



namoi water

Namoi Water Submission

NSW Water Metering Framework

28th September 2018

Contact

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Introduction :

Namoi Water represents Water Access Licence Holders (WAL) in the Namoi Catchment Area. These licence holders included regulated, unregulated and groundwater systems. Namoi Water engages in advocacy, policy development and media relations. This submission represents the view of Namoi Water, however, each Member reserves the right to independent opinion on any issue covered in this submission. A copy of this submission has been provided to our members.

Namoi Water is a member of NSW Irrigators Council and we support the submission made by Council in relation to this matter.

General Comments :

Namoi Water members do not accept drop in sessions as consultation, the consultation for the NSW Water Metering framework has been inadequate for our community. We understand there are views the process used was successful, however we note that those licence holders that did attend the forum in Gunnedah were extremely disappointed with the format. It is important Government understand that the criticism is in regard to the format of the consultation, not of the opportunity or effort to ensure departmental and senior executives attended and engaged with the community. It is not unreasonable that Namoi Water requests adequate consultation based on our community expectations. It is our expectation that public meetings, including presentation of information with facilitated question and answer sessions are the preferred method of consultation with our community. We are on record regarding this requirement for over 20 years.

We do not consider “briefings” or “drop in sessions” as consultation, they may form part of the process, but they do not fulfil best management or appropriate transparency in consultation that leads to the best outcome. That is, improved community understanding as a result of the feedback which is informed, adds value, presents a range of views and works in rural regions. With many of our members suffering some level of industrial deafness clarity of the message delivery in a room without background noise is critical. We strongly request that NSW Government hold public meeting format. Public meetings should also be advertised in the local paper.

We will not attend any further consultation unless this format is agreed to prior to the meeting commencing.

The Namoi region is in the midst of one of the worst droughts on record. The current regulation will result in a large percentage of Namoi Licence holders being required to replace existing meters or undertake substantial civil works to install a meter in unregulated systems. To apply these regulations whilst many farmers have had no income from their irrigation licences for quite a few years and in many cases have no capacity to take due to previous reforms is unconscionable. Small users are still adversely impacted as a result of the proposed regulation and it is clear there has been little ground trothed data used in developing the regulation. At this time we do not support the proposed regulation unless considerable changes are made to make the timeframes workable and remove the requirement for smaller licence holders (entitlement) to replace existing meters that are currently functional.



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NSW Water Metering Framework

The NSW Water Metering framework consultation paper states that the proposal aims to improve coverage and standards of meters in a staged way and based on risk. Water users support the intention to move towards modern metering arrangements with a staggered implementation based on proper risk assessment.

Namoi Water is unclear how risk has been taken into account within the thresholds that have been selected or how the risk assessment detailed on page 12 was calculated. In relation to these issues Schedule 9 in the draft regulation covers the bulk of water resource areas within the state outside southern region already covered by the original metering project. Thus the application of the small works exemption would appear to apply to a very low number of works.

We request the department provide the analysis that informed the risk assessment and a quantification of the number of small users the exemption might apply to.

Thresholds:

Based on the draft proposal it would only be Unregulated licence holders in the Namoi under the 100mm threshold (4 inch) that would be eligible for the exemption. Our estimate of works within Unregulated sources is that this exemption would apply to less than 17% of water licences and the majority of these will be due to the fact that the works are not equipped rather than pump size.

Our figures do not appear to reconcile with the information in the consultation paper, page 12 states that 56% of works will be required to meet the new standards. Namoi Water requests transparency of the age of the information used to support this number and if this has been ground trothed. It appears the state level data misrepresents the level of impact on smaller inland works and the number of works required to install a new meter in our region may well be in excess of 90% of work approvals.

Whilst the proposed thresholds are stated to be simple and easy to enforce we reject the assertion they are easy to comply with. There are a large number of smaller licence holders within the Inland water sources that will be captured as a result of the proposed approach to thresholds, the use of cumulative multiple works threshold and at risk water source assessment.

The proposed implementation approach fails to take into account licence holders with less than 20 meg entitlement represents over 883 licences in the Namoi (30%), all of whom will would find the replacement cost of a pattern approved meter cost prohibitive. Namoi Water has contacted a number of meter manufacturers to price small diameter pattern approved meters with telemetry, pricing ranges from \$5500-7500 upwards for the meter (including Telemetry) plus installation costs. This would result in a significant cost for those with very small entitlement that could be better managed with their existing meter being maintained and lead sealing of all small volume take.

The NSW Metering Business case averaged the cost of meter replacement at \$20 000 per work including installation, using this figure the total cost to the Namoi using these thresholds/risk assessment the total cost to move to upgraded meter is approximately \$45 million.



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In relation to a small water source we would like to highlight the impact using Upper Namoi Groundwater Zone 1 lost over 95% of their entitlement in the previous ASGE reform. The volumes in this table are all that remains and the bulk of this water is unused as it is uneconomical to undertake production with this reduced level of entitlement, all of these licence holders would need to upgrade their meter.

ML	LICENCE	ZONE
57	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
53	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
41	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
30	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
24	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
21	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
21	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
14	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
14	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
11	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
11	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
10	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
9	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
9	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
6	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
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5	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
5	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
3	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
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3	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
2	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
2	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
2	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
1	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
1	Groundwater	UPPER NAMOI ZONE 1 BORAMBIL CREEK GROUNDWATER
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At Risk Groundwater Source Threshold:

Namoi Water requests the data used to assess the Upper Namoi as meeting the 70% annual extraction limit against recent extraction.

Using the Upper Namoi Groundwater as a whole resource will impact a significant number of small licence holders as per the table below over 122 small users with less than 20 megs of entitlement that is highly likely to be inactive will be caught within at risk assessment test.

Zone	% LTAAEL	Number of Lic	Licences below 20 ml
Zone 1 – Average use 189 ml	21%	34 licences	24 licences below 20 megs
Zone 2 – Average use 7950 ml	84%	30 licences	1 licence below 20 megs
Zone 3 – Average use 16072 ml	93%	62 licences	16 licences below 20 megs
Zone 4 – Average use 19230 ml	91%	152 licences	50 licences below 20 megs
Zone 5 – Average use 15884 ml	97%	65 licences	22 licences below 20 megs
Zone 6 – Average use 1178 ml	10%	32 licences	0 licences below 20 megs
Zone 7 – Average use 1696 ml	45%	17 licences	1 licence below 20 megs
Zone 8 – Average use 15976 ml	91%	63 licences	4 licences below 20 megs
Zone 9 – Average use 2486 ml	22%	29 licences	0 licences below 20 megs
Zone 10 – Average use 52ml	3%	6 licences	0 licences below 20 megs
Zone 11 – Average use 378 ml	17%	28 licences	3 licences below 20 megs
Zone 12 – Average use 509 ml	25%	20 licences	1 licence below 20 megs

The Upper Namoi as a whole resource unit based on average use is sitting at 75% of historical extraction against LTAAEL. Given this is the most developed alluvial system and there is considerable variation within the zones usage compared to LTAAEL as demonstrated above it ranges from 3% - 97% the selection of 70% threshold needs further consideration of risk. The current approach to assessing risk from small works is not fit for the more complicated groundwater sources such as the Upper Namoi.

Recommendations At Risk Thresholds Groundwater:

1. Remove the Upper and Lower Namoi Groundwater, Manilla, Quipolly and Quirindi Water sources from Schedule 9 based on the at risk groundwater threshold assessment .
2. Apply the threshold exemption of 200 mm to the Upper and Lower Namoi Groundwater, Manilla, Quipolly and Quirindi Water sources.
3. Seal all meters with lead seals either through Water NSW meter reading process or request licence holder have meter sealed by certified meter installer.
4. Reconsider the threshold test for small works and add entitlement threshold. Suggest that any take below 20 ml is required to maintain a meter with a lead seal (by Water NSW or Validated meter installer) applied within the next 12 months.
5. Namoi Water does not support the use of cumulative work threshold for groundwater being based on linked works/entitlement or landholding. The threshold should be implemented at an individual work approval level in the interim period until the 5 year review.



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Thresholds Surface Water :

The thresholds for groundwater and surface water require different settings and as such the current proposal is not fit for purpose for the unregulated system in tributary catchments in highly ephemeral systems. It must be based on risk to the resource and as such there is considerable discrepancy between system capacity to take and capability to take. The capability (reliability of resource) to take for unregulated licence holders in many of the Namoi systems is extremely low.

In our previous submission we asked for the following information to be provided:

The Departmental risk assessment of the measures contained within the exposure Bill needs to be transparent and data used to support this risk assessment provided to licence holders for comment. For example we would request as part of this assessment the following information should be provided to stakeholders in a resource level report.

How many water licences are there in a resource system? What volume of take is allowed?

How many of these water licences are active ie: that have infrastructure in place?

What is the pump capacity? What are the total flows within the system?

What are the triggers in place that support allowable take?

What is the reliability of the resource?

What infrastructure does government have in place to measure water volumes or impact from take?

What current meter reading occurs? How often has it occurred in the past?

Is there a risk of activation?

Have the assumptions changed in the time since the issue of the licence?

Does the department have current information and if so has it been analysed and validated with on ground experienced staff?

When and how is the system monitored?

Given the above information has not been provided in the metering regulation paper we suggest the departments figures of 56% of works being measured will result in 95% of the take being metered is inaccurate and therefore the assessment of the impact of the thresholds has not been done from an informed basis. The Unregulated example we provided in our previous paper still stands as being a relevant example.

Bohena Creek has 1161 megs of licenced entitlement

15 licence holders

3 licences located on Namoi River which on flows on in peak flood (with no storage capacity).

3 licences are located on Bohena Creek and are equipped and for 2 of these licences, the take is primarily overland flow events located on unnamed water ways.

Over 70% of the licences are inactive and unused.

There are over 590 Unregulated licences in the Namoi, Peel and smaller unregulated catchments within the broader Namoi region. Over 438 of these are less than 100 megalitres of take in a range of systems, with majority being highly unreliable. Whilst the current proposal does exempt those with less than a 100mm work approval, our concern is the threshold set when used without a risk assessment will result in licence holders in extremely low reliability systems (the most reliable can access water 16-20% of the time being the Mooki and Cox's creek) to install meters at significant cost. Hence on this basis the current approach whilst simple, is not necessarily fit for purpose.

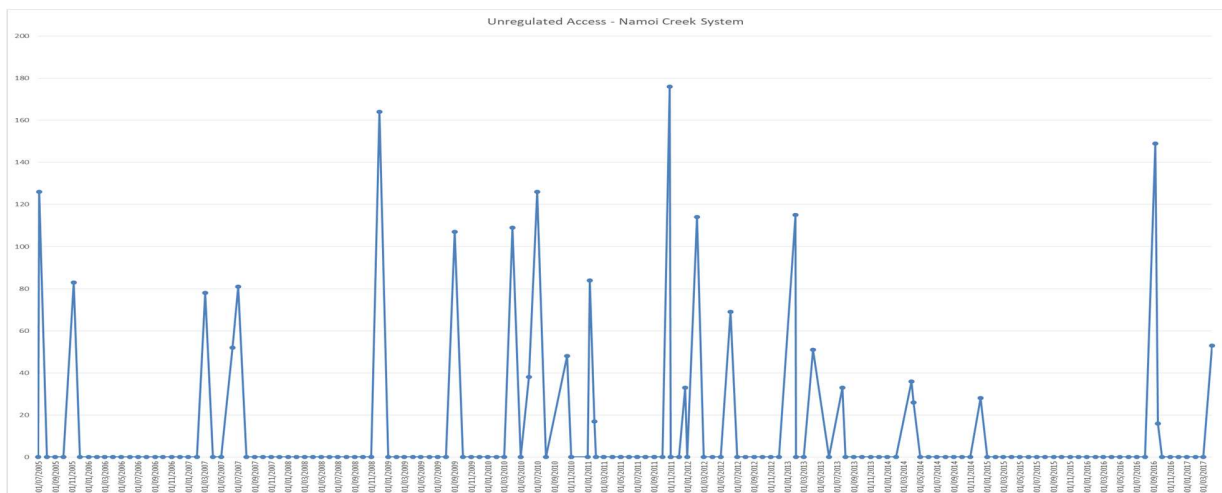


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Namoi Water recommends the department review the small works approach for unregulated take between 100-500mm with ground trothed data with a view to understanding risk. The current proposal will result in a number of smaller unregulated licence holders being required to install a pattern approved meter at significant expense (meter and installation) for limited take contributing to the overall volume required to be measured.

The example below is from an averaged sized licence of 850 megalitre on Cox's Creek. In the last 13 years the works (500mm pump) has extracted an average 154 ml per year. Over this same period of time access has been available less than 16% of the time based on monthly time step. Cox's creek and the Mooki River are the most reliable unregulated systems in the Namoi with 16% & 20% reliability (from water users records) over the last 15 years.

Namoi Water asserts there is need for greater consideration of a risk assessment for unregulated systems. The combination of capacity (works installed/storage) and capability (reliability of flows) impact significantly on the volume of water able to be taken.



Recommendations Surface water

1. As per our previous submission ALL regulated take regardless of size must be metered and we expect all licence holders should transfer to either a pattern approved meter or one that can be validated as being accurate.
2. All large Unregulated works over 500mm should be required to install a meter that is pattern approved or can demonstrate their existing meter is validated as accurate.
3. Unregulated take between 100mm and 500mm threshold needs to be reassessed for cost benefit and risk. Consideration should be made to a longer implementation timeframe for unregulated licences.



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4. Further consideration of entitlement threshold and risk assessment is needed to ensure smaller licence holders within unreliable water sources are not adversely impacted for no gain to the overall volume of take measurement. In many cases the meter could fail before it's second use in systems that are highly unreliable and metering equipment can reasonably be expected to fail in hot climates such as north west NSW. Namoi Water recommend entitlement below 100 ml and in systems with low reliability (under 30%) should not be required to install a meter but keep log books with engine hours or electricity meters to be submitted to iwasa on quarterly basis.

Implementation : Staggered Rollout

The Namoi Valley currently has one accredited Meter installer. It is physically impossible for all the current meters to be validated and new meters to be installed for the over 500mm threshold on Surface water in the northern systems. See Table Below Northern Metering Business Case and Water NSW Metering Audit.

Namoi Water has contacted the manufacturers of pattern approved meters regarding timeframes and many have advised t most meters will have a wait period of 6 weeks. Currently some licence holders in the Namoi region have been waiting for 12 weeks for meters to be supplied. On this basis we recommend if Government stays with the current implementation schedule it will result in failed process well outside the control of licence holders.

The irrigation industry recognises the need to be able to meet timelines set and restore confidence, the proposed staggered rollout is unlikely to be met by the market in the next 12 months. The table below compares the NSW Metering Business Case – meters for replacement tables from the Appendix with the more recent Water NSW Meter Audit of the Regulated Systems in the North.

Using the same costings as the NSW Business Case the cost of meter upgrades for the Northern System is approximately \$149 million. There are insufficient accredited meter installers and insufficient supply of meters and insufficient choice in meters currently pattern approved and suitable to the northern climatic conditions. As a result the implementation schedule and thresholds should be adjusted.

Proposed Implementation schedule

Surface Water in the Barwon Darling - 2019

Surface Water above 500 mm - 2019 (Regulated Rivers Only)

Surface Water above 500 mm - 2020 (Unregulated Rivers Inland)

Groundwater above 200 mm - 2020 (Inland) *with additional entitlement threshold

Groundwater meters below 200mm sealed – 2020

Remaining Surface Water – 2021 (Inland) *with additional reliability/entitlement threshold

Recommendation Implementation

1. Adjustment of the implementation timeframes is required due to the lack of accredited meter installers and the current lack of cost effective surface water meters that are pattern approved.



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NSW Metering Business Case versus Water NSW Meter Audit					
Regulated	Work size	Work size	Work size		
Valley	0-150mm	15-500mm	500-700mm	NOW Figures Total	Water NSW 2012 Figures
Macquarie	58	132	30	220	462
Border Rivers	33	74	16	123	183
Gwydir	42	95	21	158	268
Namoi	89	203	45	337	414
Lachlan	44	101	22	167	311
Total	266	605	134	1005	1638
Unregulated					
valley	0-150	15-500	500-700	Total	*Estimate Figures
Macquarie	95	28	12	135	175
Border Rivers	53	16	7	76	98
Gwydir	68	20	9	97	126
Namoi	146	43	20	209	271
Lachlan	72	22	10	104	135
Total	434	129	58	621	807
Groundwater					
valley	0-150	15-500	500-700	Total	
Macquarie	118	184	0	302	392
Border Rivers	66	103	0	169	219
Gwydir	94	132	0	226	293
Namoi	180	283	0	463	601
Lachlan	292	459		751	976
Total	750	1161	0	1911	2481
Total ALL	1450	1895	192	3537	4926
Cost	\$ 17,400,000.00	\$ 75,800,000.00	\$ 28,800,000.00		
	Known meter upgrade estimate cost			Missing Meters estimate cost	
	\$ 122,000,000.00			\$27,780,000	\$ 149,780,000.00



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Standards that apply to meters

Whilst we support the NSW Government for their support of the Many Hydraulics Laboratory the risk to all surface water resources if Mace meters are not pattern approved is high. The cost benefit on non-Mace meters for large diameter pipe is unjustified as demonstrated in the pilot metering project. The following indicative pricing from meter manufacturers causes concern when matched with a licence that potentially is accessed less than 5% of the time for unregulated licence holders with low level entitlement.

Meter	Diameter	Price
Siemens MagFlow	800DN	\$12,000.00
Aquamaster4	200mm	\$ 7,400.00
Aquamaster4	250mm	\$ 7,380.00
Macelll		\$10,500.00
Krohne Waterflux 3070	200mm	\$4800 + telemetry
Krohne Waterflux 3070	500mm	\$8448 + telemetry
EuroMag Model 2200EL	200mm	\$6600 + telemetry
EuroMag Model 2200EL	500mm	\$14300 + telemetry

Namoi Water supports meters that are tamper proof, include data loggers and have the capacity for telemetry. Support for the pattern approval standard is premised on the Mace meters being able to achieve pattern approval. If this is unsuccessful the current view of industry is likely to change substantially particularly for surface water users.

On the issue of Telemetry there are a number of issues that need to be resolved, we again are concerned that these will be worked through in separate processes. It is not feasible for industry to support a regulation when the requirements for data logging and telemetry protocol have not been provided. Whilst we support the principles the aim of the regulation was to provide the detail of the proposed regulation this again results in less oversight and scrutiny of the implementation of the proposed regulation.

In relation to physical limitations of Telemetry we note there are a number of regions that do not have sufficient service to support telemetry and cost effective alternatives will need to be provided. We strongly suggest that self-reporting through Iwas on a quarterly basis should be considered in lieu of telemetry when combined with proper compliance/audit process.

Given the number of times some installations may need to be pulled up to remove blockages there validation protocol needs further consideration of practical impacts associated with groundwater.

We also note many licence holders are having difficulty obtaining certification from overseas manufacturers for existing meters, this is critical issue as many of these are the most common and reliable groundwater meters.



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Other Requirements

The requirement for a licence holder to record the purpose of the water use is an unjustified requirement, the licence holder may take water for a range of uses. We consider this to be an over reach of the regulation that is particularly onerous. Namoi Water suggests that this requirement will be the most difficult to comply with and it is not clear for where this was requested in the Mathews Report and what requirement it is meeting.

The requirement for detailed meter repair data will again result in a host of additional information that is unused by the department and is likely to be discontinued over time.

Five Year review

Namoi Water asserts the department is yet to undertake a 5 year review of any program in the last 20 years we look forward to seeing the review occur and we suggest the first priority should be to have actual accurate data to determine the success or failure of the requirements implemented.