



ENGINEERS  
AUSTRALIA

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# Productivity Commission Draft Report on National Water Reform

Engineers Australia submission

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## 1. Introduction

*"With a variable climate and much arid land, Australia has a lot to lose if we do not continue to lead in water management."* The opening sentence in the Issues Paper for this Inquiry succinctly states the reason why water management is so critical for Australia.

This submission has been prepared to provide Engineers Australia's input to the Productivity Commission's Inquiry into progress on National Water Reform, based on the Commission's September 2017 Draft Report. Engineers Australia is the peak body of the engineering profession. We are a member-based professional association with over 100,000 individual members. Established in 1919, Engineers Australia is a not-for-profit organisation, constituted by Royal Charter to advance the science and practice of engineering for the benefit of the community.

We are pleased that the draft report highlights the value of the National Water Initiative (NWI), the significant progress that has been made and that further work is required to meet NWI objectives, address gaps and limitations, and respond to developing challenges. We are supportive of the reform priorities outlined in the draft report, and the recommendation for Australian, state and territory Governments to recommit, revise and enhance the NWI to preserve and build on the strengths of the NWI.

Engineers Australia previously provided a submission on the Issues Paper for this Inquiry, and we are pleased to see that our submission has assisted the Commission in their review. However, we would like to emphasise two key issues which do not appear to have been fully reflected in the recommendations in the Draft Report:

- Management of Water for Public Benefit Outcomes
- Data Collection and Availability

We consider that addressing the two issues above more explicitly in the text and recommendations of the draft report will assist in meeting the goals of the NWI. Further detail on these two key issues are provided in the sections below.

## 2. Management of Water for Public Benefit Outcomes

The objectives of the NWI are outlined in Box 1 of the Draft Overview Report, of which the third is to achieve 'statutory provision for environmental and other public benefit outcomes, and improved environmental management practices'.

While there has been significant attention on environmental management practices, it appears there has been limited attention on arrangements for meeting other public benefit outcomes. Section 6.1 of the draft report states "The urban water sector provides services ranging from the provision of potable (drinking quality) water and wastewater services to stormwater management and water recycling."

There appears to be a lack of acknowledgement that many urban water supply systems also supply a range of other public benefit outcomes including, but not limited to, provision of fire fighting water supply services and flood mitigation services. Some acknowledgement of these additional services would appear to be appropriate as the first step in developing a best practice framework for the management of these important community benefit services.

As described in Section 10 of Engineers Australia's April 2017 submission, the provision of fire fighting and flood mitigation services potentially involves considerable cost, and there appears to be a number of areas of concern in the framework around the provision of these public benefit services. In particular, with private or government owned corporations owning and operating some of this water infrastructure, it is important that relevant agencies have a clear statutory responsibility to provide such services, are appropriately funded, and then plan and carry out the works required to deliver these critical public services.

Development near water infrastructure can have major implications on the safety, performance and cost of operating that infrastructure. It is considered important that new development pays its share of the additional costs imposed on water infrastructure by that development, whether or not that development becomes a consumptive user of that scheme's water. Without an appropriate development charging regime:

- Developers are not seeing a price signal on why development in a certain location is less desirable than in another location where, for example, the property is not at risk from a dam break event.
- Without collection of these charges infrastructure may not be upgraded, leading to a gradual decline in, for example, the ability to fight residential house fires. Alternatively, such upgrades are funded from general taxation, and the lack of price signal to developers will likely lead to increasing costs to the general taxpayer over time.

## Recommendations

### Recommendation 1

Engineers Australia recommends that the Inquiry Report explicitly acknowledges the key 'other' public benefit outcomes often provided by water supply schemes / urban water utilities.

### Recommendation 2

Engineers Australia recommends that the Inquiry Report includes a review of (or a recommendation to review) existing management frameworks for the delivery of these public benefit services including: statutory or commercial requirements, performance standards, funding mechanisms and the planning and delivery of the required public benefit services.

## 3. Data Collection and Availability

In Section 8 of Engineers Australia's April 2017 Submission we highlighted the importance of reliable data for a host of reasons within the water planning framework. The models which underpin water plans and water entitlements are founded on rainfall and stream gauging station data. Streamflow stations, in particular, do not have a good coverage nationwide. Streamflow stations serve a host of purposes, including assisting in scheme operation and flood warning and providing basic information for a range of development, climate change and scientific assessments. Some jurisdictions, such as the Northern Territory, have seen a number of significant long-term gauging stations closed in recent years. The recent Australian Rainfall and Runoff (ARR) update project has identified a critical lack of quality gauges in small urban catchments. Rating curves, which convert recorded heights to estimated flows, are often poor. Maintenance budgets for stations may be low and consequences can be significant. A number of studies have examined the benefits of water monitoring, and have shown that the benefits generally outweigh the costs by a significant margin.

Gauging station records are often held by a range of agencies, and the public provision of data from these stations is uneven and fragmentary. Continued structural change in the agencies managing these stations has further fragmented the gauging station data and meta-data. The benefits of these data will be maximised if historical records are well maintained and made generally available.

Water diversion/use data also tends to be collected for the primary aim of invoicing, with its use in modelling and resource assessment a distant second. There are opportunities to improve the monitoring of diversion data, and to publish that data to inform the operation of water markets and for future assessments of the resource.

## Recommendations

### Recommendation 3

Engineers Australia recommends that the Inquiry Report explicitly acknowledges the key role of basic data collection in assessing and modelling water supply systems and providing the foundation for infrastructure design and the operation of water markets.

### Recommendation 4

Engineers Australia recommends that the Inquiry Report includes a review of (or a recommendation to review) flow and diversion monitoring stations to meet current and future water reform requirements. The review should include assessment of the quality of the data, the spatial and temporal extent of the data, and the public accessibility of the data.

## 4. Conclusion

Engineers Australia appreciates the opportunity to provide input to the Productivity Commission's Inquiry on national water reform. It is recommended that the Productivity Commission gives consideration to the two key issues raised in this submission.

Engineers Australia and its members are available for further input and would welcome further discussion. Please contact: Jonathan Russell, National Manager for Public Affairs on (02) 6270 6565 or by email at [JRussell@engineersaustralia.org.au](mailto:JRussell@engineersaustralia.org.au).



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