

## Proposed Regulation changes for floodplain harvesting and rainfall run-off in NSW

*The NSW Government is proposing changes to the Water Management (General) Regulation 2018 and is seeking feedback on the changes.*

The NSW Government is committed to regulating and measuring floodplain harvesting, including rainfall run-off where practical. This process is being done in a way that, wherever possible, improves trust, confidence and transparency for stakeholders.

It is anticipated that the new licensing and approval regulatory framework for floodplain harvesting will commence on or before 1 July 2021. To improve efficiency and transparency, changes to the *Water Management (General) Regulation 2018 (Regulation)* are being proposed to allow for floodplain harvesting licences to be issued in a streamline manner, impose measurement requirements once water supply works are granted for floodplain harvesting and improve clarity on when rainfall runoff requires measurement by providing an exemption in certain locations and during specified periods.

Until the new framework commences on 1 July 2021, a transitional exemption arrangement will be inserted into the Regulation to provide clarity for landholders about the use of eligible works for floodplain harvesting. This amendment will cease to apply when the licencing and approval process is complete or 1 July 2021, whichever is sooner.

There are four distinct sets of proposed amendments that seek to implement key elements of the Floodplain Harvesting Policy and provide clarity for rainfall runoff collected through tailwater drains, specifically these proposed amendments:

1. Establish a state-wide tailwater drain exemption
2. Embed the floodplain harvesting licence determination process
3. Implement the NSW Government's Floodplain Harvesting Measurement Policy
4. Establish a transitional exemption for floodplain harvesting that will cease on 1 July 2021

Table 1 summarises the intent of each of these changes. They are described in more detail below.

### Public exhibition

**The public exhibition period runs from 19 November to 16 December (inclusive) 2020.**

### More information

For more information and to provide feedback on the proposed changes, visit the 'Have your say' page on the Department of Planning, Industry and Environment's website at [insert correct link once finalised]

**Table 1. Summary of proposed changes to the Regulation**

### Proposed changes to the Water Management (General) Regulation 2018

#### **Change: establish a state-wide exemption for tailwater return drains**

The intent of this exemption is to recognise that measuring rainfall run-off collected in a tailwater drain is complex, particularly as much of the run-off may be used irrigation water that has already been measured under an existing water access licence. This change will provide an exemption from the need for a water supply work approval for the use of tailwater drain.

It will also provide an exemption from the need for a water access licence for the collection of rainfall run-off from an irrigated field into a tailwater drain when no other overland flow is being taken by works on the land, other than a tailwater drain.

During times when this exemption does not apply, the volume of water collected in a tailwater drain must be measured and accounted for under a licence.

#### **Change: embed the floodplain harvesting licence determination process**

This sets out the processes for how actual or proposed floodplain water usage by landholders will be converted into replacement floodplain harvesting licences. Several stages are undertaken in the determination process for these licences. If a landholder meets the requirements of each stage, a floodplain harvesting access licence will be issued, with share components determined in accordance with the process set out in the Regulation.

#### **Change: implement the NSW Government's Floodplain Harvesting Measurement Policy**

Under the proposed changes, storages used to collect water under a floodplain harvesting access licence must be fitted with compliant metering, data logging and telemetry equipment, and tamper-evident seals. Equipment will need to be installed and signed off by a 'duly qualified person'.

The deadline for installing compliant equipment will be 1 July 2021 or 1 July 2022, depending on the size of the storage and its frequency of use. All water taken under a floodplain harvesting licence from 1 July 2021 will need to be measured.

The proposed changes also set out requirements for reporting water take during a flood event and processes to follow if metering equipment fails.

#### **Change: establish a transitional exemption for floodplain harvesting that will cease on 30 June 2021**

This amendment is intended to provide clarity on the use of eligible works for floodplain harvesting prior to the licencing and regulatory framework being complete or 1 July 2021, whichever is sooner.

The proposed amendment will provide a temporary exemption from the need to hold a water access licence and water supply work approval when undertaking floodplain harvesting using an eligible work. For the purpose of this regulation eligible works are limited to approved works only.

Reporting and measurement requirements are included in this proposed amendment, along with penalties for failing to meet those requirements.

## Tailwater drain exemption

As part of implementing the *NSW Floodplain Harvesting Policy*, a significant issue was identified: it is not possible or practical to confidently measure rainfall run-off collected in a tailwater drain. While this was initially identified in floodplain areas, the issue occurs throughout NSW.

A tailwater drain is a channel or trench that collects excess water from an irrigated field that can then be reused. This irrigation water is measured and accounted for under a relevant licence before being applied to these crops.

When it rains, rainfall run-off from the irrigated area of land mixes with used irrigation water in the tailwater drain. This makes it difficult to measure and account for the rainfall run-off collected separately from the used irrigation water. Further, because of the high soil moisture content of an irrigated area of land, a tailwater drain will generally be the first structure to start collecting rainfall run-off when it rains.

The intent of the proposed exemption is to acknowledge that measuring rainfall run-off collected in a tailwater drain is not practical to achieve.

The department will work with other Murray-Darling Basin states to identify how growth in this activity is being assessed across the Basin and will establish a policy for managing this as an interception activity.

## Exemption from the requirement to hold a water supply work approval

A tailwater drain generally does not require a water supply work approval. This is because the primary function of a tailwater drain is to collect and convey used irrigation water. However, during times when the tailwater drain collects rainfall run-off, it could be considered to be a work that takes water from a water source and may therefore require a water supply work approval.

To clarify the approval requirements for this type of work, and to acknowledge that a tailwater drain will only collect rainfall run-off periodically, the government proposes creating an exemption. This exemption will ensure that, despite the collection of rainfall run-off, a tailwater drain will not require a water supply work approval.

***Please refer to clause 39B.***

## Exemption from the requirement to hold a water access licence

As described above, there are times when rainfall run-off collected in a tailwater drain cannot be practically measured and accounted for separately to used irrigation water. To improve clarity and certainty for water users about when they must account for rainfall run-off collected in tailwater drains, the government proposes creating an exemption from the requirement to hold a water access licence in certain circumstances.

This exemption would apply to the take of rainfall run-off that is collected in a tailwater drain when rainfall run-off is **only** being collected in a tailwater drain. The exemption stops when other structures, such as channels or dams, start to take rainfall run-off.

When the exemption applies, the rainfall run-off collected in a tailwater drain can be transferred to a storage without the need for measurement. Conversely, when the exemption does not apply, rainfall run-off will need to be accounted for under a relevant licence, or released back into a river, creek or floodplain.

***Please refer to clause 17B.***

## Floodplain harvesting licence determination

The licence determination process for floodplain harvesting licences is explained in detail in the *Guideline for the implementation of the NSW Floodplain Harvesting Policy*, available on our website.

The intent of the proposed change is to clarify the steps involved in the licence determination process. It will also ensure the process is undertaken consistently for each valley where floodplain harvesting licences are issued, both now and in the future. Essentially, it sets out the process for how floodplain harvesting licences will be issued, including eligibility for licences and determination of licence categories and share components.

This change is made in accordance with section 57A of the *Water Management Act 2000* (WM Act). This section allows for the Regulation to provide more detail about the conversion of actual or proposed floodplain water usage into a floodplain harvesting access licence entitlement.

### Eligibility for licences

A floodplain harvesting access licence can only be issued where there is a confirmed eligible work. An eligible work is defined in the *NSW Floodplain Harvesting Policy* and the intent of this definition is replicated in the proposed change. The proposed change describes an eligible work as a work capable of floodplain harvesting that, on or before 3 July 2008, was:

1. located on a floodplain in accordance with a relevant approval, or
2. located on a floodplain without a relevant approval because an approval was not required, or
3. located, or proposed to be located, on a floodplain and an application for a relevant approval was pending.

***Please refer to clause 23B.***

### Determination of licence category

Following a determination of eligibility, the proposed change specifies that the category of floodplain harvesting licence will be determined in accordance with following criteria:

- where a landholder held a regulated river access licence (with or without another licence category) on 3 July 2008, a floodplain harvesting (regulated river) access licence category will be granted, or
- where a regulated river access licence was **not** held by a landholder on 3 July 2008, a floodplain harvesting (unregulated river) access licence category will be granted.

***Please refer to clause 23J (1) for licence category determination.***

## Determination of share components

There are two different methods that may be used to determine the share components of a floodplain harvesting access licence. These methods are modelling or a repeat of the volumetric conversion process that was applied when a *Water Act 1912* licence was converted to a licence or approval under the WM Act.

***Please refer to clauses 23 D, 23H and 23I for modelling.***

***Please refer to clauses 23E and 23F for volumetric conversion.***

Modelling will be used for those landholders where a floodplain harvesting (regulated river) access licence category applies, or those landholders who, on 3 July 2008, held an unregulated river access licence with a share component that specified the Barwon–Darling Unregulated River Water Source.

For landholders that do not satisfy the above requirement, a repeat of the volumetric conversion process will be used instead.

In modelling share components for floodplain harvesting licences, there are two key steps that are reflected in the proposed change:

1. The need to model the capability of the eligible works, both at a property scale and at a water source scale (*eligible development scenario model*)
2. The need to model the volume associated with eligible works at a water source scale, along with the proposed rules to manage allocations, against the extraction limit specified in the relevant water sharing plan to identify any exceedance. If the volume exceeds the extraction limit, the volume associated with eligible works is adjusted to ensure compliance with the limit (*plan limit compliance scenario model*).

***Please refer to clauses 23D (2) - (5).***

For those landholders who, in addition to holding a regulated river access licence, held an unregulated river access licence, their share component determined as a result of the plan limit compliance scenario model will be reduced to reflect the amount of water that was taken under the unregulated river access licence.

The starting point will be to reduce the share component by the share component specified on the unregulated river access licence. However, the volume can be adjusted by the Minister if satisfied that the volume of water used was less than the amount entitled to be used by the landholder. This must be established by the landholder.

For example, where suitable evidence is provided to confirm that the landholder took less water than the share component specified in the unregulated river access licence, a volume less than the share component will be deducted. Conversely, if no suitable evidence is provided by a landholder, the entire share component will be deducted.

***Please refer to clause 23D (6) - (7).***

For the landholders where a repeat of the volumetric conversion process is used, the Minister will determine their share component based on a calculation that considers the maximum crop area in any year between 1993–99 and whether or not the maximum crop area is greater than the irrigated area.

This will be determined by multiplying the maximum crop area by the relevant crop conversion rate, and then subtracting the share components specified in the unregulated river access licence and/or metered groundwater usage from the multiplied value.

If the calculation results in a value greater than zero, this value will be the share component that is determined for the floodplain harvesting (unregulated river) access licence.

Crop conversion rates are detailed in the *Volumetric conversion handbook* available on our website. Importantly, for landholders where only a bore licence was held, the crop conversion rate for cotton is used in the calculation.

**Please refer to clauses 23E and 23F.**

Once a landholder's share component is determined, but before a final licence is issued with the entitlement, the landholder will be notified of their proposed entitlement and the information that was used to calculate that entitlement.

A landowner will then have 28 days to make a submission if they do not believe their entitlement calculation is correct. The proposed change ensures that a licence will not be issued until this submission has been considered.

**Please refer to clause 23G.**

### Final determination of category and share component

A floodplain licence will only take effect once the Minister for Water has given written notice of the category of the licence and the final share component. The licence will also be subject to any conditions imposed by the Minister.

**Please refer to clause 23J.**

## Implementing the floodplain harvesting measurement policy

### Application of requirements

These proposed changes are intended to bring the NSW Government's *Floodplain Harvesting Measurement Policy* into operation.

The changes will, in effect, impose a 'mandatory metering condition' on the holder of work approval (the works approval holder) for a storage that can be used to take water under a floodplain harvesting water access licence.

The mandatory metering condition will require each storage to be fitted with either:

- storage metering equipment, or
- point-of-intake metering equipment.

The Minister for Water will be able to exempt a storage from the mandatory metering condition if satisfied that it is not possible to measure water taken using metering equipment that complies with the mandatory metering condition. Importantly, the minister will be able to issue this exemption subject to conditions, for example, that the storage be fitted with an alternative measurement device.

**Please refer to clauses 238A to 238C**

### Compliance dates

In practice, a works approval holder will need to submit certificates issued by duly qualified persons that demonstrate they have installed the necessary equipment by the relevant compliance date.

All storages with a capacity of 1,000 ML or greater that are nominated against a floodplain harvesting water access licence will need to be fitted with compliant metering equipment by 1 July 2021.

All other storages will need to be fitted with compliant metering equipment by 1 July 2021.

If a works approval holder can demonstrate to the Minister for Water by 1 July 2021 that a storage is less than 1,000 ML, or is greater than 1,000 ML but used less than once in every seven years on average, that storage does not need to be fitted with compliant metering equipment until 1 July 2022.

However, a storage that does not need to metering equipment until 1 July 2022 can only be used to take water under a floodplain harvesting access licence between 1 July 2021 and 1 July 2022 if the works approval holder can demonstrate, by 1 July 2021, that the storage has been fitted with a compliant redundancy device.

***Please refer to clause 238O***

### Standards for storage metering equipment

Storage metering equipment measures the volume of water in a water supply work by reference to the water level in the work.

To comply with the mandatory metering condition for storage metering equipment, the works approval holder will need to demonstrate that the storage meter:

- meets standards approved by the Minister for Water (the department will maintain a list of meters that have been shown to meet these standards)
- was installed and validated by a duly qualified person.
- was levelled into a survey benchmark by a duly qualified person.

For every storage, the NSW Government will establish a 'default' storage curve document. A storage curve document supports the measurement of floodplain harvesting by allowing the height of water in a storage to be converted into volume.

The works approval holder will need to submit an amended storage curve document, certified by a duly qualified person, if they become aware that the existing storage curve is inaccurate.

***Please refer to clause 238J***

### Standards for point-of-intake metering equipment

Point-of-intake metering equipment measures the flow of water as it enters the water supply work.

To comply with the mandatory metering condition for point-of-intake metering equipment, the works approval holder will need to demonstrate that:

- a duly qualified person has certified that all water entering the storage can be measured with metering equipment that measures flow
- a duly qualified person has certified that the metering equipment complies with the non-urban metering standards.

***Please refer to clause 238I***

## Standards for metering equipment installed before the Regulation begins

Water users may continue to use metering equipment installed before 14 February 2020 until the end of its life in the following circumstances.

For storage metering equipment, a works approval holder must demonstrate that either:

- a duly qualified person has certified that the meter meets the standards made by the Minister for Water and the meter was installed in accordance with the manufacturer's instructions
- the meter has an accuracy range of  $\pm 10$  mm and a duly qualified person has certified that the meter has a digital sensor, and was installed in accordance with the manufacturer's instructions.

In both cases, the works approval holder must also demonstrate that a duly qualified person has certified that the meter has been levelled into a survey benchmark.

For redundancy devices, where a gauge board is installed, the works approval must demonstrate that the gauge board has been installed in accordance with the manufacturer's instructions.

The amended Regulation will also recognise metering equipment installed after 14 February 2020, but before the start of the Regulation, provided the installation was done in accordance with guidelines published by the department in this interim period.

***Please refer to clause 238N***

## Standards for data logging and telemetry

All metering equipment – new and existing – will need to be fitted with data logging and telemetry capacity that enables the collection and transmission of water take information.

This equipment will need to meet the data logging and telemetry specifications already approved by the Minister for Water for the purposes of non-urban metering rules and be installed by a duly qualified person.

The department will maintain a list of devices on its website that have been shown to meet these standards.

***Please refer to clauses 238I and 238J***

## Measurement period for floodplain harvesting and contaminated run-off

A works approval holder will be required to notify the Minister for Water within 24 hours of the beginning and end of a floodplain harvesting measurement period. This is the only time a works approval holder will be permitted to floodplain harvest.

Similarly, if the works approval holder is taking contaminated run-off as permitted under a water sharing plan, they must notify the minister within 24 hours of the beginning and end of the contaminated run-off measurement period. During this time, the works approval holder must not take any overland flow, other than the contaminated run-off.

The measurement period begins when overland flow captured by a work nominated to take water under a floodplain harvesting access licence:

- cannot be isolated from water taken from other entitlements, or
- has begun filling a storage.

The measurement period ends when overland flows are no longer being collected by storages nominated to take water under a floodplain harvesting licence and all buffer zones are empty.

During the measurement period, obligations apply to the works approval holder to ensure that all water taken in the storage under a floodplain harvest access licence is accounted for.

In particular, during the measurement period, the works approval holder:

- must not use the water in the storage for irrigation if using storage metering equipment
- must record and report the change in storage volume every 24 hours (in practice, this will be done automatically, using the meter's data logging and telemetry capability)
- must keep records and report every 14 days on the volume of water taken under another entitlement transferred into the storage.

The works approval holder will be required to report their floodplain harvesting take to the Minister for Water 28 days after the end of each measurement period and at the end of each water year.

***Please refer to clauses 238E***

### Faulty metering equipment and secondary devices

A works approval holder must notify the Minister for Water within 24 hours of becoming aware that metering equipment is faulty. They must have the equipment repaired or replaced within 21 days and can apply to have the repair period extended. A works approval holder must notify the minister within 28 days of repairing or replacing the metering equipment.

A works approval holder can continue to take water under a floodplain harvest access licence while the metering equipment is faulty, provided they have a compliant secondary measurement device installed.

A compliant secondary measurement device is a device, such as a gauge board, approved by the minister and installed by a duly qualified person.

***Please refer to clauses 238D and 238F***

### Duly qualified persons and standards

The proposed amendment Regulation prescribes several activities that must be done by a 'duly qualified person' in accordance with standards approved by the Minister for Water.

Table 2, below, summarises who a 'duly qualified person' is for each of these activities. In each case where a duly qualified person must certify that something has been done, they must provide a copy of the certificate to the works approval holder within 7 days.

**Table 2. Activities that must be undertaken by a duly qualified person**

Metering equipment	Activity	Duly qualified person
Storage meter	Install and certify the installation of a storage meter, including the data logging and telemetry capacity.	Certified storage meter installer and validator

Metering equipment	Activity	Duly qualified person
	Certify that the storage meter has been referenced to the survey benchmark	Registered Surveyor Registered Engineer Person or class of persons approved by the Minister for Water
Survey benchmarks	Establish and certify the establishment of survey benchmarks	Registered Surveyor Person or class of persons approved by the minister
Redundancy measurement device (gauge board)	Install gauge board	Not prescribed
	Certify that the gauge board has been referenced to the survey benchmark	Registered Surveyor Registered Engineer Person or class of persons approved by the minister
Storage Curves	Certify volumetric survey Prepare and certify amended storage curve	Registered Surveyor Registered Engineer Person or class of persons approved by the minister
Existing storage metering equipment	Certify that an existing storage meter has been installed in accordance with manufacturer's instructions	Certified storage meter installer and validator
	Certify that an existing storage meter has been referenced to a survey benchmark	Registered Surveyor Registered Engineer Person or class of persons approved by the minister
	Certify that an existing storage meter is within 10 mm accuracy	Certified storage meter installer and validator Certified Practising Hydrographer
Point-of-intake metering equipment	Certify that a site is appropriate for point of intake measurement	Certified practising hydrographer Registered engineer with floodplain management) experience Person or class of persons approved by the minister

Metering equipment	Activity	Duly qualified person
	Certify that compliant metering equipment has been installed and validated	Certified Meter Installer Certified Practising Hydrographer

***Please refer to clauses 236 and 238K***

## Floodplain harvesting transitional exemption

Prior to the licencing and approval regulatory framework being finalised for floodplain harvesting, there is need to clarify the legality of using certain works for floodplain harvesting. A transitional arrangement is proposed to ensure that both water users and the Natural Resource Access Regulator are confident in what can and cannot be legally taken from a floodplain.

A similar exemption was put in place in February 2020. However, this exemption ceased to have effect following disallowance of the exemption in September 2020. There were four key reasons for this disallowance:

- a lack of consultation on the amendment prior to commencement,
- a lack of clarity on the duration of the amendment,
- concern over the volumes of water being taken under the exemption,
- concern that the exemption legalised illegal works.

The proposed exemptions developed for public consultation seek to address these key concerns by limiting the scope and duration of the original exemptions and including mandatory notification and reporting requirements.

### Scope and duration of the exemptions

The proposed amendment will apply until water supply work approvals and floodplain harvesting access licences have been issued for eligible works or 1 July 2021, whichever is sooner. This duration acknowledges that the approval and licencing process is close to completion in those valleys where the NSW Floodplain Harvesting Policy is being implemented. We are particularly interested in stakeholder views about whether these or similar transitional arrangements will be required in the southern Basin beyond 1 July 2021.

***Please refer to clause 39AA (3) and Schedule 4, 17AA (3)***

The proposed exemptions only apply to eligible works that are already constructed in accordance with a relevant approval either prior to 3 July 2008, or after 3 July 2008 where a valid application for the work was lodged prior to this date.

This means that the exemptions will only apply to works that are constructed on a floodplain in accordance with a relevant approval under the *Water Management Act 2000* or the *Water Act 1912*. Narrowing the scope of this exemption directly address the concern that the exemption legitimises unapproved works.

***Please refer to clause 39AA (2) and Schedule 4, 17AA (2)***

### Exemption from the requirement to hold a water supply work approval

To provide clarity around the approval requirements for works used for floodplain harvesting, and to acknowledge that works considered to be eligible will receive a water supply work approval in

the near future, an exemption from the requirement to hold a water supply work approval is proposed. This exemption will ensure that until the water supply work approvals are issued or 1 July 2021, whichever is sooner, eligible works will not require a water supply work approval.

The proposed exemption allows eligible works to be used for the purpose of floodplain harvesting.

***Please refer to clause 39AA (1)***

### **Exemption from the requirement to hold a water access licence**

To clearly allow floodplain harvesting using eligible works to be undertaken legally in the period prior to floodplain harvesting licences being issued or 1 July 2021, whichever is sooner, a temporary exemption from the requirement to hold an access licence is proposed. This exemption only applies to the taking of water using an eligible work.

***Please refer to Schedule 4, clause 17AA (1)***

### **Reporting and measurement requirements**

The proposed exemptions are subject to reporting and measurement requirements. This will ensure a level of accountability regarding the volume of water taken by floodplain harvesting.

There are three distinct conditions of using eligible works for floodplain harvesting under the proposed exemption.

The first is a requirement to notify the Natural Resources Access Regulator within 12 hours of floodplain harvesting to confirm that an eligible work is being or has been used for floodplain harvesting pursuant to the exemption.

***Please refer to clause 21 (7), (8)***

The second requirement is to provide the following measurement information to the Natural Resources Access Regulator within 28 days of each occasion of floodplain harvesting using an eligible work:

- a reasonable estimate of the volume of water taken,
- the method used to estimate the volume, and
- the date or consecutive dates on which the water was taken.

***Please refer to clause 21 (9)***

The final requirement is to provide the above measurement information to the Minister within 28 days of the end of the water year, in respect of all water taken pursuant to the exemption during the water year (30 June 2021).

***Please refer to clause 21 (10)***

Failure to meet any of these requirements will result in a penalty of \$750 per requirement for an individual or \$1,500 per requirement for a corporation.

***Please refer to Schedule 7***