

Land Use and Climate Change Workshop – Catchment Management Community of Interest

at Water New South Wales / Sydney on 20/11/2018

Notes from Workshop

1. Presentations

The Workshop commenced with a quick overview from the previous Catchment Management Community of Interest Workshop held in Melbourne in December 2017. This was then followed by a series of presentations from our utility members who discussed the relevant works and expected outcomes of ongoing works in this area to date. The presentations included an overview of the issues being addressed by: Seqwater, SA Water, Melbourne Water, WaterNSW, Hunter Water and Coliban water.

2. Identifying the opportunities

With the stimulating presentations and chatter over lunch, the group were then asked to consider what the needs are for their utility to know to manage potential water quality risks. These needs were grouped under themes that had arisen from the earlier presentations, and then prioritised.



Within the themes, the group prioritised the following needs:

Reservoir

- Understanding water quality risks under low and variable reservoir conditions / dead zone/ yield
- Mixing of water supply/storage sources (**Knowledge transfer**)
- Extreme Events
- Other **Knowledge transfer**:
- Changes to water quality in terms of algal load/populations
- Changes to water quality in terms of hydrology
- Treatment performance
- Event monitoring – flouro – develop monitoring regime

Economics

- Benefits of Catchment Investment
- Riparian and catchment investment (**Knowledge transfer**)

Natural Catchment

- Model Structure Gap – increasing CO₂ levels (**lit review**)
- Agricultural catchments – intensifying land use
- Change in agricultural practise
- Trigger alert levels for land use changes

- Bushfire impact and runoff in catchment

- Changes in natural vegetation species
- Drier catchments – soil and sediment changes

Urban Catchments

- Changes in water i.e. Stormwater; have stormwater interventions been effective? Tangible benefits? (**Knowledge transfer** for Melbourne Water work)
- Effects of increasing population – infill development
- Changes in land use
- Direct potable reuse
- Liveability & heat

3. Identifying the benefits and the areas of impact

After some discussion around the potential benefits of the top two projects (highlighted in red box above):

1. “Understanding water quality risks under low and variable reservoir conditions (dead zone / yield)”

The discussion around the most highly prioritised need ‘low reservoir levels’ led to the identified benefits and areas of impact, below:

Table 1 Identified needs

Identified need?	Understanding water quality risks under low and variable reservoir conditions	
What will success look like?	Better understanding of the mechanisms that could drive a risk Better predicative capacity Developed process to characterise risks and consider options	
Who Benefits?	Who Benefits?	Who Benefits?
Utility	Customers	Recreators
How?	How?	How?
Costs to treat (financial viability) Proactive planning Justifiable decisions	Confidence in utility/reservoir management	Better risk identification and warning
KPIs	KPIs	KPIs
Meeting service standards	Avoided extra costs	Recreation closures (avoided safety incidents)

Table 2 Areas of impact

Areas of Impact	Why and How?
Bulk Water Planning	Constraints on current system model “Water Management Network” – could factor in water quality risks and thresholds
Asset Planning	Providing options for asset investments – alternatives to avoid risks
Alternative water supplies	Evidence of cost / benefit, avoided costs – potential for IPR
Operations (treatment risks)	Thresholds and guidelines to anticipate and respond to impending risks
Research Managers	Focussed issues that mater for research

Table 3 Project objectives

Number	Objective	Deliverable
1	Compile past examples of extreme low levels (using data, literature review and case studies)	Risk characterisation
2	Model compatibility and review	Identified data needs for model improvements
3	Evaluation of options available during low levels	
4	Develop process to characterise risk and consider options	Decision making framework?

2. “Communication of benefits to landholders and generational understanding (school children to grey nomads)”

The discussion around the most highly prioritised need ‘benefits of catchment investment’ led to the identified benefits and areas of impact, below:

Table 4 Identified needs

Identified need?	Communication of benefits to landholders and generational understanding (school children to grey nomads)		
What will success look like?	Acceptance and adoption by community of best practices (e.g. as identified in fact sheets) Community understands individual and broader benefits = ownership of the issue		
Who Benefits?	Who Benefits?	Who Benefits?	
Industry	Landowners	Broader Community	
How?	How?	How?	
Risk management Research output Via a communication tool to landholders	Service delivery Valuable information to sustainably and productively manage land Branding	Capacity Building Research output Education of younger generation around benefits Capacity building and developing leaders in the community	
KPIs	KPIs	KPIs	

Table 5 Areas of impact

Areas of Impact	Why and How?
Planning	Developing business cases with the community (“buy in”)
Communications Teams	Key messages advertised Messages are consistent and shared with other groups
NRM	Communication tool for benefits
Training / learning manager	Education in schools etc. (“next generation”)

Other high priority projects and knowledge transfer projects were highlighted in the red boxes above

4. What’s next?

Following the workshop and the ideas generated and briefly demonstrated in this document, WaterRA will populate and circulate a proposal and request for funding form for both: Water Quality during Low and Variable Reservoir Levels Project, and Communication of benefits to land holders and generational understanding

They will be circulated amongst workshop participants to gather interest and support to progress the projects.

Appendix A – List of attendees

Alan Benson
Ann-Marie Rohlfis
Anthony Agostino
Barry Floyd
Claire McInnes
David Hamilton
David Roberts
John Stanmore
Kathy Cinque
Kelly Hill
Leon Van Der Linden
Lisa Hamilton
Lucy Marshall
Malcolm Hughes
Pouya Amirsayafi
Richard Stuetz