

**Senate Standing Committee on Environment and Communications  
Legislation Committee**

Answers to questions on notice

**Sustainability, Environment, Water, Population and Communities portfolio**

Supplementary Budget Estimates, October 2011

**Program: Division or Agency:** 4: NWC **Question No:** 161

**Topic:** Link between the Murray-Darling Basin and the Great Artesian Basin

**Proof Hansard Page and Date** 56 (18/10/11)  
**or Written Question:**

**Senator Joyce asked:**

Senator JOYCE: Can you give me what you believe are the interactions between the Murray-Darling Basin catchment and the Great Artesian Basin?

Mr Cameron: I cannot give you a technical—

Senator JOYCE: Hydrologically.

Mr Cameron: I cannot give you a detailed hydrological answer. I would need to take that on notice.

**Answer:**

There are a number of complex surface water and groundwater interactions between the Murray-Darling Basin (MDB) and the Great Artesian Basin (GAB).

The MDB consists of numerous, highly diverse and interconnected surface water and groundwater systems. Similarly, the GAB consists of numerous, interconnected aquifer systems. In some areas of New South Wales and Queensland, GAB aquifers, recharge zones and discharge areas overlap spatially with the MDB. However, both systems extend significantly beyond that area of overlap.

There are a number of mechanisms through which connectivity between surface water and groundwater may occur in the overlapping areas of the MDB and the GAB. These interactions are complex and are documented in detail in the Background report on the Great Artesian Basin undertaken by CSIRO as part of the National Water Commission funded Murray-Darling Basin Sustainable Yield Study (Herczeg AL (2008)).

**Reference:**

Herczeg AL (2008) Background report on the Great Artesian Basin. A report to the Australian Government from the CSIRO Murray-Darling Basin Sustainable Yields Project. CSIRO, Australia. 18pp. Website: <http://www.csiro.au/resources/BackgroundGreatArtesianBasinMDBSY.html>.

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Supplementary Budget Estimates, October 2011

**Program: Division or Agency:** 4: NWC

**Question No:** 162

**Topic:** Water price leaks

**Proof Hansard Page and Date** Written  
**or Written Question:**

**Senator Birmingham asked:**

1. Is the NWC aware of allegations some state governments are leaking water allocation announcements to irrigators prior to their announcement, resulting in unfair distortions to the trading market? Please detail any specific incidences. What work has the NWC undertaken to investigate this and what action could be taken to prevent it?

**Answer:**

1. Through its work analysing Australian water markets, the National Water Commission (NWC) is not aware of any evidence of leaking of water allocation information prior to their announcement.

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Supplementary Budget Estimates, October 2011

**Program: Division or Agency:** 4: NWC **Question No:** 163

**Topic:** National Water Commission  
biennial assessment

**Proof Hansard Page and Date  
or Written Question:** Written

**Senator Birmingham asked:**

1. In the recent NWC biennial assessment the NWC stated its frustration with the lack of progress on adjusting over allocated and overused water systems to sustainable levels. Please provide details of which systems remain over allocated and the cause of lack of progress in addressing over allocation in each case.
2. How would the NWC be assisted by receiving a government response to the previous 2009 biennial assessment?
3. What can be done to improve the speed and transparency in price information in the water market?

**Answer:**

1. Parties to the National Water Initiative (NWI) agreed to identify and make substantial progress towards adjusting all currently overallocated and/or overused systems to a sustainable level of extraction by 2010 (NWI paragraphs 43-35).

Not all NWI parties explicitly identify systems as overallocated or overused. In the absence of explicit acknowledgement by all parties, the National Water Commission (the Commission) reviewed in its biennial assessment 159 plans. The Commission sought to determine the extent to which the plans manage systems as though they are overallocated or overused and the extent to which the plans identify the return to environmentally sustainable levels of extraction as a management objective.

Our review identified 48 systems as overallocated and/or overused compared to 24 identified in a similar review in 2009. The increase results from a greater recognition of system stress, and is mainly attributed to the commencement of new Victorian sustainable water strategies and New South Wales macro plans that cover multiple water sources.

Jurisdictions with systems that were identified by this review as overallocated and/or overused are:

- NSW (8);
- Queensland (5);
- South Australia (8);
- Victoria (18); and
- Western Australia (9)

Most plans identified as overused or overallocated also included provisions to address system stress or adjust levels of extraction. The Commission's analysis, however, found that the effectiveness of these approaches vary. In particular, where responses rely on annual allocation processes to avoid overuse, degradation may be mitigated in the short term but there is a risk that the longer term reliability of water access entitlements and allocations will be adversely affected.

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2. In its 2009 Biennial Assessment, the Commission made 68 recommendations for improvements to the management of Australia's water resources. While some actions have been initiated or proposed in response to that report, they had not been formally adopted by COAG at the time the 2011 Biennial Assessment was finalised. For the Commission, these delays in implementing improvements and identifying enhancements to the reform work program impacted on our review of the implementation of the NWI.

3. In the Strengthening Australia's Water Markets Report released in July 2011, the Commission identified that the quality, timeliness and accessibility of price information is an impediment to the further development and strengthening of water markets. The Commission recommended that price disclosure and data collection be mandatory, and the data should be monitored and verified. The Commission also recommended that a mechanism should be developed and implemented for collecting and disclosing entitlement price information at or before the time of trade approval. This should apply both within and outside the Murray-Darling Basin and disclosure should be a condition of trade approval.

The Commission recommended that processing times be shortened and that the frequency of entitlement trade data collection should increase. Trade processes and data collection mechanisms should also be amended to distinguish between different types of trades and transfers. Current trade processing standards also need to be expanded to cover a broader range of performance information.

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Supplementary Budget Estimates, October 2011

**Program: Division or Agency:** 4: NWC

**Question No:** 164

**Topic:** Urban water pricing report

**Proof Hansard Page and Date** Written  
**or Written Question:**

**Senator Birmingham asked:**

1. Does the NWC believe establishing guidelines of the use of stormwater or recycled water in the potable water supply would be of benefit. Is the NWC currently, or is it seeking to, establish such guidelines.
2. Is the NWC aware of any proposals for the use of stormwater or recycled water in the potable supply and does it have a view on the merit of any such proposals?

**Answer:**

1. National guidelines for the use of recycled water (including stormwater) in potable water supply have already been established. The Australian Guidelines for Water Recycling (AGWR) were first published in 2006, and the NWC assisted in their development. The AGWR sit within the broader National Water Quality Management Strategy (NWQMS) which is managed by the Department of Sustainability Environment Water Population and Communities (the department).

A review of the NWQMS is currently underway and the NWC has provided input into that review process drawing on its Review of urban water quality regulation in Australia report published in May 2011. The NWC also recently supported a national workshop series to improve understanding and implementation of the AGWR within jurisdictions, and to create opportunities for greater collaboration and information sharing.

2. The NWC's Waterlines report No. 2 Using recycled water for drinking (2007) included international (Singapore, California, United States and Europe) and domestic (South East Queensland, ACT) examples of existing or proposed schemes involving the use of recycled water in potable supply. Specific examples over recent years in Australia include those in Toowoomba, which involved adding recycled water to supplement Cooby Dam (the proposal did not go ahead); a pilot project in Perth, which involves injecting treated effluent from the Beenyup wastewater treatment plant into the Leederville aquifer; a proposal for Goulburn that did not proceed, involving a new wastewater plant to recycle effluent for return to Sooley Dam; and, a proposal for Canberra that did not proceed, which involved adding recycled water to Cotter Dam.

The NWC does not take a position on individual projects or proposals, as these are a matter for state and local governments and communities. However, the NWC believes that the introduction of treated recycled water into the drinking water supply (Indirect Potable Reuse (IPR)) is an important option to consider in improving Australia's long-term water security. The NWC has encouraged objective and even-handed consideration of IPR alongside all other options and has urged leadership by water decision-makers throughout Australia to enable consideration of IPR. The NWC recognises risks associated with recycled water for drinking but considers that these risks can be satisfactorily and safely managed. The NWC has also emphasised the importance of sound, consultative community decision-making processes that are well informed by science and evidence.

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Supplementary Budget Estimates, October 2011

**Program: Division or Agency:** 4: NWC

**Question No:** 165

**Topic:** Impacts of Coal Seam Gas

**Proof Hansard Page and Date** Written  
**or Written Question:**

**Senator Waters asked:**

1. In NWC's position statement on CSG, it states, if not adequately managed and regulated, CSG risks having significant, long-term and adverse impacts on adjacent surface and groundwater systems. If the government were to take a precautionary approach, what more information and research would be needed before the decision-maker prior to making a decision on whether a CSG project should proceed?
2. Adaptive management is being regularly used to allow this industry, with all its uncertainties, to proceed. Has NWC advised Government on the appropriateness of adaptive management and its application when drilling through aquifers? Can NWC step through how this management and regulatory approach is consistent with the precautionary principle?

**Answer:**

1. The National Water Commission (the Commission) has articulated its position on Coal Seam Gas (CSG) developments in its December 2010 Position Statement and more recently in its 2011 Biennial Assessment The National Water Initiative – securing Australia's water future. In its Position Statement, the Commission proposed a set of principles that it considers should be adopted in managing CSG developments. The Commission would suggest that research and information efforts be directed towards actions that are necessary to implement those principles.
2. The Commission's advice to governments on CSG activities is set out in its Position Statement and Biennial Assessment. Implementation of adaptive management can occur within a structure that applies the precautionary principle. In such circumstances, precautionary principles may be applied in determining key adaptive management decision points and thresholds and these should be transparently articulated and regularly reviewed.