

**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 2012

**Program: Division or Agency:** 6.1: CEWO **Question No:** 162

**Topic:** Location and volumes of environmental entitlements

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator McKenzie asked:**

1. Could you provide the committee with the location and volumes of the 'Bridging the Gap' and other environmental entitlements held throughout the Murray Darling Basin?

**Answer:**

1. The Commonwealth environmental water holdings (river system, security, registered entitlements, and long term average annual yield) are reported each month on the Commonwealth Environmental Water Office website at:  
<http://www.environment.gov.au/ewater/about/holdings.html>

A list of the holdings as at 30 September 2012 is attached.

Other environmental water holders, and the Living Murray program, also publish their holdings on their respective websites. These are additional to the Commonwealth environmental water holdings.

### Holdings at 30 September 2012 \*

\*All figures are rounded to the nearest megalitre (ML)

River System	Security	Registered entitlements <sup>1,2,3,4</sup> (ML)	Long Term Average Annual Yield (ML) <sup>5</sup>
<b>Queensland</b>			
<b>Border Rivers</b>	High		
	Medium	10,610	3,615
	Unsupplemented	1,161	545
<b>Lower Balonne</b>	Unsupplemented	39,355	26,125
<b>Moonie</b>	Unsupplemented	1,415	1,100
<b>Nebine</b>	Unsupplemented	5,920	1,000
<b>Warrego</b>	Unsupplemented	16,050	8,000
<b>Total QLD</b>	High		
	Medium	10,610	3,615
	Unsupplemented	63,901	36,770
<b>New South Wales</b>			
<b>Barwon-Darling</b>	Unregulated	14,603	14,603
<b>Border Rivers</b>	High		
	General	269	108
<b>Gwydir</b>	High	375	375
	General	89,525	32,229
	Supplementary	19,100	3,629
<b>Lachlan</b>	High	733	733
	General	86,199	36,204
<b>Lower Darling</b>	High		
	General	492	399
<b>Macquarie/Cudgegong</b>	High		
	General	98,004	41,162
	Supplementary	1,888	397
<b>Murray</b>	High	7,791	7,401
	General	257,476	208,556
	Groundwater	205	205
<b>Murrumbidgee</b>	High	1,838	1,746
	General	170,206	108,932
	Conveyance	5,727	5,441
	Supplementary	20,820	2,915
<b>Namoi (upper)</b>	High		
	General	105	81
<b>Namoi (lower)</b>	High		
	General	6,098	4,695
<b>Warrego</b>	Unregulated	8,106	8,106
<b>Total NSW</b>	High	10,737	10,256
	General	708,374	432,364

	Conveyance	5,727	5,441
	Supplementary	41,808	6,940
	Unregulated	22,709	22,709
	Groundwater	205	205
<b>Victoria</b>			
<b>Broken</b>	High	47	45
	Low	4	3
<b>Campaspe</b>	High	6,409	6,087
	Low	395	194
<b>Goulburn</b>	High	196,712	186,876
	Low	11,074	3,876
<b>Loddon</b>	High	2,775	2,636
	Low	527	142
<b>Murray</b>	High	235,582	223,803
	Low	11,525	2,766
<b>Ovens</b>	High	70	67
<b>Total Victoria</b>	High	441,594	419,513
	Low	23,526	6,981
<b>South Australia</b>			
<b>Murray</b>	High	103,753	93,377
<b>Total SA</b>	High	103,753	93,377
<b>Total Murray-Darling Basin</b>			
	High	556,084	523,146
	General/Medium/Low	742,510	442,960
	Conveyance	5,727	5,441
	Supplementary	41,808	6,940
	Unsupplemented/Unregulated <sup>4</sup>	86,610	59,479
	Groundwater	205	205
<b>GRAND TOTAL</b>		<b>1,432,944</b>	<b>1,038,171</b>

#### Notes

1. Formal transfer of ownership to the Commonwealth takes place on registration of the entitlement by the relevant State water authority. The entitlement becomes part of the Commonwealth environmental water holdings at that time.
2. Registration can occur a number of months after the exchange of contract, so the amount in the holdings differs from the volume of entitlements secured under contract through the Restoring the Balance in the Murray-Darling Basin program and the Sustainable Rural Water Use and Infrastructure program.
3. Allocations of water against entitlements held in regulated systems are made periodically and will depend on factors including seasonal inflows and rules associated with water held in storages.
4. Unsupplemented and unregulated entitlement figures represent the annual volumetric limit of water that may be available when licence conditions are met. Where the licence conditions specify the annual volumetric limit as a maximum volume of water that may be accessed in a multi-year period, the entitlement volume reported reflects the *average* annual volumetric limit available.

5. All average annual yield figures in this table are calculated using the Department of Sustainability, Environment, Water, Population and Communities' estimates of the long term average annual yield for each entitlement. It was advised in the Murray-Darling Basin Ministers' Communiqué of 4 November 2011 that these would be used to determine how much of the 'gap' between the Baseline Diversion Limit (BDL) and the Sustainable Diversion Limits (SDL) has been 'bridged' through purchase and infrastructure projects.
6. Southern Connected Basin entitlements include Murrumbidgee, Murray, Lower Darling, Goulburn, Campaspe (excluding Coliban) and Loddon titles.

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**Program: Division or Agency:** 6.1: CEWO **Question 163**  
**No:**

**Topic:** Environmental Watering

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Joyce asked:**

1. Over what timeframe does the Federal Government propose to address the issues relating to a plan for implementing environmental flows and to compensate any landowners or any other affected parties as a result of that plan?

**Answer:**

1. The altered proposed Murray-Darling Basin Plan includes a proposal for the Murray-Darling Basin Authority to develop within 12 months of the commencement of the Murray-Darling Basin Plan, a Constraints Management Strategy that:
  - identifies and describes the physical, operational and management constraints that are affecting, or have the potential to affect, environmental water delivery;
  - evaluates options, opportunities and risks to water users, communities and the environment, associated with relaxing or removing key constraints and improving environmental benefits through the effective and efficient delivery of environmental water;
  - assesses the impacts of modifications of constraints on environmental water delivery and third parties, as well as downstream impacts, and assesses options to address those impacts; and
  - identifies mechanisms by which impacts on third parties can be addressed.

The strategy must be developed with appropriate public consultation and include annual reporting on progress.

In the meantime, and as is currently the case, environmental water releases will continue to be managed by river operators within existing rules and procedures, which include rules and risk management procedures to manage the risk of flooding.

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**Program: Division or Agency:** 6.1: CEWO

**Question No:** 164

**Topic:** Environmental Watering

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Joyce asked:**

1. What are the compensation mechanisms to address immediate and short business impacts that will continue subject to final decisions on how environmental flows are to be managed within known system constraints?

**Answer:**

1. Refer to the response provided to Question number 163, Supplementary Budget Estimates, October 2012.

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**Program: Division or Agency:** 6.1: CEWO

**Question No:** 165

**Topic:** Carryover water

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator McKenzie asked:**

1. In reference to QON #155, in 2010-2011 65 GL of water was carried over, 2011-2012 331 GL and it is expected that in 2012-2013 615 GL will be carryover.
2. Given that Eildon has lost water from its spillable water account, is your carryover estimate of 615 GL for the 2012-2013 year still valid?

**Answer:**

The carryover on 1 July 2012 into the 2012-2013 water year was 615 gigalitres. The Commonwealth did not hold any water in spillable water accounts attached to the Lake Eildon storage on 1 July 2012.

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**Program: Division or Agency:** 6.1: CEWO **Question 166**  
**No:**

**Topic:** CEWH – water entitlements

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator McKenzie asked:**

The CEWO now owns water entitlement with the same characteristics as irrigator's water.

1. Is this water subject to the National Metering Standards for non-urban supply?
2. Could you list the all the metering points for delivering environmental water and list their in situ field accuracy?
3. Page 10 of the "WATER AUDIT MONITORING REPORT 2008–09" calculates that the basin wide error in water diversions is  $\pm 10\%$ . Is it a fair thing to say that "On average irrigators are meeting the requirements of the National Metering Standard with the delivery of their water share but the environmental own water share is not"? Explain.
4. Could you calculate the potential gain or loss of water in GL due to meter/measuring error applied to:-
  - a. The CEWO water entitlements
  - b. Irrigators entitlements for each state
  - c. for the year 2010-2012?

**Answer:**

1. The National Framework for Non-Urban Water Metering applies to meter owners. The Commonwealth Environmental Water Office does not own any meters. Commonwealth environmental water is usually delivered by state delivery partners. The Commonwealth environmental water is transferred onto licences owned by State agencies with associated works approvals. All water use associated with these licences is required to comply with the conditions of those licences, including in relation to metering, as provided for in State frameworks. All state governments have agreed that their legislative frameworks will be consistent with the COAG endorsed National Framework for Non-Urban Water Metering.
2. Commonwealth environmental water use is measured by relevant state agencies using their systems. This occurs at various points depending on the nature of the delivery. Measurement can occur at a number of points in stream, on the floodplain, or in wetlands. Measurement can be made at the point of release from storage, or at a gauge on a downstream weir, regulator, off-take or pump. The relevant state agencies are the meter owners and are responsible for monitoring in situ field accuracy of meters.

3. There is no basis to conclude that metering used for environmental water is any more or less accurate than the average for all water users. However, as the National Framework for Non-Urban Water Metering is rolled out, there will be an opportunity to improve the accuracy of measurements for all water users.
- 4a. Nil change. The implementation of more accurate metering does not in and of itself change the water entitlements. Any change to the volume of water delivered against entitlements would depend on individual circumstances.
- 4b. Nil change to water entitlements.
- 4c. Nil change. The total amount of water available to be shared amongst all entitlement holders will not change due to its measurement in any year.

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**Program: Division or Agency:** 6.1: CEWO

**Question No:** 167

**Topic:** Charges incurred for water licenses

**Proof Hansard Page and Date:** Written

**or Written Question:**

**Senator Birmingham asked:**

1. Please detail water charges incurred by the CEWO for water licences or storage held in 2011-12 and an estimate for charges likely to be incurred in 2012-13. Please breakdown by state and entitlement type.

**Answer:**

1. The Commonwealth Environmental Water Office (CEWO) incurred \$5.489 million in fixed entitlement fees and \$0.301 million in spillable water charges for water licences held in the 2011-12 financial year, a total of \$5.79 million. A further \$2.77 million was committed for variable use charges. A breakdown of these charges is as follows:

<b>State</b>	<b>Entitlement Type</b>	<b>Fixed Entitlement Fees \$ m (Excl. GST)</b>	<b>Variable Use Fees \$ m (Excl. GST)</b>	<b>Total</b>
NSW	High	0.021	0.023	0.044
NSW	General	2.496	2.736	5.232
NSW	Unregulated	0.139	0	0.139
<b>Total NSW</b>		<b>2.656</b>	<b>2.759</b>	<b>5.415</b>
QLD	Medium	0.088	0	0.088
QLD	Unregulated	0	0.011	0.011
<b>Total QLD</b>		<b>0.088</b>	<b>0.011</b>	<b>0.099</b>
VIC	High	2.269	0	2.269
VIC	Low	0.092	0	0.092
VIC	Spillable Water	0.301	0	0.301
<b>Total VIC</b>		<b>2.662</b>	<b>0</b>	<b>2.662</b>
SA	High	0.384	0	0.384
<b>Total SA</b>		<b>0.384</b>	<b>0</b>	<b>0.384</b>
<b>Total</b>		<b>5.790</b>	<b>2.770</b>	<b>8.560</b>

It is forecast that the CEWO will incur \$8.983 million in water charges during 2012-13. This includes \$8.54 million in fixed entitlement fees and up to \$0.443 million in spillable water account charges. The forecast for fixed entitlement fees has been calculated based on 2012-13 pricing schedules, the volume of registered entitlements as at 30 June 2012 and forecast entitlement registrations during 2012-13. It is also estimated that \$4.593 million will be spent on variable use (delivery) fees. The forecast breakdown of charges against the Commonwealth environmental water holdings in 2012-13 is as follows:

<b>State</b>	<b>Entitlement Type</b>	<b>Fixed Entitlement Fees \$ m (Excl. GST)</b>	<b>Variable (Use) Fees \$ m (Excl. GST)</b>	<b>Total</b>
NSW	High	0.084	0.060	0.144
NSW	General	3.662	4.315	7.977
NSW	Supplementary	0	0.022	0.022
NSW	Unregulated	0.102	0	0.102
<b>Total NSW</b>		<b>3.848</b>	<b>4.397</b>	<b>8.245</b>
QLD	Medium	0.101	0.099	0.200
QLD	Unregulated	0	0.097	0.097
<b>Total QLD</b>		<b>0.101</b>	<b>0.196</b>	<b>0.297</b>
VIC	High	3.978	0	3.978
VIC	Low	0.098	0	0.098
VIC	Spillable	0.443	0	0.443
<b>Total VIC</b>		<b>4.519</b>	<b>0.000</b>	<b>4.519</b>
SA	High	0.515	0	0.515
<b>Total SA</b>		<b>0.515</b>	<b>0.000</b>	<b>0.515</b>
<b>Total</b>		<b>8.983</b>	<b>4.593</b>	<b>13.576</b>

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**Program: Division or Agency:** 6.1: CEWO **Question No:** 168

**Topic:** Commonwealth Environment Water –  
Basin watering strategy

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Ruston asked:**

1. What's the CEWH environmental watering strategy for all Basin catchments – that is, how are they going to apply environmental water to environmental assets in each valley?

**Answer:**

1. The Commonwealth Environmental Water Office has developed Annual Water Use Options documents that set out the proposed approach for the use of Commonwealth environmental water in each part of the Murray-Darling Basin in which water is held. These documents were developed in consultation with a range of groups including State agencies, local environmental water advisory groups, catchments management authorities and others.

The 2012/13 Annual Water Use Options documents may be found on the Commonwealth Environmental Water Office website at:  
<http://www.environment.gov.au/ewater/publications/index.html>

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**Program: Division or Agency:** 6.1: CEWO **Question 169**  
**No:**

**Topic:** Commonwealth Environment Water –  
water market

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Ruston asked:**

1. CEWH is now entering temporary water market, in direct competition with private diverters. What steps are being taken to ensure CEWH's intervention in the water market is not distorting and putting up the price of water? Is there any evidence of price distortion in the market?

**Answer:**

1. The Commonwealth Environmental Water Office (CEWO) has not yet undertaken any trade of Commonwealth environmental water.

CEWO's primary objective is to manage the environmental water holdings to protect and restore environmental assets. As such, its key activity is environmental water delivery. This means that CEWO is likely to trade only a proportion of its water holdings in any given year.

The CEWO has been consulting stakeholders on a trading framework to avoid, minimise or mitigate any potential market distortions. A position paper on the trade of Commonwealth environmental water will be released in due course. Key elements of the proposed trading framework include:

- *Trading consistent with legislative requirements* – including the *Water Act 2007*, the Murray-Darling Basin Plan Environmental Watering Plan, Commonwealth financial management requirements and State and Basin Plan water trading rules. Trade must be undertaken through open and competitive processes and deliver value for money, which means that the price paid for any purchases will typically be broadly commensurate with prevailing market prices.
- *Trade decision making* – decisions to trade must give consideration to a number of matters, including the potential market impacts, and not use any inside information. The volume of trade that is sought will take into account the size of the market.
- *Public announcements* – provide regular guidance on medium-term trading intentions; announce trading actions prior to undertaking trade, release a market assessment prior to undertaking a trade, and report on the outcomes of trade.
- *Review and audit* – trading arrangements will be subject to ongoing monitoring and review.

- *Improvement* – development of modelling tools to assess market impacts, local engagement to address knowledge gaps, and development of a market information database to inform trading decisions.

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**Program: Division or Agency:** 6.1: CEWO **Question 170**  
**No:**

**Topic:** Commonwealth Environmental Water  
– banking of entitlements

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Birmingham asked:**

1. In reference to QoN 157, Is there a 1st in 1st serve approach to caps on storage or do all get equal billing?

**Answer:**

1. It is assumed that “caps on storage” refer to caps to the volume of water that individual entitlement holders can store in storage, for example, the account limit.

The states set rules with respect to water entitlements that include carryover and water account limits. When the balance of the water accounts equals the account limits, then any additional water allocated to the entitlement holder is automatically re-allocated to others under state rules. Commonwealth environmental water operates under the same rules as other entitlements.

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**Program: Division or Agency:** 6.1: CEWO **Question No:** 171

**Topic:** Commonwealth Environmental Water  
– Gwydir catchment

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Birmingham asked:**

1. What proportion of environmental water was used in the Gwydir?
2. How much water is currently held?
3. What limit is there on carryover water in this catchment?
4. What plans does the CEWO have to use environmental water in the Gwydir this year?
5. What environmental needs will this address?
6. How would another wet year affect the CEWO's ability to use this water?
7. Is this water in danger of spilling?

**Answer:**

1. During 2011-12 a total of 1.2 gigalitres of Commonwealth environmental water was delivered (in early October 2011, before the floods) for use in the Gwydir Wetlands.
2. The Commonwealth holds 89.5 gigalitres of general security, 0.4 gigalitres of high security and 19.1 gigalitres of supplementary entitlement in the Gwydir catchment.
3. There is a limit on carryover for general security entitlements of 150 per cent.
4. The Annual Water Use Options 2012-13: Gwydir River Catchment identifies five potential water use options, including for the Gwydir Wetlands and to support in-stream ecosystems. This plan is available on the Commonwealth Environmental Water Office website at <http://www.environment.gov.au/ewater/publications/planning-2012-13-factsheet.html>.
5. If watering is required, this will continue the recovery of native plants and animals in river bank and wetland areas. It will also contribute to efforts that connect the rivers within the catchment to its wetland areas and improve water quality. These contributions aim to provide good quality habitat in which native plants and animals can successfully breed and grow.
6. Another wet year may meet environmental needs in the Gwydir catchment. Seasonal, operational and management issues are considered as decisions on the use of Commonwealth environmental water are taken throughout the year.
7. No.

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**Program: Division or Agency:** 6.1: CEWO **Question No:** 172

**Topic:** Commonwealth Environmental Water  
– Lower Lakes

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Birmingham asked:**

1. During 2011-12 how much environmental water was used in the Lower Lakes and Coorong? How much are you planning on using in 2012-13?

**Answer:**

1. During 2011-12, 328.8 gigalitres of Commonwealth environmental water was used in the Lower Lakes and Coorong.

As at 30 September 2012, 763.4 gigalitres of Commonwealth environmental water has been made available for use in the southern connected basin, with further decisions pending. A minimum volume of 551 gigalitres of Commonwealth environmental water is planned to be provided for use in the Lower Lakes and Coorong.

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**Program: Division or Agency:** 6.1: CEWO

**Question No:** 173

**Topic:** Commonwealth Environmental Water  
– sites and purpose of allocation

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Birmingham asked:**

1. On what sites and for what purpose has environmental water allocated this year been used?

**Answer:**

1. As at 30 September 2012, up to 763.4 gigalitres of Commonwealth environmental water has been made available for use in 2012/13. The table below shows approved watering actions for 2012/13 as at 30 September 2012.

<b>Location</b>	<b>Purpose</b>	<b>Approved for Delivery in 2012-13 – up to (gigalitres)</b>
Murray	Contribute towards environmental outcomes at multiple sites in the Murray River.	300
Edward-Wakool River System	Improve water quality and vegetation health.	4
Loddon River	Provide flows for supporting native aquatic species, maintaining native vegetation within riparian communities, and providing key ecosystem functions.	2.7
Lower Broken Creek	Facilitate native fish passage, and support native fish habitat, migration and breeding.	59
Mid Murrumbidgee	Facilitate recruitment of large-bodied fish.	190
Lower Murrumbidgee	Promote continued recovery of wetland vegetation communities, and provide habitat for waterbirds and native aquatic fauna.	6
Campaspe	Support the maintenance of native riparian vegetation, fish and macro-invertebrates, and ecosystem function.	6.8
Goulburn	Support fish habitat, aquatic ecosystem function and vegetation condition.	194.8
Ovens River	Supplement in-stream flows.	0.07

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**Program: Division or Agency:** 6.1: CEWO **Question No:** 174

**Topic:** Commonwealth Environmental Water  
– South Australia

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Birmingham asked:**

1. How much Environmental water flowed into South Australia during 2011/12? How much is expected to flow into SA during 2012/13?
2. What were total flows on environmental water over the barrages? What is this as a % of water flowing through the barrages?
3. What were the tangible benefits to the lower lakes of this environmental water?

**Answer:**

1. A total of 343.4 gigalitres of Commonwealth environmental water was delivered into the Murray River for the purpose of achieving multiple benefits in the River Murray channel, Lower Lakes and Coorong.

As at 30 September 2012, 763.4 gigalitres of Commonwealth environmental water has been made available for use in the southern connected basin, with further decisions pending. A minimum volume of 551 gigalitres of Commonwealth environmental water is planned to be provided for use in the Lower Lakes and Coorong.

2. The volume of Commonwealth environmental water accounted as barrage flow in 2011/12 was 328 gigalitres.

The total volume of Commonwealth environmental water as a percentage of total barrage flows was approximately 6.7 per cent based on estimated total barrage flows of 7,000 gigalitres.

3. Examples of the environmental outcomes reported in the Lower Lakes and Coorong to which environmental water contributed include:
  - An increase in the abundance of submergent, amphibious, floating and emergent species in the Lower Lakes;
  - Successful spawning and recruitment of black bream and green flounder in the Coorong; and
  - Lake levels managed to within the target range throughout 2011/12 to help mitigate salinity levels and improve the condition of wetland vegetation.

The above environmental outcomes are reported in:

- Gehrig S.L., Nicol, J.M., Frahn, K.A. and Marsland, K.B (2012), *Lower Lakes Vegetation Condition Monitoring – 2011/12*, South Australian Research and Development Institute (Aquatic Sciences), Adelaide. Available at:  
[http://www.sardi.sa.gov.au/\\_\\_data/assets/pdf\\_file/0020/175034/Lower\\_Lakes\\_Vegetation\\_Condition\\_Monitoring\\_11\\_12\\_-\\_FINAL\\_12\\_07\\_2012.pdf](http://www.sardi.sa.gov.au/__data/assets/pdf_file/0020/175034/Lower_Lakes_Vegetation_Condition_Monitoring_11_12_-_FINAL_12_07_2012.pdf)
- Ye, Q., Bucater, L., Short D. and Earl, J (2012), *Coorong fish condition monitoring 2008-2012*. South Australian Research and Development Institute (Aquatic Sciences), Adelaide. Available at:  
[http://www.sardi.sa.gov.au/\\_\\_data/assets/pdf\\_file/0009/177147/Coorong\\_Fish\\_Condition\\_Monitoring\\_2012\\_Report.pdf](http://www.sardi.sa.gov.au/__data/assets/pdf_file/0009/177147/Coorong_Fish_Condition_Monitoring_2012_Report.pdf)

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**Program: Division or Agency:** 6.1: CEWO **Question 175**  
**No:**

**Topic:** Commonwealth Environmental Water  
- trading

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Birmingham asked:**

1. Will the CEWH consider selling excess water to farmers this year? If not, under what conditions would water be sold?
2. What capacity does the CEWO have to engage in water trading? When can you buy? When can't you? When can you sell? When can't you?
3. Isn't it to your detriment if you can't top up? Wouldn't it better to sell water rather than let it spill?
4. In reference QoN 257 where that trading opportunities may involve selling in one area and buying in another – can you explain how potential impacts on irrigators will be considered?

**Answer:**

1. Information on the Commonwealth Environmental Water Office's (CEWO) approach to portfolio management, including its trading intentions, is provided through Portfolio Management Statements available on the CEWO website. In summary, the Portfolio Management Statements indicate the following as at 7 September 2012:

***Southern Basin***

There are no plans to sell allocations in 2012/13 as available allocations are expected to be required to meet environmental needs. Sale of permanent entitlement is not being considered for 2012/13.

***Northern Basin***

There are no plans for allocation trade in the short-term due to the high levels of water availability which means that there is a low level of demand from potential purchasers. There may be potential to sell allocations in future, subject to there being sufficient market demand. Sale of permanent entitlement is not being considered for 2012/13.

These intentions will be reviewed throughout the year to take into account changing seasonal and operational factors. More detailed information on the approach in specific catchments is provided on the CEWO website:

<http://www.environment.gov.au/ewater/management/portfolio.html>

2. The *Water Act 2007* provides for the Commonwealth Environmental Water Holder (CEWH) to trade both water allocations and entitlements, subject to a number of conditions. In general, the Commonwealth environmental water holdings must be managed for the purpose of protecting or restoring the environmental assets of the Murray-Darling Basin.

Section 106 of the *Water Act 2007* requires that the CEWH can only dispose of water allocations or entitlements if:

- the water is not required to meet environmental objectives and cannot be carried over (Section 106(1)); or,
- the proceeds from the sale of the water would improve the capacity to meet environmental objectives (as compared to not selling the water) (Section 106(2)).

Any trade decision made by the CEWH must also be consistent with the requirements of the Murray-Darling Basin Plan Environmental Watering Plan (once it comes into effect).

In addition to the above requirements, any trade undertaken by the CEWH must comply with Commonwealth financial management requirements and State water management frameworks (for example, State trading rules). In certain catchments, State trading rules may place volumetric restrictions on trade and/or restrict the time period during which trade can occur.

The Commonwealth has partly bridged the gap to the 2,750 gigalitre starting point in the Murray-Darling Basin Plan (Basin Plan) and so the Commonwealth environmental water portfolio is currently less than will be required, on average, to meet the environmental objectives set in the Basin Plan. Accordingly, opportunities to trade are presently limited to specific locations where water has been unusually abundant and large allocations have been made against entitlements and in those areas there is presently little demand which could be met by a trade from the CEWH.

3. The CEWO actively manages its portfolio to ensure that the maximum environmental outcome is able to be achieved from the available water. A public output of the planning process is the Portfolio Management Statements for a catchment or grouping of catchments referred to in response to question 1. These statements that are adjusted as required, set out:

- available Commonwealth environmental water;
- water use options for the year;
- expected trade for the year; and
- carryover strategy.

Dam spills can have different implications for the management of the Commonwealth environmental water holdings depending on the particular water management rules in each catchment. In some circumstances, it may be beneficial for CEWO to pursue the sale of water allocations if there is a risk that a dam spill could result in allocation being debited from Commonwealth allocation accounts. However, as this situation is likely to occur in periods of high water availability, there may be insufficient market demand to justify pursuing a sale. In such circumstances, given that a physical spill may itself bring environmental benefits it may be best to allow allocation to be debited from the Commonwealth account and avoid incurring the transaction costs associated with a trading action.

4. A decision to sell water in one area and purchase in another would be made where it would result in an overall improvement in environmental outcomes. Each associated trade would be conducted within the context of the trading framework that the CEWO is developing in consultation with Basin stakeholders. A position paper will be released in due course, however key elements of the proposed framework that are relevant to the consideration of potential impacts on irrigators include:
  - *Trade decision making* – decisions to trade must give consideration to a number of matters, including the potential market impacts, and not use any inside information. The volume of trade that is sought will take into account the size of the market.
  - *Trading consistent with legislative requirements* – including the *Water Act 2007*, the Basin Plan Environmental Watering Plan, Commonwealth financial management requirements and State and Basin Plan water trading rules. Trade must be undertaken through open and competitive processes and deliver value for money, which means that the price paid for any purchases will typically be broadly commensurate with prevailing market prices.
  - *Public announcements* – provide regular guidance on medium-term trading intentions; announce trading actions prior to undertaking trade, release a market impacts assessment prior to undertaking a trade, and report on the outcomes of trade.
  - *Review and audit* – trading arrangements will be subject to ongoing monitoring and review.
  - *Improvement* – development of modelling tools to assess market impacts, local engagement to address knowledge gaps, and development of a market information database to inform trading decisions.

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Answers to questions on notice  
**Sustainability, Environment, Water, Population and Communities portfolio**  
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**Program: Division or Agency:** 6.1: CEWO

**Question No:** 176

**Topic:** Commonwealth Environmental Water  
– usage and carry over

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Birmingham asked:**

1. How is water being used this year? On what sites? How much do you expect will be carried over? What is the maximum that could be carried over?
2. What proportion of environmental water held in each catchment was used in 2011-12?
3. These last few years have been wet years – how wet would you classify them - In the top 5% of years? In average years, say 40-60%, how much do you estimate would be carried over?

**Answer:**

1. Commonwealth environmental water is being used in accordance with the Annual Water Use Options documents that set out the proposed approach for the use of Commonwealth environmental water in each part of the Basin in which water is held.

The 2012-13 Annual Water Use Options documents may be found on the Commonwealth Environmental Water Office website at:

<http://www.environment.gov.au/ewater/publications/index.html>

The table below shows approved watering actions for 2012-13 as at 30 September 2012.

<b>Location</b>	<b>Approved for Delivery in 2012-13 – up to (gigalitres)</b>
Murray	300
Edward-Wakool River System	4
Loddon River	2.7
Lower Broken Creek	59
Mid Murrumbidgee	190
Lower Murrumbidgee	6
Campaspe	6.8
Goulburn	194.8
Ovens River	0.07

It is too early in the water year to have a clear expectation as to how much Commonwealth environmental water may be carried over into 2013-14. The amount of water used will depend on seasonal and operational conditions.

The maximum volume that could be carried over into 2013-14, based on the Commonwealth environmental water holdings as at 30 September 2012, was 964 gigalitres (excluding Victorian spillable water accounts).

2.

<b>Catchment</b>	<b>Utilisation (%)</b>
Southern connected basin (NSW, Victoria, South Australia)	65
Lachlan (NSW)	15
Macquarie and Cudgegong (NSW)	30
Gwydir (NSW)	1
Ovens (VIC)	100
Other Catchments:  Coliban (VIC)  Namoi (NSW)  Border Rivers (NSW & QLD)	No activities.

Note: In the southern connected basin, water can be traded between catchments and therefore cannot be reported as use against individual catchments.

3. The Bureau of Meteorology has reported that: 2011 was Australia's second-wettest calendar year since national rainfall records began in 1900; and that April 2010 to March 2012 was Australia's wettest two-year period on record.

Over the longer term it is expected that the percentage of Commonwealth environmental water that is carried over will be similar to other water users - although like all water users it will vary from year to year. In average years the carryover rate for all users is approximately 30 per cent of the water available.

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**Program: Division or Agency:** 6.1: CEWO

**Question 177  
No:**

**Topic:** Cost of ownership of water

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator McKenzie asked:**

1. Based on last year's Commonwealth Environment Water Holdings (2011), please provide for each individual irrigation district the cost of ownership of that water? That is, all tariffs and fees paid by the Commonwealth for holding this water and excluding the cost of delivery.

**Answer:**

1. With exception of entitlement shares held with Murray Irrigation Ltd, the Commonwealth holds entitlements as on-river licences which are not attached to specific irrigation districts. The fixed (entitlement) tariffs and fees paid by the Commonwealth to each water authority in 2011-12 were as follows:

<b>Water Authority</b>	<b>\$ m (Excl. GST)</b>
State Water Corporation and NSW Office of Water - NSW	2.191
Murray Irrigation Ltd - NSW	0.465
Department for Water - SA	0.384
Department of Environment and Resource Management - QLD	0.088
Goulburn-Murray Water - VIC	1.995
Lower Murray Water - VIC	0.662
Coliban Water - VIC	0.005
<b>Total</b>	<b>5.790</b>

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**Program: Division or Agency:** 6.1: CEWO **Question No:** 178

**Topic:** Total Commonwealth Environmental  
Water held in storages

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator McKenzie asked:**

Currently, what is the volume of water held by the CEWH that is not stored in dams or storages? (i.e. diversion water)

1. What is average price per mega litre paid for this water?
2. Is this water used in any way or does it just add to the run of rivers and streams?
3. Does the CEWH intend to purchase any more diversion water? If so how much?

**Answer:**

The total volume of unregulated water (water not held in dams or storages) secured through water buybacks and currently held by the CEWH is 102.46 gigalitres as detailed in Table 1 below.

1. The average price for the entitlements purchased through the Restoring the Balance in the Murray-Darling Basin program is broken down by catchment in Table 1.
2. The water can be used for watering wetlands and floodplain forests. It can also be left instream.
3. The volume of water purchasing required to bridge the gap will not be known until water yields from infrastructure projects and offsets from environmental works and measures and other sources has been confirmed. The type of water entitlements that are purchased are determined on a catchment by catchment basis according to an assessment of the mix of entitlement types which will deliver the environmental outcomes sought in the Basin Plan.

**Table 1**

<b>Catchment</b>	<b>Entitlement Type</b>	<b>Secured Entitlement Purchases (ML)</b>	<b>Secured Entitlement Purchases - Average Annual Yield (ML)</b>	<b>Average price paid per trade (\$/ML)<sup>(b)</sup></b>
Gwydir	Supplementary	19,101	3,629	1,045
Condamine-Balonne	Unsupplemented	30,205	30,205	1,535
Intersecting Streams (inc. NSW Warrego)(a)	Unregulated	8,106	8,106	N/A
Macquarie-Bogan	Supplementary	1,888	397	161
QLD Border Rivers	Unsupplemented	64	64	N/A
Barwon-Darling <sup>(a)</sup>	Unregulated	22,273	22,273	836
Murrumbidgee	Supplementary	20,821	2,915	218
		102,458	67,589	

All average annual yield figures in this table are calculated using SEWPaC's estimates of the long term average annual yield for each entitlement. It was advised in the Murray-Darling Basin Ministers' Communique of 4 November 2011 that these would be used to determine how much of the 'gap' between the Baseline Diversion Limit (BDL) and the Sustainable Diversion Limits (SDL) has been 'bridged' through purchase and infrastructure projects.

<sup>(a)</sup> This data includes the water entitlements acquired from Toorale Station.

<sup>(b)</sup> This includes the water purchased from the Victorian Government related to the NVIRP project. The water purchased in this transaction is specified in average annual yield terms.

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**Program: Division or Agency:** 6.1: CEWO

**Question No:** 179

**Topic:** Total cost of allocating water

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator McKenzie asked:**

1. What is the total cost to the Commonwealth of delivering the water held by the CEWH in the 2011 year? Also cite the total amount of CEW used or delivered in this period in GL. If possible also break down this cost to costs associated with each of the Basin States.

**Answer:**

1. The Commonwealth Environmental Water Office incurs the same charges as other water holders. This year (2011/12) the total charges were \$8.56 million. This includes \$5.79 million in fixed fees and charges associated with holding environmental water entitlements, and \$2.77 million in variable use fees associated with the delivery of environmental water. These variable fees were applicable to water delivered from all New South Wales and Queensland Lower Balonne entitlements.

A total of 680 gigalitres of Commonwealth environmental water was delivered in 2011/12. The costs incurred for fixed, variable and spillable water account fees and charges in each Basin State are as follows:

<b>State</b>	<b>Total Fees and Charges (\$ millions)</b>
Queensland	0.099
New South Wales	5.415
Victoria	2.662
South Australia	0.384
<b>Total</b>	<b>8.560</b>

These totals include all fees incurred for delivery actions completed in 2011/12, some of which will be invoiced and paid in 2012/13.

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**Program: Division or Agency:** 6.1: CEWO **Question No:** 180

**Topic:** Volume of main public storages in the Murray-Darling Basin

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator McKenzie asked:**

During the May Senate Estimates, the CEWO reported: “the volume of the main public storages in the Murray-Darling Basin is 22,214 gigalitres”.

1. What is the long term average annual yield of these storages?
2. What is the long term average annual irrigation diversion for these storages?
3. What is the long term average annual diversion for entitlements other than irrigation for these storages?
4. What is the current total environmental entitlement (in LTCE, State and Commonwealth holdings) for these storages?
5. What would you estimate the total environmental entitlement (in LTCE, State and Commonwealth holdings) for these storages to be if the 2750 gigalitres of water was sourced entirely through water buybacks?
6. What is the current total urban entitlement (in LTCE, State and Commonwealth holdings) for these storages?

**Answer:**

1. The Murray-Darling Basin Authority (the Authority) has estimated that total watercourse diversion averages 10,903 gigalitres/year. This comprises irrigation use and non-irrigation use. In addition, interceptions by runoff dams and plantation forestry averages 2,720 gigalitres/year.

At times, orders against water entitlements in regulated water sources are supplied by unregulated inflows (for example, from tributaries), and not from storages.

2. The total watercourse diversion from the Murray-Darling Basin for irrigation is estimated to be 10,400 gigalitres/year.
3. The total watercourse diversion for other consumptive uses including urban is estimated to be 500 gigalitres/year.
4. Entitlements are against a water resource, which includes water from storages and inflows from tributaries.

The Long Term Average Annual Yield (LTAAY) of water available for the environment is available on the Authority's website at: <http://download.mdba.gov.au/proposed/Post-PBP-recovery-30-June-12.pdf>.

Prior to 2009, 823 gigalitres LTAAY of Murray-Darling Basin environmental entitlements was recovered and factored in to the Murray-Darling Basin Plan baseline. A further 1,547 gigalitres LTAAY has been contracted for recovery as at 30 June 2012.

The Commonwealth Environmental Water Holder entitlements as at 30 September 2012 totalled 1,432 gigalitres which have a LTAAY of 1,038 gigalitres.

5. The 2,750 gigalitres is already expressed in LTAAY terms. There are many different types of entitlements which all have different LTAAY factors. The 2,750 gigalitres of LTAAY will not be sourced entirely from buybacks.
6. The current total urban entitlement is approximately 560 gigalitres. Metropolitan Adelaide receives an annual allocation over and above this.

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**Program: Division or Agency:** 6.1: CEWO **Question No:** 181

**Topic:** CEWO – water-use option documents

**Proof Hansard Page and Date** 41

**or Written Question:** (16/10/12)

**Senator Joyce asked:**

Senator JOYCE: Multiple sites. So how many sites do those 10 documents encompass?

Mr Parker: We would have to take that precise question on notice.

**Answer:**

Ten annual water use options documents have been prepared for 2012-13 covering all the catchments of the Murray-Darling Basin, with the exceptions of the Paroo, Wimmera-Avoca, and East Mount Lofty Ranges where no Commonwealth environmental water is held. These catchments include the vast majority of the key environmental assets identified by the Murray-Darling Basin Authority.

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**Program: Division or Agency:** 6.1: CEWO **Question No:** 182

**Topic:** Commonwealth Environmental Water  
Holder - allocations

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Joyce asked:**

1. How much water that was allocated in 2011-12 was carried over into the 2012-13 year?
2. Did the government have any water allocated in 2011-12 that could not be carried over?

**Answer:**

1. 615 gigalitres was carried over into the 2012/13 year.
2. Yes. 0.1 gigalitres.

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**Program: Division or Agency:** 6.1: CEWO **Question No:** 183

**Topic:** Commonwealth Environmental Water Holdings

**Proof Hansard Page and Date** Written

**or Written Question:**

**Senator Joyce asked:**

1. For the Commonwealth's environmental water holdings, could you please list the amount of water allocated, the carryover water and the amount of water delivered for 2011-12?
2. For the Commonwealth's environmental water holdings, could you please list the amount of water allocated, the carryover water and the amount of water delivered for 2012-13 (year to date)?

**Answer:**

1. Amount of water allocated (new allocations): 961 gigalitres. Carryover from 2010-11 (on 1 July 2011): 331 gigalitres. Amount of water delivered: 680 gigalitres.
2. As at 30 September 2012: Amount of water allocated (new allocations): 785 gigalitres. Carryover from 2011-12 (on 1 July 2012): 615 gigalitres. Amount of water delivered: 5 gigalitres.