus on prosecution, now you are saying it is about assisting people to comply	(NRAR) Prosecutions are not the main focus of our compliance approach in this space. Our emphasis is on voluntary and assisted compliance. We recognise these are new rules and that most people are trying to do the right thing. If we find people who aren't, we will take action but we don't anticipate that to be the norm.
There are some unworkable conditions that cannot work under these regulations. Someone needs to take some leadership and work through the issues	(DPE) We are interested in working with you to understand any areas where you think you cannot comply and working through solutions with you. There are a variety of ways to contact the Department to discuss how to comply. We recognise that some situations are complex, and the Department wants to work with you to find solutions.
You are trying to do a 'one size fits all' approach and it is hard to implement that. We want to comply. We have licences across four valleys - there are some really complex situations where the rules don't neatly apply	(DPE) The measurement framework has a lot of inbuilt flexibility that landholders can adopt to suit their business needs e.g., subdividing work approvals, different measurement methods, use of buffer zones. We are happy to work with landholders to provide advice on measurement options for your property. Where seeking advice, please email metering.reform@dpie.nsw.gov.au . As the reform rolls out, we recognise that we may have to make some adjustments. We are prepared to pivot and shift but that needs to be balanced and remain consistent with the intent of the legislation.
What will the annual charges for water be under a FPH licence and what about the costs for metering - monthly costs?	(Water NSW) Water costs are set by IPART and are available at https://www.waternsw.com.au/customer-services/water-pricing/fees-and-charges
FPH Measurement	
There is a real issue with getting a surveyor in this area. Is there any other professional we can use. We are having to wait more than six months for a gauge board at the moment.	Survey benchmarks can be installed by a registered surveyor or a non-registered surveyor duly qualified person (assessed by the Minister as having the necessary skills to undertake this work). If you are a suitably qualified person looking to become a non-registered surveyor duly qualified person, please contact the department at

Question/Comment	Response
	<p>metering.reform@dpie.nsw.gov.au to have your experience assessed.</p> <p>If you already have a compliant benchmark installed, then anyone can install the gauge board provided it is validated by one of the following:</p> <ul style="list-style-type: none"> • Registered surveyor • Person holding a bachelor's degree in surveying • Person holding a diploma in surveying • A person working under the supervision of a person listed above • A registered professional engineer. <p><i>Registered surveyor</i> means a registered surveyor under the <i>Surveying and Spatial Information Act 2002</i> or a corresponding law of another State or a territory.</p>
<p>We have full storages at the moment - what happens with 'pathway to compliance' if our storages are still full in 12 months' time?</p>	<p>(DPE contractor) There are some metering devices, i.e. radar sensors, that can be installed in full storages. You will need to have a gantry for these to be installed and there will be follow up works required when the storage is empty.</p>
<p>There is a real problem with what you have set up here. DQPs are not going to be able to install all the meters that are required within 12 months, possibly not even the secondary ones.</p>	<p>(DPE) We do recognise that there is a shortage of DQPs. We are working on a range of initiatives to deal with this. It is a top priority for the department. However, it is important that you do all you can to comply and if you are unable to comply within the timeframe, that you can clearly demonstrate you have taken all reasonable steps in a timely manner.</p>
<p>We have irrigators above Warren and Nyngan with insignificant allocations with their licences. Investment of the capital for the equipment is not cost-effective. Don't want to decommission the works because they have been there for 30-40 years. Can we record that we need to engage with these stakeholders through the Irrigators Groups.</p>	<p>(DPE) Water take can still be significant with 50-100-unit shares of entitlement. Secondary measuring is optional for the first 12 months. It is also possible for people to make works inactive (and still hold your licence) and can be made active again if conditions suit - so may not necessarily need to be fully decommissioned. If the works are made active, you will need to install primary metering equipment after the first 12-month transition period has passed.</p>
<p>We have had floodwater on our property for 18 months. I have pumped my FPH licence allocation. Now I want to pump general security water to fill the storage. But can't pump general security water because I have flood water over all of my channels. Can I use my storage meter to measure that water and then count it as carry over water rather than it be counted as FPH water?</p>	<p>(DPE) Only way that could be measured then would be at the storage meter. At the moment that would be credited against your FPH licence.</p> <p>We are exploring this issue and it has been brought up before in relation to supplementary water take. There is no simple solution, but it is a problem we recognise needs to be worked on.</p>

Question/Comment	Response
How do I meter my general security water when the meter that I use to take out of the creek is six metres underwater?	If your metering equipment is not working or not working properly, you must lodge a s91i form within 24 hours of becoming aware.
Why can't we use the volume measurements for our storages that you have already given us for our licence?	(DPE) You can use your storage curves. A DQP, registered surveyor, will need to upload it to the DQP portal if you have one that complies with the approved storage curve standard . Storage curve guideline
Going back to the issue of being able to nominate what water is general security and what is floodplain water. We are likely to get another flood. What do you expect us to do if we get more floodwater and we have run out of our FPH allocation and we want to use carry over for our general security and we can't meter it?	(DPE) If you can't physically meter, you can apply for a metering exemption through the Non-Urban Water Metering Framework using this form . The application is quite long so we encourage you to contact the team that process these applications to talk through your requirements. It is a rigorous process - usually conditioned with an alternative measurement requirement. You can apply early, even if this exact situation doesn't currently exist. If you get the exemption it would be in the system. We encourage you to get it started if you can foresee that situation happening on your farm.
It is imperative that the rules are changed so you can access different sources of water (supplementary, general security, etc.) through the FPH measuring devices. This should apply to supplementary, general security and unregulated water because there will be times when we run out of FPH water - needs to be dovetailed together	(DPE) We hear the feedback that you want more flexibility. It is an issue we are aware of. Noting there are a range of considerations, will take that feedback on board and will see what can be done.
If you opt to go inactive but can't stop the overland flow, what happens?	(DPE) Need to amend your Work Approval to make works inactive. You would have to demonstrate the works are not capable of taking flood water (considered on a case by-case assessment). Have to show that the water that you are not entitled to take, can pass through. You can apply to make the works active again in the future - if you see that the next year there is likely to be significant flood plain water. However, you will be required to install metering equipment if your works are made active.
In the situation with the tailwater exemption when there is high soil moisture, significant rain events. If the exemption is no longer applicable once you are in that measurement period, if you have to pump everything out of your surge area how does that work? Does that then become a different class of water? If you call a measurement period and one reservoir is capturing overland flow, other half	(DPE) If you put meters on surges, sacrificial fields or other storages, you can then retain the status of whatever water was in those areas directly prior to your measurement period. Obviously, there is a cost involved to meter those storages. The only way you could capture water under the exemption in the scenario described would be to split your work approval into two. There is

Question/Comment	Response
of farm is not affected so its draining your run off.	some flexibility in the framework that allows you to do this provided you have controlling infrastructure between the subdivided areas to prevent water moving between the two areas if a measurement period is called in either area. For clarity, the developed area runoff exemption switches off if you are floodplain harvesting.
With regard to primary and secondary devices. I'm worried about those timelines and the 12 months to comply. There is currently a pretty large backlog. We have guys who already have 150 days of work lined up. If you have a work order for a primary but don't have a secondary meter, can you FPH?	(DPE) If you want to FPH in the next twelve months you must have at least an approved secondary device in place. You can go straight to primary metering if you want. Technically, you can't FPH if you don't have a primary or a secondary measurement device, but again it goes back to that pathway to compliance and making all efforts to comply. The 12 months is a transition phase so it is time to take the steps you need to take to become compliant now. Waiting to take action to comply, until closer to the deadline won't be looked upon favourably if you've failed to meet it.
Can you FPH while waiting for a secondary device?	(DPE) The rules are that you cannot floodplain harvest without a secondary or primary metering device installed. There is an inherent risk in floodplain harvesting without primary or secondary devices. If you have done everything you can to comply ahead of that take and have met obstacles, NRAR will take those efforts into account when deciding how to respond. Be sure to keep records which demonstrate the efforts you made to comply ahead.
Are there approved logbooks that we can use if we are using a secondary device?	(Water NSW) Measurement forms will be available in iWAS.
We will be pumping water out onto fields all while taking floodwater - so it just doesn't work. Not irrigating at same time as FPH does not work. Wouldn't it make sense to combine all the water sources? Amalgamate into the one works approval. Doing away with a lot of cost. We have multiple intake points	(DPE) You can't irrigate at the same time as FPH using storage measurement. Storage measurement works by measuring changes in water height in your dam. So, if you are taking water out and putting water in at the same - it's impossible to measure the volume taken through change in storage accurately. Alternatively, you can use point of intake metering so that you can floodplain harvest at the same time as you irrigate.
Not being able to irrigate at the same time as you are taking floodplain water just misses an essential part of how we operate our farm. We would go out of business if we couldn't do that. We have to irrigate on demand, we do it when the crop needs it. It is completely independent of what is happening with the floodplain.	(DPE) We have heard that feedback and have requested information from landholders so that we can work through those scenarios. We need evidence to show how this is a problem. We can also talk off-line about examples.

Question/Comment	Response
<p>Irrigating while we are FPH is a primary function of our business. The primary aim is to measure - we understand that. But in doing so you have put all these barriers around our functionality of our farming system to prevent our business from working how it should be working.</p>	
Case Studies	
<p>What do you do if you can't take any more FPH water and you have filled your storages, but water is still coming in and you can't actually keep water out of your farm? The water stays</p>	<p>(DPE) Either discharge or keep your FPH period open. Could put a meter on your storage. If you put meters on your intake points you can move your water anywhere you need to. It provides a lot of flexibility.</p>
<p>What is the benefit in preparing a property measurement plan?</p>	<p>(DPE) These plans are not mandatory but will assist landholders in communicating to the Regulator (and farm hands) how they comply with the measurement rules. DPE is trialling development of property measurement plans in the Border Rivers and Gwydir. This project will help with developing resources to assist landholders in developing a property measurement plan.</p>
<p>What if you can't take water out of your farm? If you are a 'passive taker'? You could have 100 ML in a buffer zone?</p>	<p>(DPE) Suggest it might be best to put a meter on it.</p>
<p>You can't put meters on everything. What about water that is outside your flood works? Might be outside your developable land and be stagnant water. It is water that is just sitting there but it could be significant - we might have water one metre deep and it is over 100 ha.</p>	<p>(DPE) We would need to look at that on a case-by-case basis. If you can't levy water out and it mixes with floodplain water it will be classified as floodplain take. However, in the regulation there are rules that acknowledge that some water, i.e., water lying on the lowest part of the property, is incapable of being used for consumptive use and therefore can be left as "dead water" that does not need to be accounted for.</p>
<p>You can pump the buffer zone prior to an event but you can't after - is that correct?</p>	<p>(DPE) You can use water from buffer zones for irrigation directly prior to floodplain harvesting. However, once a measurement period has been nominated, all water in the buffer zone must be transferred to a metered storage prior to calling the end of a measurement period.</p>
<p>Are you saying that if we have already maxed out our licence, we can't take that water? We take that water if the crop requires it. How is that counted after the flood recedes? Flood water stopped six months ago but you still have a stack of water everywhere. 90% of us pull that off as soon as the crop demands it.</p>	<p>(DPE) Landholders need to ensure that their floodplain harvesting take remains within their licence limit.</p>
<p>If you have a flood - water can't physically go anywhere. A % of our farm becomes unproductive - can't get tractors on to it, etc.</p>	<p>Noted. However, if you have the infrastructure to be able to pump water out of an area and use it for consumptive use (i.e. irrigation) then</p>

Question/Comment	Response
Only thing we can do is pump that water out and then we direct it onto crops.	you should be able to measure it prior to calling the end of your measurement period.
<p>You are assuming that our main source of water is through our storages – that is not the case. There are various intake points on most of our properties that deal with different types of water.</p> <p>Some of our intake points are 3 kms wide – they are immeasurable and uncontrollable. If we could keep the water out in a flood we would but we can't because we are on a floodplain.</p>	<p>Noted.</p> <p>(DPE) We have come from a situation where there is no measurement, no licensing. We are trying to provide some certainty. Think of where we have come from. On the other end of the spectrum, there is no FPH, without measurement.</p> <p>Appreciate there are concerns and you have our undertaking that we will try to find some solutions. We can't provide any guarantees, other than we want this to be workable and we will attempt to address the issues raised as much as possible</p>
<p>Most people want to comply. But our experience with NRAR is that they 'shoot first and ask questions later'. Their actions cost us all time and money. Does this reform have to be pushed out at this timeline?</p>	<p>(NRAR) We're a firm regulator, but we are also a fair regulator. Our compliance approach is geared toward helping water users to get into compliance, if you take reasonable steps to comply well ahead of your deadline and can show us evidence of those steps, we will take them into account in our response.</p> <p>(DPE) What is clear from Government is get on with installing the measurement equipment. We are interested in working with you more to understand how the rules may not work in your situation. Try to find solutions within what the framework is asking you to do. If you don't think you can do it, come up with some solutions that you think will work for your property. There will be opportunities to engage with us on this in the future.</p>
<p>It would significantly lower the pressure and the stress if DPE could work with NRAR about the compliance timeline.</p>	<p>(DPE) Noted. It is important to stress that landholders need to be able to try to make it work. If you can't make it work according to the regulations, then tell us what a better solution is. However, you can't just throw up your hands and say this won't work – you need to look for solutions.</p>
<p>The measuring and metering framework should not be rolled out if so many of the situations have to be dealt with on a case-by-case basis.</p>	<p>(DPE) We suggest that you make progress on installing equipment.</p>
<p>A proper framework needs to be set up to deal with exemptions because there is going to be a lot of them.</p>	<p>Noted.</p>
<p>We need people to come out in the field to see our situations on the farms. You need to put people in the field so you can understand the practicalities of this.</p>	<p>(DPE) Property Measurement Plans is a useful tool but we won't have the resources to work with every individual property owner to develop a plan. We currently have a pilot in the Gwydir and Border Rivers to test the plans. We will be running online sessions next week.</p>

Question/Comment	Response
	<p>We can provide you with the tools that will enable you to prepare those plans so you can demonstrate how you comply. Also, please email us at metering.reform@dpie.nsw.gov.au so we can start the conversation with you and go from there.</p>
<p>What if the floodway divides your property in two. You have a storage on one part and point of take on the other.</p>	<p>(DPE) You can 'sub-divide' or split your work approval into two or more areas creating different measurement areas provided you have controlling infrastructure between the two areas. You will not be able to transfer water between the two subdivided areas during a measurement period but outside a measurement period you can move the water freely across these two areas. Your 'point of take' area can be used in any way. Sub divide, does not mean you are subdividing the property (i.e. there is no impact on your Lot and DP) you are simply subdividing your work approval</p>
<p>There appears to be this paranoia that we are getting away with something that we shouldn't be or are not entitled to. It needs to be understood that there are costs on this side that prevents that from happening. There might be a compromise somewhere in the middle where we can find workable solutions.</p>	<p>Noted.</p>
<p>It is really important that DPE and NRAR work together given the compliance complexities and the timeline</p>	<p>DPE and NRAR are working together. We have regular interagency meetings, and we will continue to do so as we move into the implementation period.</p>
<p>Approvals, Dealings and Billings</p>	
<p>If you do need to amend a work approval, what is the timeline for that?</p>	<p>(Water NSW) The statutory timeline is 60 days. Often for simple amendments it can be more like 40 days and some very straightforward administrative ones are being completed in 10 days.</p>
<p>What is the process for registering your SIM and the ongoing charges related to that?</p>	<p>(Sierra Tek) Once your DQP uploads your details to the portal that will trigger an automatic SIM registration process. The SIM gets sent directly to your nominated LID manufacturer. (DPE) In relation to ongoing charges, when FPH water users connect their telemetry equipment, they can access the \$975 telemetry rebate available through the NSW and Australian Governments Telemetry Rebate Program. The rebate is applied as a discount to the telemetry service charge on the users water bill, over a four-year period, for each FPH meter connected to the telemetry system.</p>

Question/Comment	Response
We are a country of free trade - but I can't trade with anyone in the Upper Macquarie. One side of the river has two trade zones, my side of river has none	(DPE) This process is coming up for review when we look at the Unregulated Plan. The trade rules have come up as an issue that needs to be addressed. We can come back and confirm a timeline with you on that - it may be 2025.
Trading zones could be challenged because barriers to trade should not be there.	Noted
Can you trade within your own zone?	(DPE) Yes you can trade within a zone, and this can be both up and down stream if it is an existing approval
What about properties spanning across zones. I have a storage that is not regulated that is in a different trade zone to my FPH licence. How do I get water to my storage?	(DPE) Properties do span catchment zones. Zones are based on water source boundaries, not property or cadastral boundaries. It is recognised this can lead to some issues for properties spanning those boundaries and we are working through solutions with Water NSW. Our intention is there should be greater flexibility for properties spanning those boundaries but resolving that will take time.
If in different management zones and one licence is a smaller licence, can you apportion it to one side of the river and take one farm out of FPH?	(DPE) No. You would have to trade it.
If you have a landholding with multiple zones is there a process to amend this so that we don't get caught up in all these different trade rules?	(DPE) Provide us with the details and we can look at it