Floodplain Harvesting Measurement Overview

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NSW GOVERNMENT

What we'll cover today

1. Why measure floodplain take
2. Where the Policy applies
3. Measurement at a glance
4. Measurement methods
5. Measurement period
6. Steps required to measure
7. Faulty devices
8. Existing metering equipment
9. Duly qualified persons
10. We're ready to go!
11. Programs to support floodplain harvesting

1. Why measure overland flow

Last large substantial surface take

Floodplain Harvesting Measurement Policy 2020

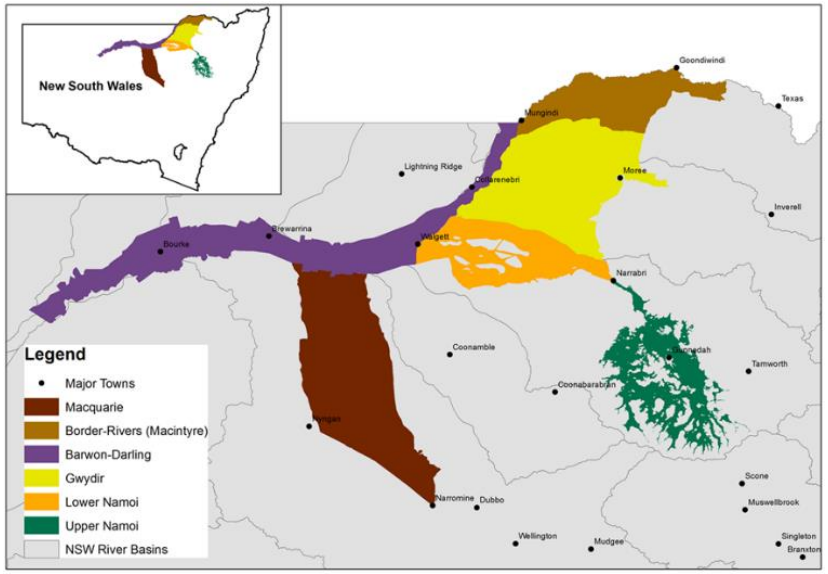
Bringing floodplain harvesting into NSW's water accounts is key in ensuring the Basin is managed as a whole-connected system.

Fully automated, accurate, reliable and tamper evident primary measurement system that aligns with NSW non-urban metering framework.

Accurate measurement means we have good data to manage the water source effectively and equitably.

Accurate measurement is vital to enforcing water limits under the Basin Plan and delivers on MDB Compliance Compact requirements.

2. Where will the Policy apply?



Valley	Storages
Gwydir Valley	**324**
Border Rivers	**110**
Macquarie	178
Barwon Darling	86
Namoi	447

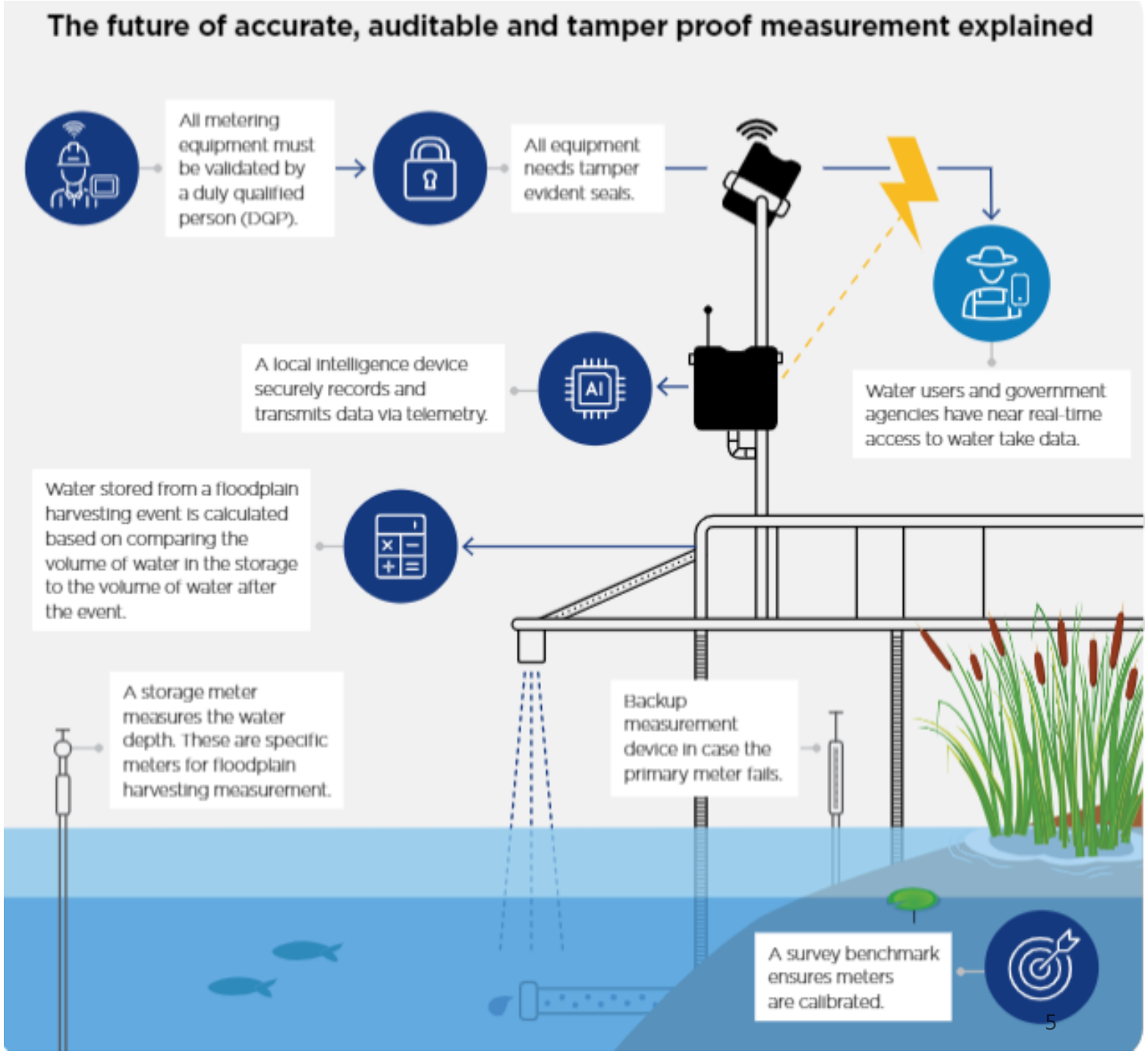
Approx. **1145 storages** across northern valleys

Floodplain harvesting measurement **will be** rolled out in **Gwydir and Border Rivers** first with conditions imposed when floodplain harvesting licences are issued

Landholders have 12 months **to** install '**primary** metering equipment'.

Landholder can use 'secondary metering equipment, **such as a gauge board, if they wish to floodplain harvest during that time.**

3. Measurement at a glance

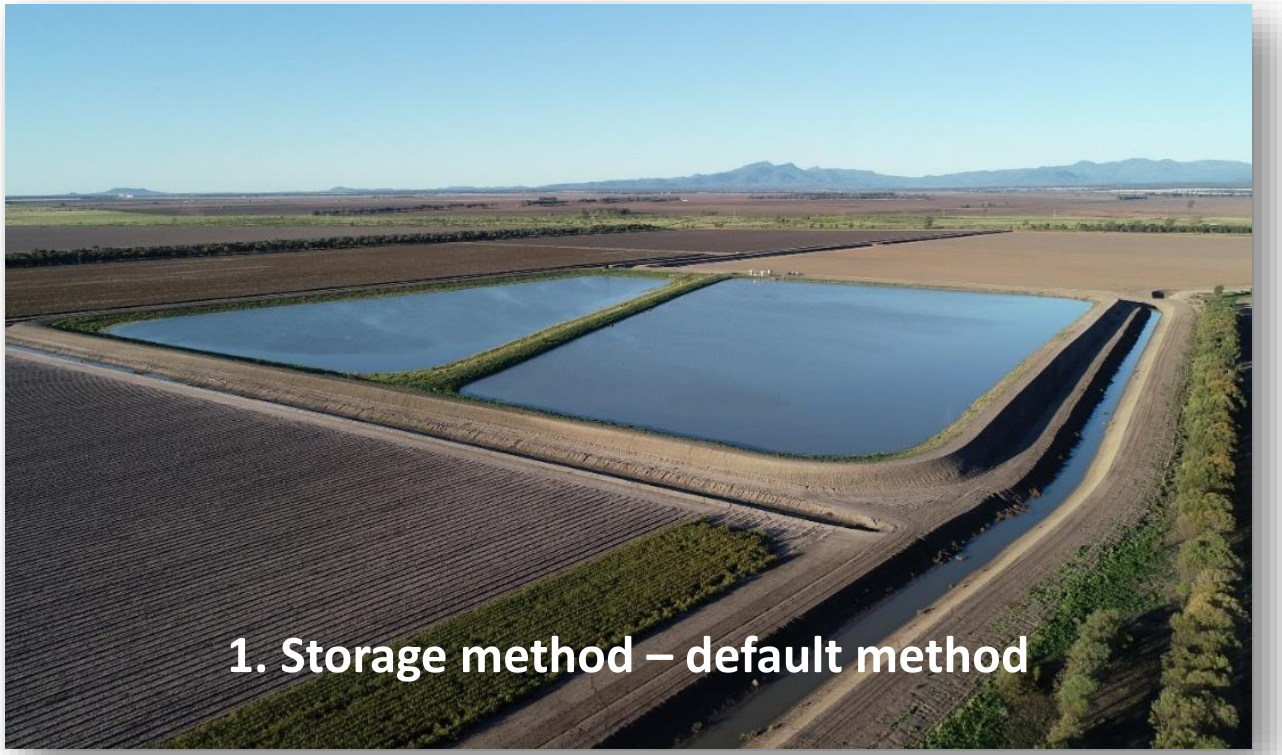


4. Measurement methods

Floodplain harvesting occurs when water is either collected and impounded in an on-farm storage or is directly used.

There are 2 ways you can measure floodplain take:

- at the storage method OR
- point-of-intake method.



1. Storage method – default method

2. Point of intake method

Measurement method continued: Storage

This is the **default measurement method – est. for 90% of cases.**

Storage meters are used to measure storage (dam) level changes to determine volumes floodplain harvested.

No irrigation allowed during an FPH event.

Calculated:
Sum of daily gross storage volume increase for all storages nominated on water supply work approval
minus
metered take under other licences put into storage during the measurement period.

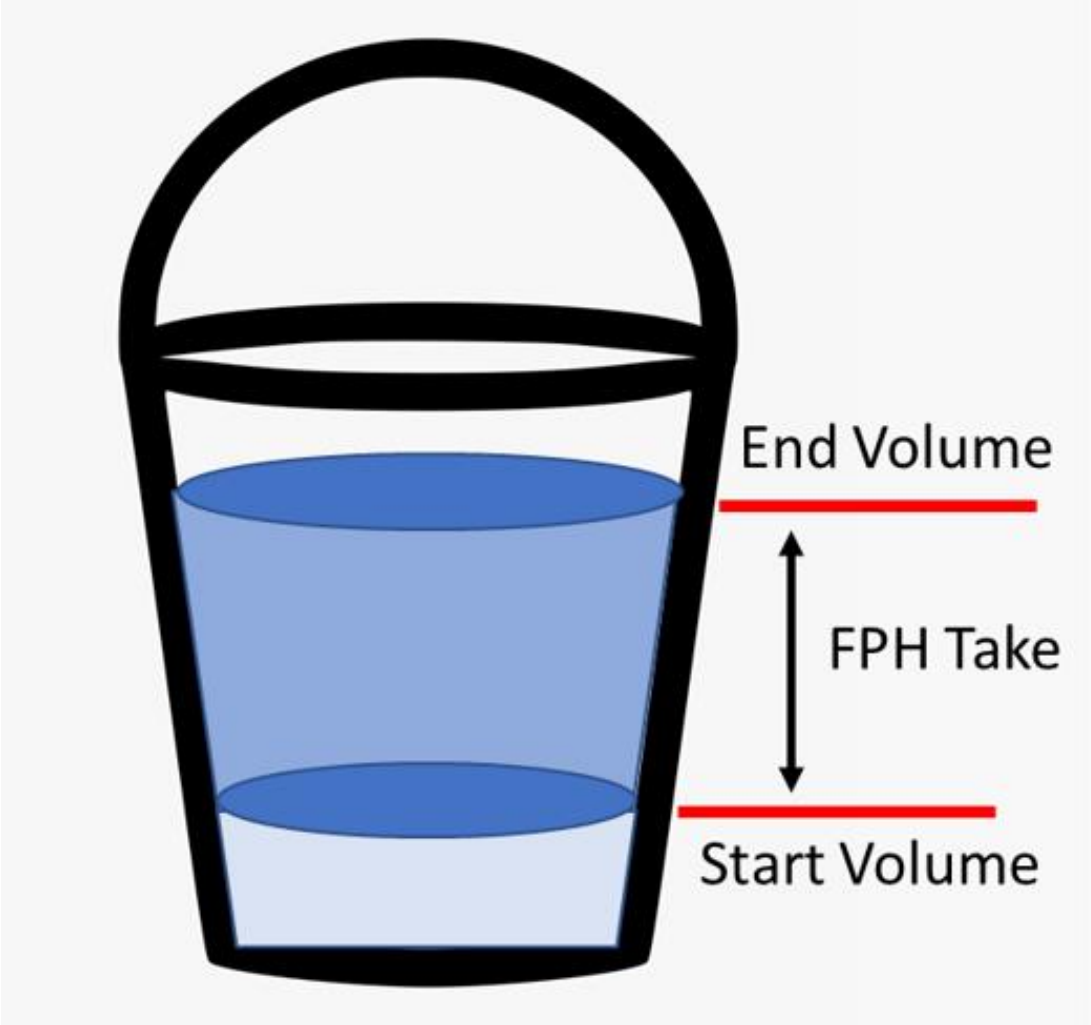
5. Measurement period

The Measurement ***STARTS*** when overland flow:

- starts filling a storage, or
- mixes with water on the property

The Measurement Period ***STOPS*** when water is no longer flowing into a storage and all other buffer zones are empty

Landholders nominate the beginning and end of the measurement period in iWAS



6. Steps required to measure

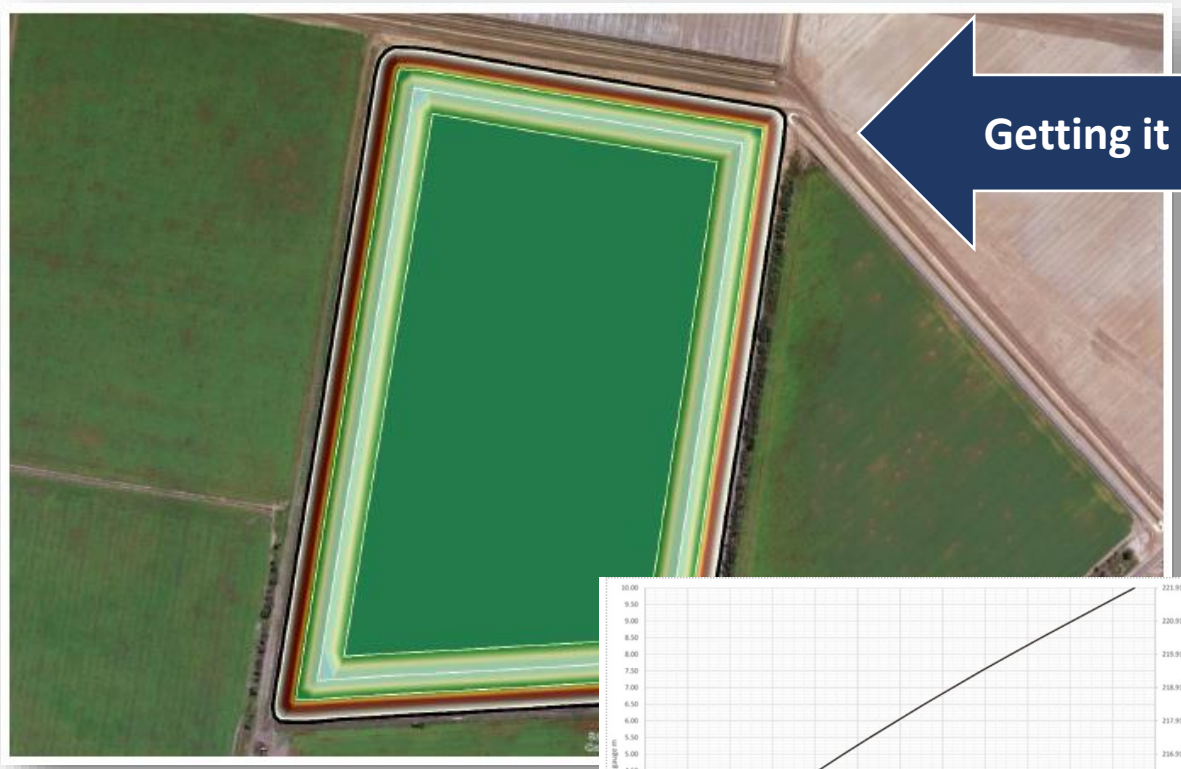
a. Survey benchmark and storage curve

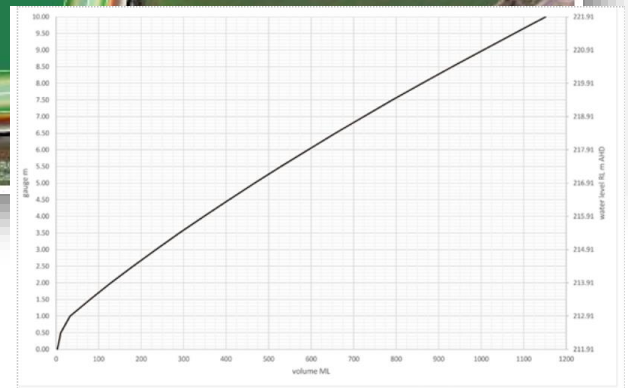
b. Primary metering equipment- storage meter and local intelligence device (LID)

c. Secondary metering equipment
   - gauge board, or
   - another approved system such as storage meter

Steps required to measure:

a. Storage curve and survey benchmark





Storage curve is used to determine volume

Getting it right on the ground

Survey benchmark links storage curve and the storage meter or gauge board to Australian Height Datum benchmark

Steps required to measure:

b. Primary metering equipment - storage sensor

Radar Sensor – measures water level using radar from above (catwalk)

Devices accurate to +/- 10mm

Submersible Pressure Sensor – affixed to the deepest point of the storage

Steps required to measure:

c. Primary metering equipment - local intelligence device (LID)

- All storage meters must be combined with a local intelligence device that meets the departments telemetry specs.
- LID logs and sends data via telemetry to WaterNSW in near real time
- Landholder have access to their data in iWAS.

Steps required to measure:

c. Primary metering equipment - tamper evident seals

To prevent tampering, all floodplain harvesting metering equipment will have NSW tamper proof seals installed.

Steps required to measure:

c. secondary metering equipment

The following secondary metering equipment can be used:

- A gauge board that meets the standards
- Another storage meter validated by a duly qualified person in accordance with the manufacturing standards
- Another device or class of devices approved by the Minister

Secondary metering is required during the implementation phase if landholders wish to floodplain harvest OR if primary device fails.

Guidelines available for landholders.

7. Faulty devices

- Landholders must notify the Minister within 24 hours of becoming aware that their metering equipment is faulty or telemetry has failed.

- Landholders will have 21 days from the time that they have lodged their faulty meter form with the Minister, to repair or replace the faulty storage meter.

- Landholders can continue to floodplain harvest during repairs to their primary device (storage meter), using an approved secondary device (e.g. gauge board).

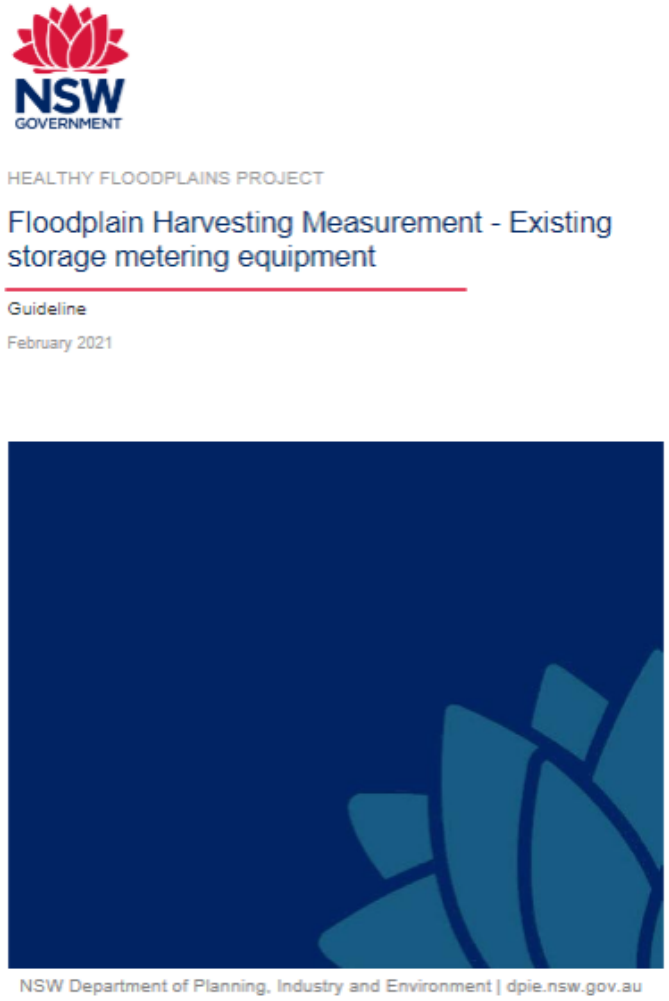
8. Existing storage metering equipment

Metering equipment purchased on or before 14 February 2020:

Accounts for approx. 8% of storage meters

Following requirements:

- Needs to be a digital measurement sensor
- +/-10mm of accuracy at depths of up to 10m
- independent (separated) from any on-farm or private network
- Must be fitted with local intelligence device that meets the Minister's specs
- Need to reference to storage curve and survey benchmark
- Must be validated by duly qualified person



9. Duly qualified persons – DQP

Survey benchmark	Storage curve	Storage meter installation and validation	Meter installation and validation	Local intelligence device	Secondary metering device	Point of intake eligibility
Registered surveyor	Registered surveyor	Certified storage meter installer and validator (CSV)	Certified meter installer (CMI)	CMI or CSV	Registered surveyor	Certified practising hydrographer
				Telemetry technician	Class of persons approved by the Minister	

10. Device and installation availability

11 compliant level sensors

3 compliant local intelligence devices

Market engagement policy for metering and telemetry

MHL testing

28 Certified Storage Meter Validators

11. Programs to support floodplain harvesting measurement

- Programs to support floodplain harvesting include:

- Establishment of a Floodplain harvesting measurement demonstration site at Australian Cotton Research Institute
- $18 million telemetry rebate program
- $2.5 million floodplain harvesting measurement field program – 50 sites across Border Rivers and Gwydir valleys
- Field day in Narrabri to support continued learning, development and recertification of certified storage meter installer and validators

Questions?

Thank you

For further information:

- industry.nsw.gov.au/water/plans-programs/healthy-floodplains-project/measurement