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Water Renewal Task Force
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To whom it may concern

Subject: CICL Submission Water Reform Action Plan

Please find attached Coleambally Irrigation Co-operative Limited's (CICL's) submission to the Water Reform Action Plan consultation papers.

CICL welcomes the opportunity to provide comment on the consultation papers released in March 2018 and looks forward to continuing to be involved in the implementation of the Water Reform Action Plan.

If you require clarification of any of the issues or comments contained in this submission please contact CICL's Policy and Communication Manager, Jenny McLeod on M. 0427 884431 or via E: jmcleod@colyirr.com.au.

Yours sincerely

A handwritten signature in black ink, appearing to read "Clifford Ashby", with a long horizontal stroke extending to the right.

Clifford Ashby
Chief Executive Officer



Coleambally Irrigation Co-operative Limited

NSW Water Reform Action Plan

Submission

April 2018

Executive summary

Coleambally Irrigation Co-operative Limited (CICL) welcomes the commencement of the Water Reform Action Plan and strongly encourages NSW to progress these reforms whilst respecting NSW principles for the Basin Plan implementation and development of water resource plans

CICL also welcome recognition that these reforms will apply to CICL's water access licences and point of supply and not to our individual customers.

In relation to water take and measurement:

- NSW should tailor its strategy to deliver a robust water management framework centred on measurement that delivers equity within and between valleys. This strategy should result in 95 percent of the take within a water sharing plan area being covered by fully compliant metering with some form of measurement applying to the remaining five percent of diversions.
- There are advantages and disadvantages of government ownership of meters. In CICL's case the co-operative owns its meter and CICL is emphatic it should retain ownership because it is integral to the daily operations and effectiveness of our operations.
- There will be cases where achieving AS4747 pattern approval is not feasible; this situation applies to CICL's off take meter. In cases where AS4747 pattern approval cannot be achieved the relevant International Standard should apply.
- CICL supports alternative measurement options for the use of environmental water, where standard metering is not feasible.

In relation to transparency measures:

- CICL does not support the Matthew's Inquiry recommendations in relation to transparency. CICL considers the proposal to disclose information at an individual water access licence will result in disclosure of private information and information that may be commercial in confidence.
- CICL supports the development of improved accessibility of the significant information that is already accessible from public registers.

In relation to better management of environmental water:

- CICL does not support the draft Government Bill which allows the proposed changes which allow government to apply restrictions on access across all water sources.
- NSW approach to improved environmental management needs to explicitly recognise NSW principles for implementation of the Basin Plan and water resource plans, which include avoiding or negating the impacts on water availability to water access licence holders.

In relation to flood plain harvesting:

- CICL considers the following are important:
 - The NSW Government should expedite implementation.
 - The floodplain harvesting volumes must be included in the Sustainable Diversion Limit.
 - The framework needs to be enforceable.
 - Unintended consequences should be avoided which may require variation in approaches between catchments.

1. Introduction

Coleambally Irrigation Co-operative Limited (CICL) welcomes the opportunity to provide feedback on the NSW Government Water Reform Action Plan. CICL supports the efforts of the NSW Government to progress changes to water management that will build public confidence in NSW water management. CICL supports an approach which is based on accurate water accounting and compliance to a consistent metering standard. CICL considers this work a priority for NSW and its multiple agencies involved in water regulation and water delivery.

This submission is based on CICL's knowledge and experience in the development and implementation of technology to improve water management from our extraction point on the Murrumbidgee River through our channels and onto farm. Our knowledge and experience is also centred on the Murrumbidgee Regulated River and the Lower Murrumbidgee Groundwater Source where WaterNSW has implemented the NSW Metering Scheme.

CICL welcomes the recognition by Government that the proposals for water take, measurement and transparency will apply to CICL's point of extraction from the Murrumbidgee River and not to CICL's internal operations and customers. CICL considers this position should be reflected in any proposed legislative changes. In welcoming this position, CICL is not seeking to avoid its customers being subject to robust water measurement but to ensure that Government's resources are directed at regulation of their customers. CICL already has strong commercial and governance incentives to ensure that its internal metering and compliance activities are robust and effective. There is also public reporting of our annual performance¹.

2. Background to CICL

CICL is based in the Riverina and supplies irrigation and drainage services to nearly 500 farms via an open, earthen, gravity fed channel network. Coleambally Irrigation has a dual governance arrangement, CICL and Coleambally Irrigation Mutual Co-operative Limited (CIMCL).

The Co-operatives were formed on 21 January 2000 when ownership of the Government owned Coleambally Irrigation Area was transferred to its irrigator customers/members. Each Co-operative has their own rules and separate boards.

The CICL area of operations is 456,821ha including 317,281ha which is serviced by the West Coleambally Outfall Channel. The intensively irrigated area is approximately 80,000ha.

CICL is a member owned co-operative supplying irrigation services to its members and customers. CICL operates and maintains the irrigation supply and drainage system and delivers a range of corporate services on behalf of its members. CIMCL has responsibility for the future replacement of the major assets within/under/over the supply and drainage systems. CICL's charges to members exclude the cost of major asset replacement, whereas CIMCL's levy is specifically focused on providing for those assets replacement.

We are responsible for the maintenance and future refurbishment of the Co-operatives' assets which include; 516 kilometres of supply channel, 711 kilometres of drainage channel, 286 regulators and 600 farm irrigation outlets with 93 percent of these outlets automated and linked to CICL's Rubicon Water™ demand management system.

¹ CICL Annual Compliance Report is available from CICL's website www.colyirr.com.au

The asset replacement cost of the Co-operatives civil infrastructure including concrete, flow control, SCADA etc. but excluding earthen channels and drainage is \$168M.² A significant proportion of CICAL's asset base involves investment in technology and infrastructure to measure and manage CICAL's water diversions and deliveries.

Since 2001, we have invested in modernisation of our channel regulators and water supply points to improve our water supply service and efficiency. CICAL's delivery system is managed under Total Channel Control (TCC) and automated water delivery system developed by Rubicon Water™.

CICAL holds a number of water access licences with the NSW Government and has a combined Water Supply Work Approval and Water Use Approval No 40CA401473 (Murrumbidgee regulated river water source) and combined Water Supply Work Approval and Water Use Approval for Groundwater extraction 40CA403808 and 40WA404593.

3. Water take measurement and metering

This framework needs to be driven by recognition that water is a scarce and valuable resource and Government's regulation and management of this resource is important to achieving economic, environmental and social outcomes. Improved compliance is one element; however, the primary objective of Government is to ensure that there is effective management and regulation of water resources and equity for all stakeholders, including water access licence holders. Measurement of water, not just diversions, is vital to effective water management; this is particularly relevant in the regulated systems where the volumes associated with river operations are significant.

Whilst concerns with NSW compliance framework have driven the development of the NSW Water Reform Action Plan, it is imperative that NSW now implements an enduring framework for the measurement and management of water resources in NSW. This framework does not stop with decisions about when a meter is required and the standard, but the ongoing maintenance of the framework, and a framework that provides information that builds the effectiveness and competence of Government's water management. It needs to have an architecture that is integrated with aligned policies and procedures which are seamless across the multiple water agencies in NSW.

3.1 Consultation topic one: When should a meter be required?

CICAL has approached water management within its area of operation to require all extractions to be measured including house and garden water; however, the standard of meter required is lower for house and garden water. CICAL's approach recognises the commercial value of water and the importance of effective management. A summary of our approach from off take to our farm meters and the quality assurance around its management is in table 1.

The background to this approach was an organisational commitment to the philosophy that *"if you cannot measure it you cannot manage it."* This approach to water management by CICAL has driven investment in infrastructure and systemic changed policies that have delivered enduring improvements in CICAL's operational efficiency.

It is CICAL's view that NSW policy should require, over time, for all extractions to be measured with the priority on metering of irrigation diversions that cover 95 percent of the take within a Water Sharing Plan area.

CICAL's views on the options proposed in the discussion paper are below.

² Jacobs (2016) Coleambally Irrigation MEERA valuation report.

Option one: No meter, no pump (universal metering)

Should every water use be metered, or should thresholds apply?

CICL is concerned by what is being inferred by the statement in option one that metering of 54 percent of water supply works will only deliver an additional five percent of water use being metered.³

CICL's view is that NSW needs to tailor its water take and measurement strategy to deliver a robust water management framework centred on measurement that delivers equity within and between valleys. This strategy should result in 95 percent of the take within a water sharing plan area covered by fully compliant metering with some form of measurement applying to the remaining five percent of diversions, including stock and domestic use.

CICL's rationale for this approach is that it will provide the data necessary for NSW to more effectively manage its regulated water supply, and in the case of unregulated and groundwater, access to the resource at a valley and or water sharing plan level, providing benefits to water users, the environment and the community. Given the obvious variation in water use between water supply work approvals, CICL does not consider a state-wide approach will provide the improvements and equity stakeholders are expecting from the NSW Water Reform Action Plan.

Water is a valuable resource and the potential extraction volumes that can be extracted from relatively small pumps are significant. CICL argues that the Department of Industry, in considering cost benefits from investment in metering, needs to recognise the value of the water being extracted. For example, a 150mm pump operating for six months of the year, subject to its installation, can extract approximately 912ML⁴. This is a significant volume of water; if valued in the annual allocation market at \$100 per ML, this is \$92,200. Doesn't this warrant an investment in metering?

³ NSW Department of Industry (2018) Water take measurement and metering.

⁴ S. Oosthuysen, General Manager Operations CICL Pers. Comm. (3 April 2018)

Table 1 CICL approach to measurement and quality assurance

What CICL does to measure and manage its water	
1. Water measurement by CICL	<p>CICL has one extraction point from the Gogelderie Weir pool on the Murrumbidgee River. This extraction point (offtake) has undershot gates that are remotely controlled by CICL.</p> <p>CICL receives credits from WaterNSW for its releases into Coleambally Catchment Drain (capacity 250ML/day) and Drainage Channel DC800 (capacity 150ML/day). WaterNSW place an order for the volume to be released from each of these escapes with CICL.</p> <p>CICL owns its meters and has two meters at its offtake, a primary and a back-up meter.</p> <p>CICL's offtake and farm irrigation meters and escape flows are consistent with "NSW Interim Water Meter Standards for Open Channel Metering".</p> <p>The volume released into each of these escapes is measured via calibrated Flumegates™.</p>
2. Metering at CICL's offtake	<p>The meters installed at the offtake are Accusonic (brand name) Acoustic Transit Time Meters. This type of meter is considered best in its class for accurate metering of offtakes of our type.</p> <p>CICL have two meters at the offtake – one upstream (original, installed approximately 15 years ago) and a new one installed 500m downstream of the regulator at the end of 15/16 irrigation season.</p>
3. Verification of offtake readings	<p>CICL use a contractor (hydrographer) to undertake an independent gauging once per month. If any individual gauging varies by more than five percent from the flow record by the offtake meter a second measurement is taken.</p> <p>WaterNSW do not routinely undertake any auditing of CICL's offtake. However, during 2017 CICL commissioned and paid WaterNSW to undertake a verification of gauging at the river offtake for transparency and validation integrity.</p>
4. Quality assurance of CICL's offtakes	<p>CICL cross checks the two meters on a daily basis as well as comparing the cumulative total of each meter. In addition to monitoring the recorded flow of each meter, there are a multiple parameters recorded, reported and alarmed. These all assist in ascertaining the health and integrity of the metering arrangements.</p> <p>CICL also plots the meters surveyed cross-section with gauged cross-section to monitor the stability of the cross-sectional area. At the end of each season when the channel is drained, a full survey of the metering cross-section is completed. The velocity and water level sensors are inspected and tested annually when the channel is dry.</p>
5. Sharing of data	<p>WaterNSW have access to our offtake meter through our SCADA system.</p>

6. Tombullen storage

This is a storage owned and operated by WaterNSW. CICL delivers water to this storage from the top section of its main canal, based on WaterNSW's daily order. This volume delivered to Tombullen is not subject to any loss credits.

7. Water measurement onto farm.

CICL measures its irrigation water deliveries onto farm using Rubicon meters; the most common meter is the Flumegate™. CICL has installed a small number of Slipmeters™.

These meters are all equipped with telemetry and their opening and closing is controlled via CICL's TCC network.

CICL's system from its offtake, through the regulators and the farm outlets is automated.

TCC is enabled by the hardware, communications network and complex hydraulic modelling software. It is an integrated package.

The infrastructure is powered by solar panels on the regulators and farm offtakes.

8. Quality assurance of farm outlets

The main two parameters used for the computation of flow through a Rubicon Flumegate™ are gate position and water depth upstream and downstream of the gate. At the start of the irrigation season and again mid-season, every customer gate has the water level sensing and gate positioning measurement checked. This is commonly referred to as a "tip test". During this twice yearly tip test calibration, the gate installation is visually checked to ensure measurement integrity.

In addition to the twice yearly "tip test" calibration, CICL fully "commissions" 20 percent of its farm meters each year. This commissioning is a full survey of the site and where required, upgrades of firmware and components. CICL's field technicians, who are qualified meter validators, perform this task.

Each year CICL also engages an external certified meter validator to audit a representative sample of our gates. The external auditor randomly selects customer gates and completes a "tip test" at each site.

9. Measurement of Stock and Garden water use

CICL measures all take by our members. CICL has installed small propeller type meters on all its stock and garden outlets (up to four ML per annum). These meters are manually read once a year.

10. Water ordering

CICL uses Rubicon's Demand Management System (DMS) for water ordering and operation of the channel system.

CICL customers can only place an order for the water in their annual allocation account. This means that customers are only able to order water they have available, i.e. the DMS will not register a water order that will take the account into the negative.

Option two: Water share component

CICL does not support the share component determining the standard of metering including whether a meter should be installed because actual extractions, particularly where there is active annual allocation trade (regulated and groundwater systems in the Murrumbidgee Valley), may not result in equitable measurement of extraction.

Option three: Infrastructure size

CICL considers infrastructure extraction capacity should be the primary metric to determine the metering standard. This approach will automatically capture investments which are capable of using more than the Water Access Licence unit shares. Annual allocation trade and use of zero share water access licences are important tools used by irrigators to provide flexibility to their farm businesses.

CICL's view is that the Water Reform Action Plan needs to recognise the commercial drivers of water use and ensure investment in metering is targeted where the capacity to extract is greatest.

Should metering be linked to the size of the infrastructure that takes water? If so, what size thresholds should apply?

Size of infrastructure should determine the priority for investment in metering. The threshold applied by CICL in terms of the quality of meter installed is 50mm, where stock and garden extraction is metered by a low cost meter that is not consistent with the Australian Standard 4747, but is still metered.

It is CICL's view that Government could apply a similar approach where higher extractions rates are subject to a higher standard of measurement.

Should there be different thresholds in inland and coastal regions? Regulated, unregulated and groundwater?

Based on the principle of 95 percent of diversions in a water source to be metered, logically given the variation in volumes extracted per work approval, different thresholds should apply across catchment and water sources.

How do you capture multiple works which effectively belong to one user?

Each extraction point should be treated separately and require a separate meter.

Option four: Risk of water resources

CICL has assumed that this is a question of which water sharing plan areas are a priority for implementation, not which areas are a priority for metering, although what is intended is not clear, for example "*The benefit of this approach is that take from the highest risk water sources would be closely monitored and regulated*" implies a different approach. If the intention is to provide exemptions to metering because catchments are assessed as low risk, CICL does not support this approach. As previously stated CICL supports measurement of all diversions across water sharing plans.

The rationale for classification of different water sharing plans in table 3 is not clear. Is it based on extent of metering, competition for access to resource, other factors or a matrix of factors? The discussion on Consultation topic 3 provides some guidance on the proposed approach.

Do you agree that inland unregulated water sources should be prioritised?

Assuming this question is about the priority for decision making and implementation, CICL agrees that given the limitations of current metering in inland unregulated water sources these should be priorities. Water resource plans which cover both regulated and unregulated water use also elevate the priority for metering in unregulated systems to ensure equity between entitlement holders in the same water resource plan but different water sharing plans.

Should any groundwater and coastal water sources be considered as “high-risk”.

Yes, as a priority, the groundwater systems where there is an active allocation market as well as a number of zero water access licences.

Are there any other priorities that should be considered?

It is a priority for all Water Access Licence and Works Approval holders to have clarity on their licence and approval requirements. Farm businesses are in a continuum of Investment in irrigation development, extraction upgrades or modifications, clear guidance of the technical requirements for compliant metering are required to avoid investment in redundant infrastructure.

Option five:

Should metering be linked to a combination of infrastructure, water entitlement and risk of water sources?

CICL supports using a combination of both risk and infrastructure and potentially unit shares to prioritise the implementation of improved metering.

CICL also supports a different approach to thresholds subject to the extractive pressure and flow variability in the catchment.

What is a reasonable combination of thresholds?

Development of a combination of thresholds needs to be based on by catchment specific data on the status of metering and extractions and an assessment of risk or extractive pressure.

3.2 Consultation topic 2: What type of metering equipment and reporting will be required?

Are the proposed metering requirements practical and effective?

CICL largely supports the proposed future metering requirements and the emphasis on accurate, verifiable and auditable.

CICL has identified that a blanket requirement for AS4747 compliant meters has some practical implications. Specifically, metering of large open channel offtakes. The meters installed at the CICL offtake are Accusonic (brand name) Acoustic Transit Time Meters. This type of meter is considered best in its class for accurate metering of offtakes of our type. This meter cannot be pattern-approved because of its scale.⁵ This metering installation is consistent with ISO 6416:2017 Hydrometry – Measurement of Discharge by the ultrasonic transit (time of flight) method. The AS4747 provides for approval for use of these meters to be agreed between the meter owner and the entitlement issuer. This approval process needs to be formalised.

CICL considers this an important issue to be clarified by Government and CICL requests that Government require that the relevant ISO standard apply where the most appropriate meter cannot be pattern-approved.

Should existing nonpattern-approved meters be replaced with pattern-approved meters?

Of the seven principles identified in the consultation paper, CICL considers pattern-approval is not necessarily the highest priority to focus on. CICL argues that ensuring infield accuracy, correct installation, seals, maintenance, data capture and transmission data are more important to effective water measurement than pattern-approval per say.

Provided meters are sealed (tamper proof), meet accuracy standards and are maintained, a pragmatic approach would be to consider an appropriate transition to AS4747.

Are there barriers to entry into the pattern-approved meter market?

The primary barrier to entry of pattern-approved meters is access to testing for pattern-approval and its cost. This issue is exacerbated by the potential configurations that a meter may be installed in.

Is telemetry practical in all situations? If not please provide details of any constraints?

The use of telemetry is more challenging where there is limited mobile service coverage and construction of radio coverage which CICL utilises is prohibitive. However, CICL considers the technology developments and market competition, e.g. satellite telemetry, will reduce this cost into the future. CICL supports the requirement for telemetry to provide live data on extractions to WaterNSW and regulators and believes, based on our experience, this investment will deliver significant improvements in water regulation and management. Telemetry is also an important diagnostic tool for meter management and maintenance.

Are there any other complementary measures that if implemented would encourage compliance with the metering equipment?

Compliance would be encouraged by providing irrigators with live access to extraction information from WaterNSW. In addition, the ability to physically connect meters for on-farm management

⁵ AS4747-2013.

including automation, i.e. provision of a secure output signal for connection to farm water delivery systems, would encourage some irrigators to accelerate compliance.

Self-reporting

What is a reasonable time frame for self-reporting?

In cases where self-reporting is required, this should be a daily record, recorded on the day of take and specify the purpose the water is taken for. However, CICL support metering of all extraction points and has identified the tangible benefits of telemetered meters to negate the need for self-reporting.

CICL supports introduction of mechanisms for Government to monitor self-reporting and notes their design should ensure efficient use and capability for analysis.

Are there any additional criteria that should be applied to self-reporting?

No additional criteria identified.

Are there any other circumstances when self-reporting should be permitted?

CICL supports self-reporting where based on an agreed procedure where the approved meter is not functional and where remote reading is not available.

Are the proposed requirements for faulty meters practical?

These proposals for repair of faulty meters are not unreasonable. Where the meter is a state owned meter the same timeframes should apply to their repair.

3.3 Consultation topic 3: How should the metering requirements be rolled out?

Why can't new metering be implemented immediately?

Will staging implementation be sufficient to address the supply of meters and certified installers?

CICL does not believe there will be a significant shortfall in supply of meters or installers.

Are there any other market barriers that should be considered?

Anecdotal evidence seems to indicate that lack of pattern-approval testing facilities is a limiting factor. This impacts costs and timing.

Will manufacturers of pattern-approved meters have the capacity to produce enough meters to meet the demand?

Data about meter supply and delivery constraints should be readily available from the Murray and Murrumbidgee metering projects. CACL believes that project planning will eliminate any potential supply limitations.

Will the market signals be strong enough to encourage other manufacturers to seek pattern-approval?

While NSW must remain commercially neutral, there may be fit for purpose and cost effective metering solutions that need to be encouraged to achieve pattern-approval. Pattern-approved meters are restricted to several suppliers of Electro-magnetic flow meters and one mechanical meter.

CACL's meter fleet is almost exclusively Rubicon water products. CACL has some experience with other suppliers of meters along its West Coleambally Channel and smaller horticultural users. CACL supports the implementation of staged approach to metering to provide industry sufficient time to arrange their supply chain including supply of meter validators and installers. NSW should also encourage innovation of new technologies that may be cost effective solutions for metering situations

When would metering requirements be imposed?

Are these timeframes achievable?

Should the staging be based on the size of the user and risk of region?

It is difficult to respond to these questions without a clear view of what will be required, who will own the meter, what is considered high risk and how implementation is to proceed, and who is going to fund the implementation. Is it to be driven by Government or by water access licence holders?

The proposition is that it will take six years to roll out the new metering requirements across the state. Given the size of the task, CACL considers a timeframe of six years is ambitious.

CACL agrees it is logical to focus on high risk areas, but this is for all extractions in that area not just the size of user.

CACL agrees that across the state larger users should be a priority.

What are large users?

Is this an appropriate way to categorise "large users"

CICL agrees that large users would be captured by the top 20 percent threshold. In the Murrumbidgee, where NSW has already implemented its metering strategy, CICL argues that new Water Supply Work Approvals or upgrades should, as a condition of approval, require the installation to include a compliant meter and telemetry.

What are the high-risk areas?

Do you agree that inland unregulated water sources should be prioritised?

Should any groundwater and coastal water sources be considered as “high risk”

Refer to responses under Option 3 above.

Are there any other priorities that should be considered?

CICL reinforces the importance of Government clearly defining its requirement for all water access licences and for this information to be readily accessible across water sharing plan areas. This will provide clear direction to water access licence and works approval holders and minimise the risk of investment in redundant infrastructure. It may also accelerate implementation.

3.4 Consultation topic 4: Who should own the meters?

Should meters be owned by Government, licence holders or both?

CICL owns its meter. The Co-operative is emphatic that it should retain ownership of its meter because it is integral to the daily operations and effectiveness of CICL’s operations and water management. CICL cannot support being exposed to a third party for its metering. CICL is fully transparent in its metering accuracy. In terms of implementation of new metering requirements, CICL can identify benefits to implementation from both Government and private ownership.

CICL expects the most likely scenario is a mixture of Government and private ownership of meters which is an extension of the current arrangement in the Murrumbidgee Valley. The different costs associated with these options should be reflected in meter charges.

The Murrumbidgee Metering Project will provide guidance as to the pros and cons of private versus Government meters, especially in the areas of:

- Maintenance replacement costs, budgets needed to cover these costs, reasons for replacement or upgrade cost (e.g. change in pumping infrastructure, layout, etc.)
- Telemetry – potential implications of connecting to privately owned meters. Telemetry is essential for monitoring of compliance and meter performance.
- Compliance – cost of compliance, resources and skills required.
- Benefits of live data reporting for efficient river operation and extraction compliance.
- Requirements for extractors to have real time access to metering information.

It is recommended that investigation/consultation be undertaken on the Murrumbidgee Metering Project to ascertain the benefits of private or Government owned meters and the costs associated with each option. As with CICL’s TCC, metering is an integral component of river management (and

resource management). The Computer Assisted River Management (CARM) project on the Murrumbidgee is a good example of the benefits of an integrated river management system.

Irrespective of ownership, the integrity of the systems in place to ensure robust metering and the provision of timely information to regulators and irrigators is what is important. Adherence to principles listed on page 11 of the consultation are what is more important than the ownership of meters.

Is the market likely to respond with creative solutions to the increased demands for meters?

Yes, the market is innovative, this demand needs to be driven not just by compliance but also service. This innovation needs to be encouraged by Government.

CICL notes that current telemetry arrangements for the supply of data to irrigators for Government owned meters does not meet the needs of irrigated agriculture. For example, in the Murrumbidgee Valley a water user with a Government meter does not have access to “live data” for their own extractions.

There are complexities and risks associated with sharing of data between private and public systems. However, the roll out of the Water Reform Action Plan is an opportunity to bring convergence to these issues. CICL encourages the Department of Industry to bring expertise together to discuss these opportunities as part of its reform process.

3.5 Water take not covered by this paper

As identified in the introduction CICL welcomes recognition that internal metering within CICL is not captured by this consultation paper.

CICL does not support the blanket exemption of Basic Landholder Rights (BLR) from any form of metering. The potential volume that may be extracted under these rights may not be insignificant and improved knowledge of extraction under BLRs is warranted.

As noted in table 1, CICL has decided that all water use should be metered with different standards applied to stock and garden extractions via a 50mm pipe.

CICL is also of the view that Government should widen their consideration of metering and measurement options for environmental water use. The volume of environmental water in each system is significant; to consider that unless this water use is via a conventional site it does not need to be metered, is not appropriate. CICL considers there may be alternative measurement standards that could be applied to environmental water use.

In cases where direct metering is not technically feasible for example, flood plain harvesting, mining etc., CICL’s view is that alternative measurement should be in place.

4. Transparency measures

4.1 Consultation topic 1: What information should be included in a public register and why?

At the launch of the Water Reform Action Plan in Sydney, it was confirmed that the transparency measures applied to Water Access Licences and not to the individual accounts of irrigation corporations. CICL's response to this consultation paper is based on the assumption the paper applies to Water Access Licences.

CICL is not looking to escape all public scrutiny. CICL provides entitlement and trade data to the Bureau of Meteorology on a weekly basis. This information is required under Water Act Regulations (2008) and includes entitlement and allocation on trade transactions including price and volume. The trade data is published at the following site: <http://www.nationalwatermarket.gov.au/>.

In addition, CICL is a member of National Irrigation Corporations Water Entitlement Register (NICWER). This is a national register which includes a publically searchable facility, where entitlements which are not captured on the statutory Government registers can be accessed, like a title search or Water Access Licence search (applicable to NICWER members). The register can be accessed at <http://www.nicwer.com.au/>.⁶

CICL acknowledges there is significant interest in improving the accessibility and transparency of water availability and use of information. CICL observes this interest is driven by two different motives: commercial motives in relation to the operation of the water market, in particular the allocation market in the southern Basin; and secondly public interest from some sectors in relation to compliant water extraction.

The granularity in the information requirements sought by these two motives are different. CICL questions the extent to which providing public access to individual accounts will necessarily improve public confidence in Government's compliance framework. CICL considers this approach potentially exposes individuals to vexatious, scrutiny and community policing.

However, CICL strongly supports a seamless, unfettered sharing of information between WaterNSW, Department of Industry and Natural Resource Access Regulator (NRAR) and development of a mechanism for data sharing at this level should be a priority.

CICL also supports increased transparency and accessibility to Government's compliance strategy and enforcement with clear definition of the roles and accountability for each of the parties involved, in particular WaterNSW, Department of Industry and NRAR.

This is inclusive of public disclosure of individuals where prosecutions are made.

⁶ Fees apply to use the NICWER and access to the entitlement holders' identification number is also required.

What information is already available?

Is the information already available on the NSW Water Register and Water Access Licence Register enough to provide greater transparency of water use? If not, what else is needed and why?

As identified in the consultation paper, NSW Water Registers already contain significant information. Unfortunately accessing this information is not straight forward, in particular the information about current water use within a catchment, which is potentially important to market decisions in the regulated system.

CICL considers it would be beneficial in the Murrumbidgee Valley to be able to access allocation account volumes at water sharing plan scale, not on an individual licence scheme. This information should provide sufficient information to market participants.

Is the currently available information too complicated and difficult to access? How could it be simplified?

The information available is not necessarily too complicated. The granularity and detail required will depend on the purpose the information is being accessed for. Irrigators seeking information to assist their commercial decision making, for example decisions about allocation or entitlement trading and or carryover, will require current information at a water sharing plan level to inform their decision making.

The Victorian Water Register <http://waterregister.vic.gov.au/> and <https://nvrn.net.au/> are examples of sites where water information is more easily accessed compared to the NSW registers. NSW could provide immediate improvements in accessibility by providing more guidance on how to use the registers to extract information.

What information should be prioritised for access?

CICL is interested in improving accessibility to water availability and use at a catchment level to inform the allocation market. CICL also considers it is a priority to improve reporting of environmental water account availability and use, noting that Department of Industry is continuing to improve the disclosure of environmental water holdings and use through its water resource assessments.

Increased transparency around environmental water is a priority for CICL because of the significant volumes of held environmental water and at times planned environmental water in the Murrumbidgee Valley which does not form part of the consumptive pool.

Are there risks associated with publishing some water information and how can these be managed?

Are there categories of information that should not be made public? What are they and why?

CICL does not support the public availability of real time individual water access licence data. This data is commercially sensitive and not appropriate to be in the public arena. Public access to individual account information exposes an individual's position in the annual market, which in CICL's view is a breach of their privacy.

Are there ways that sensitive information can be managed and still made public? For example, by publishing account balances quarterly?

Introducing lag times and aggregating time scales would reduce some of the risks to individuals of publishing account balances. Irrespective, CICL remains concerned that this approach exposes individuals to unwarranted scrutiny of their daily commercial activities.

How should information be provided on a public register?

How would you like to be able to search for details and/or data in a public register of water information?

Public registers need to be designed recognising users will be looking for different information at different levels. CICL encourages Government, when considering developing and or redesigning their portals, to include a range of stakeholders to provide input and test the product prior to finalisation.

It is also important that there is supporting information to assist users find and then navigate the portal.

4.2 Consultation topic 2: How to improve information about when water can be taken?

What issues should be considered in developing a single source or authority on when take of water is permitted and how could those issues be managed? For example how would this operate in areas with limited internet coverage?

Key principles that should apply to the development of a single source or authority on when take of water is permitted are timeliness and accuracy. Announcements of access should be subject to minimal delays and the information must be accurate.

The opportunities for delay and or error escalate the more layers there are in the decision making and communication including where there are different organisations, for example WaterNSW, Department of Industry and the Murray Darling Basin Authority.

It is also important that the method of communication is widely known by industry and not confused by multiple agencies announcing the same event.

CICL also supports the use of registration schemes for alerts, for example a register for SMS messages for announcements to maximise the opportunities for equitable access to timely information.

5. Better management of environmental water

Development of policy and regulatory mechanisms that will deliver improved management of environmental water is an important but a complex task. CICL's primary concern with the consultation paper and the draft Government Bill, Water Management Amendment Bill, 2018 is that it diverges from its guiding principles for the development of water resource plans and the Basin Plan.

The NSW Government Water Resource Plan Fact Sheet, March 2017 includes the following:

Guiding principles

Principles outlined in the Basin Plan, together with principles set by NSW, will guide the development of water resource plans. Basin Plan principles state:

- There will be no adverse impacts on water available to a water access license holder.
- There will be no net reduction in the protection of planned environmental water.
- The Commonwealth is responsible for funding the gap between existing limits and Sustainable Diversion Limits (SDL) water.
- The Water Resource Plan will meet the requirements set out in the Basin Plan.

Additionally, NSW requires that water resource plans:

1. Balance social, cultural, economic and environment needs of the community and catchments.
2. Are cost neutral for NSW license holders.
3. Minimise change for WSPs within their initial ten year period.⁷

CICL supports these guiding principles and strongly recommends Government include these principles in their approach to improved management of environmental water. CICL's understanding of the draft Government Bill is that in its current form, it allows for the new powers in the *Water Management Act* which would allow changes which may limit access to water outside of the water sharing plan process. These changes would circumvent the current compensation and consultation provisions in the *Water Management Act*.

CICL considers this change is in direct conflict with Basin Plan and Government's guiding principles and is therefore not appropriate.

It is CICL's view that if there is no feasible alternative but to impact on water access licence holders in order to protect environmental water, impacted licence holders should be appropriately compensated.

CICL's other concern with the consultation paper and draft Government Bill is the bill's potential application to all water sources. Whilst discussion is focussed on the challenges in the unregulated Barwon Darling, the proposed changes are not limited to the Barwon Darling.

⁷ http://www.water.nsw.gov.au/__data/assets/pdf_file/0008/682334/wrp-overview-factsheet-2.pdf

5.1 Why is environmental water management challenging?

The measures in this paper are focused on the unregulated systems of the Northern Basin – do you agree that this should be main focus of the interim solutions package?

Yes, CICL supports the focus on the unregulated system, however, what is an interim versus an enduring solution is not clear.

CICL notes that in the regulated Murrumbidgee system, CICL and other large water users, and WaterNSW have been exploring co-operative, voluntary arrangements with the Office of Environment and Heritage to identify mutually beneficial options for improving environmental outcomes from the delivery of environmental water. The potential for dialogue and consideration of options to deliver positive outcomes for both the environment and irrigators should not be discounted.

5.2 What outcomes are we seeking?

Do you agree with the mix of environmental outcomes? Are there other we should be considering?

CICL does not have sufficient knowledge of the Barwon Darling to express an opinion on the proposed outcomes.

CICL considers it is important that these outcomes are tested against the principles established by the Interagency Working Group.

5.3 How can we better manage environmental water?

The consultation paper proposes a range of measures for better management of environmental water. Many of these measures could be applied to either regulated or unregulated systems and subject to their implementation, have the potential to impact on existing licence holders' access rights.

Table 1 (page 7) includes a list of possible measures for improving environmental management of unregulated rivers. Does this mean there is no intention to apply these measures to regulated licence holders? Is this constraint included in the draft Government Bill? CICL's understanding is the current drafting of the Bill would allow these measures to apply to all water access licences. CICL does not support this approach. Whilst some of the measures may be of merit to manage access issues in the regulated system these options should be considered via the water resource plan process and not via a separate Government process which circumvents the Stakeholder Advisory Panels and community consultation process at the catchment level. In the Murrumbidgee Catchment work has commenced on the Prerequisite Policy Measures (PPMs) which are required under the Basin Plan. NSW has developed principles for their implementation which are outlined in their Fact Sheet ⁸ and supported by CICL. These measures are to be included in the Murrumbidgee Water Resource Plan, and when combined with relaxation of constraints downstream of Wagga

⁸ https://www.water.nsw.gov.au/__data/assets/pdf_file/0004/723334/Pre-requisite-Policy-Measure-Implementation-Plan.pdf management of environmental water. Consultation Paper pg. 3.

Wagga, will be significant contributors to better management of environmental water in the regulated Murrumbidgee.

CICL considers the consultation paper is narrow in its implied application of the measures but the draft bill is not. In addition, if the potential measures are to apply to the regulated system, then there are additional measures which should be included in the discussion and these measures should be progressed via the water resource planning process.

In relation to Individual Daily Extraction Limits (IDELS), CICL supports consideration of policy options to provide policy direction in the regulated river system to assist with daily supply restrictions. Currently in the Murrumbidgee River there are no policy signals provided to irrigators on how supply restrictions will be applied when daily demand exceeds physical supply capability.

6. Implementing the NSW Floodplain Harvesting Policy

CICL's knowledge base of the issues associated with implementation of the NSW Floodplain Harvesting Policy is not sufficient to provide detailed comment on the specifics of the consultation paper.

CICL considers the following are important:

- The NSW Government should expedite implementation. It is five years since the policy was finalised and eight years since development commenced. Irrespective of how difficult the issues are failure to capture floodplain harvesting in a robust and enforceable licencing framework is a major weakness.
- The floodplain harvesting volumes must be included in the Sustainable Diversion Limit.
- The framework needs to be enforceable.
- Unintended consequences should be avoided which may require variation in approaches between catchments.

7. Conclusion

The task ahead for NSW to implement its Water Reform Action Plan is large, with a range of complex issues to be addressed, solutions developed and actions implemented. Government needs to proceed with detailed project planning including accountability for performance and stakeholder engagement.

There is no time for the decision paralysis that has plagued progression of key policy initiatives in recent years. Implementation arrangements need to clearly define the roles and accountabilities of the three key organisations involved in this reform: 1) Department of Industry; 2) WaterNSW and 3) NRAR. Co-operation between these organisations should be mandated and included in performance assessment.

The Water Reform Action Plan needs to have an architecture that is integrated with aligned policies and procedures which are seamless across the multiple water agencies in NSW and resourced by Government to provide an enduring framework.

In the case of metering, Government need to quickly harness the significant industry and organisation knowledge that exists, particularly in the Southern Basin, to support the implementation of improved water take and measurement. Much of this knowledge will reside in WaterNSW which was responsible for implementation of the Murray and Murrumbidgee metering projects. This experience will assist with resolving many of the consultation questions asked in water take and measurement consultation paper.

In relation to the other key issues, CICL encourages Government to continue to seek external stakeholder input to implementation.