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: MDBA	**Question No:**	134
Topic:	Proposed Basin Plan		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Birmingham asked:

1. Please provide the figures and documents being shown at different meetings purported to be the SDL figures in the proposed Basin Plan.
2. How many groups or meetings have these figures been shown to? When was the first time these figures were provided to a stakeholder group or meeting? Please provide details of all instances these figures were provided to a group/meeting.
3. What discussions has the MDBA had with the state governments since first briefing them on the proposed Basin Plan?
4. How many times has Mr Knowles met with representatives of each of the Basin state governments since July 2011?
5. Have any working groups been established with state Governments to look at particular issues arising from the proposed Basin Plan?
6. Have state governments requested any changes or any further work on any aspects of the proposed basin plan?
7. How many people have been shown the proposed Basin Plan? Please provide details of who has been shown the proposed Basin Plan.

Answer:

1. The three attached documents (**Attachments A, B and C**) contain the proposed Sustainable Diversion Limits (SDLs) which were the current thinking at the time of the meetings listed in question 2.

2. As at 2 November 2011, these figures have been shown at 7 meetings, the first of which was on 8 September 2011. Details of meetings are in the table below. It should be noted that some groups have disseminated the documents via their own websites with the agreement from the Murray-Darling Basin Authority (the Authority).

08 September 2011	Australian Conservation Foundation, National Irrigators Council and National Farmers Federation briefing.
22 September 2011	Basin Community Committee.
29 September 2011	National Farmers Federation and, National Irrigators Council members.
04 October 2011	Environmental Non Government Organisation groups.
17 October 2011	Catchment Management Authority Chairs.
19 October 2011	Murrumbidgee Valley Stakeholder Group.
25 October 2011	Dairy industry members.

3. The Chief Executive briefed state governments on the proposed Basin Plan on 16 June 2011. The Basin Plan Working Group (BPWG) was established at this meeting as a standing forum for conducting consultations with the states on the proposed Basin Plan. The BPWG has since met 11 times. In addition there have been regular modelling and technical teleconferences, as well as bilateral and multilateral meetings and workshops to discuss individual issues.

The Basin Officials Committee (BOC) has discussed the proposed Basin Plan twice.

4. Mr Knowles met with representatives of the Basin state governments a total of 16 times since July 2011. These comprised: one meeting of the Legislative and Governance Forum on the Murray Darling Basin (formerly Ministerial Council);

- two meetings of the Ministerial Forum;
- one meeting of the BOC;
- two meetings with representatives from South Australia;
- two meetings with representatives from Victoria;
- two meetings with representatives from New South Wales;
- one meeting with representatives from the Australian Capital Territory; and
- five meetings with representatives from Queensland.

5. Yes. The Authority has established the BPWG as above.

6. The BPWG has worked through the proposed Basin Plan in detail and amendments have been made in response to state concerns. The BPWG will continue to meet through the public consultation period, to consider further issues such as the practical implementation of different elements of the proposed Basin Plan.

7. The proposed Basin Plan has been provided to 11 groups. These comprise:

- each of the basin state jurisdictions (6) through the BPWG;
- Basin Officials Committee+;
- Basin Community Committee;
- Murrumbidgee Valley Stakeholder Group; and
- Northern Murray Darling Basin Aboriginal Nations Executive (Indigenous specific sections only).

Attatchment A

Current thinking - possible reductions in groundwater sustainable diversion limits (SDLs)
27 October 2011

SDL Area ID	SDL Area Name	Guide BDL	Guide SDL	Guide % Reduction (BDL-SDL Proposal)	Proposed BDL	Proposed SDL	Volumetric Reduction (CDL-SDL)	% Reduction (BDL-SDL)
	South Australia							
GS1	Angas Bremer (Quaternary)	6.5	4.0	38.5	0.00	2.18		
GS1	Angas Bremer (Murray Group Limestone)				6.57	6.57		
GS2	Eastern Mount Lofty Ranges	19.3	33.5		34.69	38.51		
GS3	Mallee (Pliocene Sands)	63.4	63.4		0.00	82.84		
GS3	Mallee (Murray Group Limestone)				65.73	65.73		
GS3	Mallee (Renmark Group)				0.00	2.00		
	Mallee Border Zone							
GS4	Marne Saunders (fractured rock)	4.7	4.7		2.09	2.09		
GS4	Marne Saunders (Murray Group Limestone including overlying Quaternary sediments)				2.38	2.38		
GS4	Marne Saunders (Renmark Group)				0.50	0.50		
GS5	Peake–Roby–Sherlock (unconfined limestone)	5.2	5.2		3.41	3.41		
GS5	Peake-Roby-Sherlock (confined strata - Buccleuch formation and Renmark Group)				2.58	2.58		
GS6	SA Murray (Groundwater)	1.8	19.0		1.80	127.77		
GS7	SA Murray Salt Interception Schemes	11.1	28.3		11.10	28.63		
	Victoria							
GS8a	Goulburn-Murray: Goulburn-Broken Highlands	9.8	9.8		15.18	35.76		
GS8b	Goulburn-Murray: Loddon-Campaspe Highlands	9.4	9.4		12.96	16.79		
GS8c	Goulburn-Murray: Murray Highlands	4.4	4.4		5.44	5.44		
GS8d	Goulburn-Murray: Ovens Highlands	3.2	3.2		4.67	4.67		
GS8e	Goulburn-Murray: Ovens-Kiewa Sedimentary Plain	14.7	14.7		28.47	30.54		
GS8f	Goulburn-Murray: Victorian Riverine Sedimentary Plains (deep; Renmark Group and Calivil Formation)	89.6	127.0		174.98	127.00	47.98	27.4
GS8f	Goulburn-Murray: Victorian Riverine Sedimentary Plains (shallow; Shepparton Formation)	83.3	85.0		244.14	244.14		
GS9a	Wimmera-Mallee: West Wimmera (Loxton Parilla Sands)	0.0	12.0		0.00	22.13		
GS9a	Wimmera-Mallee: West Wimmera (Murray Group Limestone)	1.9	25.5		25.50	25.50		
GS9a	Wimmera-Mallee: West Wimmera (Tertiary Confined Sands Aquifer)	0.8	4.0		4.00	4.00		
GS9b	Wimmera-Mallee: Wimmera-Avoca Highlands	0.2	0.2		1.26	3.02		
GS9c	Wimmera-Mallee: Wimmera–Mallee Border Zone (Loxton Parilla Sands)	0.0	9.7		0.00	9.37		
GS9c	Wimmera-Mallee: Wimmera–Mallee Border Zone (Murray Group Limestone)	8.8	14.1		14.10	14.10		
GS9c	Wimmera-Mallee: Wimmera–Mallee Border Zone (Tertiary Confined Sands Aquifer)		1.1		1.10	1.10		
GS9d	Wimmera-Mallee: Wimmera-Mallee Sedimentary Plain	0.6	27.0		24.23	236.21		
	New South Wales							
GS10	Adelaide Fold Belt	3.0	3.3		3.61	5.25		
GS11	Bell Valley Alluvium	2.2	2.2		2.21	2.21		
GS12	Belubula Alluvium	1.9	1.9		2.90	2.90		
GS13	Billabong Creek Alluvium	2.0	6.1		7.50	7.50		
GS14	Castlereagh Alluvium	0.4	0.4		0.63	0.63		
GS15	Collaburragundy-Talbragar Alluvium	3.7	3.7		2.76	2.76		
GS16	Cudgegong Alluvium	1.6	1.6		2.54	2.54		
GS17	Eastern Porous Rock: Macquarie-Castlereagh	5.2	5.2		6.20	13.35		
GS18	Eastern Porous Rock: Namoi-Gwydir	10.3	10.3		15.50	15.50		
GS19	Inverell Basalt	2.9	2.9		4.15	4.15		
GS20	Kanmantoo Fold Belt	8.2	27.5		8.91	28.51		
GS21	Lachlan Fold Belt: Lachlan	23.1	23.1		36.89	123.61		
GS22	Lachlan Fold Belt: Macquarie Castlereagh	47.7	47.7		51.16	89.27		
GS23	Lachlan Fold Belt: Murray	5.1	5.1		14.32	31.89		
GS24	Lachlan Fold Belt: Murrumbidgee	30.9	30.9		26.33	133.43		
GS25	Lachlan Fold Belt: Western	1.2	13.0		13.72	230.55		
GS26	Lake George Alluvium	1.1	0.8	31.8	1.30	1.30		
GS27	Liverpool Ranges Basalt	2.7	2.7		2.16	2.16		
GS28	Lower Darling Alluvium	1.4	1.9		1.78	1.78		
GS29	Lower Gwydir Alluvium	32.3	32.3		32.91	32.91		
GS30	Lower Lachlan Alluvium	108.0	64.8	40.0	123.38	117.00		
GS31	Lower Macquarie Alluvium	69.3	41.9	39.5	70.72	70.72		
GS32	Lower Murray Alluvium (Shallow)	40.0	40.0		81.89	81.89		
GS32	Lower Murray Alluvium (Deep)	83.7	83.7		88.83	88.83		
GS33	Lower Murrumbidgee Alluvium (shallow)	280.0	280.0		26.88	26.88		
GS33	Lower Murrumbidgee Alluvium (deep)				273.63	273.63		
GS34	Lower Namoi Alluvium	86.0	75.0	12.8	88.25	88.25		
GS35	Manilla Alluvium	1.9	1.9		0.42	0.42		

SDL Area ID	SDL Area Name	Guide BDL	Guide SDL	Guide % Reduction (BDL-SDL Proposal)	Proposed BDL	Proposed SDL	Volumetric Reduction (CDL-SDL)	% Reduction (BDL-SDL)
GS36	Mid-Murrumbidgee Alluvium	44.0	44.0		48.10	48.10		
GS37	NSW Alluvium above the GAB	1.2	29.0		1.28	22.47		
GS38	NSW Border Rivers Alluvium	6.6	6.6		8.39	8.39		
GS39	NSW Border Rivers Tributary Alluvium	0.5	0.5		1.73	1.73		
GS40	NSW Sediments above the GAB	1.0	46.0		0.92	80.01		
GS41	New England Fold Belt: Border Rivers	3.4	3.4		6.31	15.26		
GS42	New England Fold Belt: Gwydir	4.1	4.1		6.45	22.19		
GS43	New England Fold Belt: Namoi	15.6	15.6		18.33	39.38		
GS44	Orange Basalt	6.9	24.0		10.67	10.67		
GS45	Peel Valley Alluvium	9.3	7.3	21.5	9.34	9.34		
GS46	Upper Darling Alluvium	2.4	4.8		6.72	7.10		
GS47	Upper Gwydir Alluvium	0.8	0.8		0.72	0.72		
GS48	Upper Lachlan Alluvium	77.1	63.0	18.3	94.10	94.10		
GS49	Upper Macquarie Alluvium	13.7	13.7		17.95	17.95		
GS50	Upper Murray Alluvium	11.0	11.0		14.11	14.11		
GS51	Upper Namoi Alluvium	122.1	95.0	22.2	123.40	123.40		
GS52	Upper Namoi Tributary Alluvium	2.0	2.0		0.37	0.37		
GS53	Warrumbungle Basalt	0.5	0.6		0.55	0.55		
GS54	Western Porous Rock	29.3	71.0		48.69	225.90		
GS55	Young Granite	4.3	4.3		7.09	7.09		
GS70	Gunnedah-Oxley Basin	NA	NA		NA	300.00		
GS71	Oaklands Basin	NA	NA		NA	2.50		
	Murrumbidgee Alluvium: Deep Basin Groundwater	NA	NA					
	Australian Capital Territory							
GS56	Australian Capital Territory (Groundwater)	7.3	4.4	39.3	1.70	7.25		
	Queensland							
GS57	Condamine Fractured Rock	2.1	2.1		0.81	2.14		
GS58	Queensland Border Rivers Alluvium	13.4	13.4		13.82	13.82		
GS59	Queensland Border Rivers Fractured Rock	6.8	6.8		10.09	10.96		
GS60	Sediments above the Great Artesian Basin: Border Rivers	0.1	42.0		0.04	28.73		
GS61	Sediments above the Great Artesian Basin: Condamine–Balonne	0.3	5.0		0.66	35.61		
GS62	Sediments above the Great Artesian Basin: Moonie	0.5	9.0		0.10	64.94		
GS63	Sediments above the Great Artesian Basin: Warrego–Paroo–Nebine	1.1	25.4		1.21	197.13		
GS64	St George Alluvium: Condamine–Balonne (shallow)	2.5	40.0		0.77	54.62		
GS64	St George Alluvium: Condamine–Balonne (deep)	7.5	12.6		12.60	12.60		
GS65	St George Alluvium: Moonie	0.5	1.7		0.01	1.37		
GS66	St George Alluvium: Warrego–Paroo–Nebine	0.3	6.5		0.12	49.06		
GS67a	Upper Condamine Alluvium (Central Condamine Alluvium)	117.1	76.8	34.4	81.40	46.00	35.40	43.5
GS67b	Upper Condamine Alluvium (Tributaries)				45.50	40.50	5.00	11.0
GS68	Upper Condamine Basalts	76.1	61.1	19.7	78.96	78.96		
GS69	Warrego Alluvium	0.7	26.6		0.70	19.79		

Attachment B

Current Thinking - possible reductions in Groundwater Diversion Limits (SDLs) based on 2800GL scenario September 2011

SDL Area ID	SDL Area Name	Guide BDL	Guide SDL	Guide % Reduction (BDL-SDL Proposal)	Proposed BDL	Proposed SDL	Volumetric Reduction (CDL-SDL)	% Reduction (BDL-SDL)
	South Australia							
GS 1a	Angas Bremer (Quaternary)	6.5	4.0	38.5	0.00	2.18		
GS 1b	Angas Bremer (Murray Group Limestone)				6.57	6.57		
GS 2	Eastern Mount Lofty Ranges	19.3	33.5		34.69	38.51		
GS 3a	Mallee (Pliocene Sands)	63.4	63.4		0.00	82.84		
GS 3b	Mallee (Murray Group Limestone)				65.73	65.73		
GS 3c	Mallee (Renmark Group)				0.00	2.00		
GS 4	Mallee Border Zone							
GS 5a	Marne Saunders (fractured rock)	4.7	4.7		2.09	2.09		
GS 5b	Marne Saunders (Murray Group Limestone including overlying Quaternary sediments)				2.38	2.38		
GS 5c	Marne Saunders (Renmark Group)				0.50	0.50		
GS 6a	Peake–Roby–Sherlock (unconfined limestone)	5.2	5.2		3.41	3.41		
GS 6b	Peake-Roby-Sherlock (confined strata - Buccleuch formation and Renmark Group)				2.58	2.58		
GS 7	SA Murray (Groundwater)	1.8	19.0		1.80	127.77		
GS 8	SA Murray Salt Interception Schemes	11.1	29.0		11.10	28.63		
	Victoria							
GS 9	Goulburn–Broken Highlands	9.8	9.8		13.92	35.13		
GS 10	Loddon–Campaspe Highlands	9.4	9.4		12.34	16.48		
GS 11	Murray Highlands	4.4	4.4		6.47	6.47		
GS 12	Ovens Highlands	3.2	3.2		4.63	4.63		
GS 13	Ovens–Kiewa Sedimentary Plain	14.7	14.7		24.81	24.81		
GS 14	Victorian Riverine Sedimentrary Plains (deep; Renmark Group and Calivil Formation)	89.6	127.0		193.33	127.00	66.33	34.3
GS 14	Victorian Riverine Sedimentrary Plains (shallow; Shepparton Formation)	83.3	85.0		123.80	123.80		
GS 15	West Wimmera (Loxton Parilla Sands)	0.0	12.0		0.00	22.13		
GS 15	West Wimmera (Murray Group Limestone)	1.9	25.5		25.50	25.50		
GS 15	West Wimmera (Tertiary Confined Sands Aquifer)	0.8	4.0		4.00	4.00		
GS 16	Wimmera–Avoca Highlands	0.2	0.2		1.26	3.02		
GS 17	Wimmera–Mallee Border Zone (Loxton Parilla Sands)	0.0	9.7		0.00	9.37		
GS 17	Wimmera–Mallee Border Zone (Murray Group Limestone)	8.8	14.1		14.10	14.10		
GS 17	Wimmera–Mallee Border Zone (Tertiary Confined Sands Aquifer)		1.1		1.10	1.10		
GS 18	Wimmera–Mallee Sedimentary Plain	0.6	27.0		24.23	236.21		
	New South Wales							
GS 19	Adelaide Fold Belt	3.0	3.3		3.61	5.25		
GS 20	Bell Valley Alluvium	2.2	2.2		2.21	2.21		
GS 21	Belubula Alluvium	1.9	1.9		2.90	2.90		
GS 22	Billabong Creek Alluvium	2.0	6.1		7.50	7.50		
GS 23	Castlereagh Alluvium	0.4	0.4		0.63	0.63		
GS 24	Collaburragundy-Talbragar Alluvium	3.7	3.7		2.76	2.76		
GS 25	Cudgegong Alluvium	1.6	1.6		2.54	2.54		
GS 26	Eastern Porous Rock: Macquarie-Castlereagh	5.2	5.2		6.20	13.35		
GS 27	Eastern Porous Rock: Namoi-Gwydir	10.3	10.3		15.50	15.50		
GS 28	Inverell Basalt	2.9	2.9		4.15	4.15		
GS 29	Kanmantoo Fold Belt	8.2	27.5		8.91	28.51		
GS 30	Lachlan Fold Belt: Lachlan	23.1	23.1		36.89	123.61		
GS 31	Lachlan Fold Belt: Macquarie Castlereagh	47.7	47.7		51.16	89.27		
GS 32	Lachlan Fold Belt: Murray	5.1	5.1		14.32	31.89		
GS 33	Lachlan Fold Belt: Murrumbidgee	30.9	30.9		26.33	133.43		
GS 34	Lachlan Fold Belt: Western	1.2	13.0		13.72	230.55		
GS 35	Lake George Alluvium	1.1	0.8	31.8	1.30	1.30		
GS 36	Liverpool Ranges Basalt	2.7	2.7		2.16	2.16		
GS 37	Lower Darling Alluvium	1.4	1.9		1.78	1.78		
GS 38	Lower Gwydir Alluvium	32.3	32.3		32.91	32.91		
GS 39	Lower Lachlan Alluvium	108.0	64.8	40.0	123.38	117.00		
GS 40	Lower Macquarie Alluvium	69.3	41.9	39.5	70.72	70.72		
GS 41	Lower Murray Alluvium (Shallow)	40.0	40.0		81.70	81.70		
GS 41	Lower Murray Alluvium (Deep)	83.7	83.7		88.83	88.83		
GS 42	Lower Murrumbidgee Alluvium (shallow)	280.0	280.0		26.88	26.88		
GS 42	Lower Murrumbidgee Alluvium (deep)				273.63	273.63		

SDL Area ID	SDL Area Name	Guide BDL	Guide SDL	Guide % Reduction (BDL-SDL Proposal)	Proposed BDL	Proposed SDL	Volumetric Reduction (CDL-SDL)	% Reduction (BDL-SDL)
GS 43	Lower Namoi Alluvium	86.0	75.0	12.8	88.25	88.25		
GS 44	Manilla Alluvium	1.9	1.9		0.42	0.42		
GS 45	Mid-Murrumbidgee Alluvium	44.0	44.0		48.10	48.10		
GS 46	NSW Alluvium above the GAB	1.2	29.0		1.28	22.47		
GS 47	NSW Border Rivers Alluvium	6.6	6.6		8.39	8.39		
GS 48	NSW Border Rivers Tributary Alluvium	0.5	0.5		1.73	1.73		
GS 49	NSW Sediments above the GAB	1.0	46.0		0.92	80.01		
GS 50	New England Fold Belt: Border Rivers	3.4	3.4		6.31	15.26		
GS 51	New England Fold Belt: Gwydir	4.1	4.1		6.45	22.19		
GS 52	New England Fold Belt: Namoi	15.6	15.6		18.33	39.38		
GS 53	Orange Basalt	6.9	24.0		10.67	10.67		
GS 54	Peel Valley Alluvium	9.3	7.3	21.5	9.34	9.34		
GS 55	Upper Darling Alluvium	2.4	4.8		6.72	7.10		
GS 56	Upper Gwydir Alluvium	0.8	0.8		0.72	0.72		
GS 57	Upper Lachlan Alluvium	77.1	63.0	18.3	94.10	94.10		
GS 58	Upper Macquarie Alluvium	13.7	13.7		17.95	17.95		
GS 59	Upper Murray Alluvium	11.0	11.0		14.11	14.11		
GS 60	Upper Namoi Alluvium	122.1	95.0	22.2	123.40	123.40		
GS 61	Upper Namoi Tributary Alluvium	2.0	2.0		0.37	0.37		
GS 62	Warrumbungle Basalt	0.5	0.6		0.55	0.55		
GS 63	Western Porous Rock	29.3	71.0		48.69	225.90		
GS 64	Young Granite	4.3	4.3		7.09	7.09		
GS 79	Gunnedah-Oxley Basin	NA	NA		NA	300.00		
GS 80	Murray Alluvium: Deep Basin Groundwater	NA	NA		NA	20.00		
GS 81	Murrumbidgee Alluvium: Deep Basin Groundwater	NA	NA		NA	20.00		
	Australian Capital Territory							
GS 65	Australian Capital Territory (Groundwater)	7.3	4.4	39.3	1.70	7.25		
	Queensland							
GS 66	Condamine Fractured Rock	2.1	2.1		0.81	2.14		
GS 67	Queensland Border Rivers Alluvium	13.4	13.4		13.82	13.82		
GS 68	Queensland Border Rivers Fractured Rock	6.8	6.8		10.09	10.96		
GS 69	Sediments above the Great Artesian Basin: Border Rivers	0.1	42.0		0.04	28.73		
GS 70	Sediments above the Great Artesian Basin: Condamine–Balonne	0.3	5.0		0.66	35.61		
GS 71	Sediments above the Great Artesian Basin: Moonie	0.5	9.0		0.10	64.94		
GS 72	Sediments above the Great Artesian Basin: Warrego–Paroo–Nebine	1.1	25.4		1.21	197.13		
GS 73	St George Alluvium: Condamine–Balonne (shallow)	2.5	40.0		0.77	54.62		
GS 73	St George Alluvium: Condamine–Balonne (deep)	7.5	12.6		12.60	12.60		
GS 74	St George Alluvium: Moonie	0.5	1.7		0.01	1.37		
GS 75	St George Alluvium: Warrego–Paroo–Nebine	0.3	6.5		0.12	49.06		
GS 76a	Upper Condamine Alluvium (Central Condamine Alluvium)	117.1	76.8	34.4	81.40	46.00	35.40	43.5
GS 76b	Upper Condamine Alluvium (Tributaries)				45.50	40.50	5.00	11.0
GS 77	Upper Condamine Basalts	76.1	61.1	19.7	78.96	78.96		
GS 78	Warrego Alluvium	0.7	26.6		0.70	19.79		
GS 82	Bowen Basin	NA	NA		NA	400.00		

Attachment C.1

MDBA
Current thinking - possible reductions in surface water diversion limits (SDLs) based on 2800GL scenario
September 2011

• These numbers reflect the Authority's current thinking drawing on assessments of environmental water requirements and social and economic considerations. The assessment of environmental outcomes is based on a detailed hydrological indicator approach and modelling the flows in river systems under current constraints. This approach is very different from the end of system flow analysis that was used to the derive the numbers in the Guide.

• The scenario is based on an additional 2800 GL being provided, on average, to the environment (relative to 2009 arrangements and noting that approximately 890 GL has already been recovered since 2009 ie. there is approximately 1900 GL left to recover). The modelling already factors in that approximately 980 GL was recovered in the five years between 2004-09.

• The Authority is continuing to discuss the numbers with stakeholders and we're also undertaking sensitivity analysis, modelling recoveries of 3200 GL and 2400 GL.

• The Authority will continue discussing its proposals for the draft Basin Plan over the next couple of months and when the draft plan is released in November 2011.

	SDL Resource Unit/Catchment	Watercourse Diversions (GL)	Total reduction incl shared reduction (GL)	Shared Reduction (GL)	Local Reduction (GL)	Local Reduction (%)	Existing Recovery (GL)	Remainder of local redn (GL)	Remainder of local redn (%)	Contribution to shared reduction (GL)	Existing Recovery (GL) as at Mar 2011	Residual Reduction (GL)
		NOTE 1					NOTE 2					
Northern Basin	Paroo	0		NA	-	0%	-	-	0%			
	Warrego	45		NA	8	18%	8	-	0%			
	Intersecting streams	3		NA	1.5	50%	1.5	-	0%			
	Gwydir	326		NA	52	16%	52	-	0%			
	Nebine	6		NA	1	17%	1	-	0%			
	Condamine-Balonne	706			150	21%	6	144	20%			
	Moonie	32	**450**		1	3%	1	-	0%		**170**	**280**
	Namoi	343			10	3%	5	5	1%			
	Macquarie-Castlereagh	425			65	15%	84	-	0%	19		
	Queensland Border Rivers	223		140.5	8	3%	3	5	2%			
	NSW Border Rivers	210			7	3%	-	7	3%			
	Border Rivers - Total	*433*			*15*	*3%*	*3*	*12*	*3%*			
	Barwon-Darling	197			6	3%	8	-	0%	2		
Southern Basin	Ovens	25			-		-	-	0%			
	Goulburn	1,593			344	22%	154	190	12%			
	Broken	14			-	-	-	-	-			
	Goulburn-Broken - Total	*1,607*			*344*	*21%*	*154*	*190*	*12%*			
	Loddon	95			12	13%	2	10	11%			
	Campaspe	115			18	16%	29	-	0%	11		
	Murrumbidgee - NSW	2,061			320	16%	89	231	11%			
	ACT	40		972	-	-	-	-	-			
	Murrumbidgee - Total	*2,101*	**2290**		*320*	*15%*	*89*	*231*	*11%*		**675**	**1615**
	Kiewa	11			-	-	-	-	0%			
	EMLR	-			-	-	-	-	-			
	NSW Murray	1,721			262	15%	182	80	5%			
	Victorian Murray	1,656			253	15%	161	92	6%			
	SA Murray	665			101	15%	57	44	7%			
	Murray - Total	*4,042*			*616*	*15%*	*400*	*216*	*5%*			
	Lower Darling	55			8	15%	0	8	14%			
	Marne Saunders / SA Non Prescribed	-		NA	-	-	-	-	-			
Dis-connected Tributaries	Lachlan	302	**60**	NA	47	16%	47	-	0%		**47**	**13**
	Wimmera-Avoca	74		NA	13	18%	-	13	18%			
TOTAL		**10,943**	**2,800**	**1,113**	**1,687**	**15%**	**892**	**828**	**8%**	**32**	**892**	**1,908**

NOTES:
1. Watercourse diversions under the Baseline Diversion Limit - arrangements as at 30 June 2009 under conditions from 1895 to 2009
2. Existing recovery includes Commonwealth buybacks and infrastructure investments to 31 March 2011 and water recovered under State programs

Reduction (water course divs) =	26%	10%	15%
Reduction (total divs incl intercptn) =	20%	8%	12%

State	Watercourse Diversions (GL)	Total reduction incl shared reduction (GL)	Shared Reduction (GL)	Local Reduction (GL)	Local Reduction (%)	Existing Recovery (GL)	Remainder of local redn (GL)	Remainder of local redn (%)
Queensland	1,012			168	17%	19	149	15%
New South Wales	5,643			779	14%	469	331	6%
ACT	40			-	0%	-	-	0%
Victoria	3,583			640	18%	347	305	8%
South Australia	665			101	15%	57	44	7%
TOTAL	**10,943**	**2,800**	**1,113**	**1,687**	**15%**	**892**	**828**	**8%**

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Answers to questions on notice

Sustainability, Environment, Water, Population and Communities portfolio

Supplementary Budget Estimates, October 2011

Program: Division or Agency:	4: MDBA	**Question No:**	135
Topic:	Environmental watering needs of the Basin		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Hanson-Young asked:

1. The Authority is using hydrological indicator site methodology to estimate the environmental watering needs of the Basin's key environmental assets and ecological functions. What evidence has the Authority obtained to validate the assumption that the broader environmental watering needs of the Basin are represented by the indicator sites?

Answer:

The hydrological indicator sites have been chosen by the Authority on the basis that they are representative of the hydrological requirements of a particular part of the Basin, this includes all parts of the flow regime from base-flows through to overbank flows as well as changes along the length of the system. Sites were selected on the basis of:

- The ability of a site to be representative of the water requirements of a broader reach of river at the macro scale. Hydrologic indicator sites should be able to inform water sharing across the region as a whole, with a preference toward large, water dependent ecosystems near the end of river valleys where water requirements are an expression of valley-wide flow processes;
- The spatial distribution of sites across the Basin to represent coarse scale changes in physical and hydrological characteristics. Changes in flow interact with the habitat characteristics of ecosystems and the environmental water requirements for ecological communities and the processes that support them. Consequently, where the flow regime changes dramatically along rivers, hydrologic indicator sites have been selected to represent these change points. For the Murray in particular (and to a lesser extent the Barwon-Darling and Murrumbidgee) hydrologic indicator sites have been distributed along the river to capture key changes in flows associated with hydrology (predominantly tributary inflows);
- The ability of a site to provide assessments of priority parts of the flow regime, from a volumetric perspective; and
- The quality of information available to support a detailed assessment of environmental water requirements.

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Supplementary Budget Estimates, October 2011

Program: Division or Agency:	4: MDBA	**Question No:**	136
Topic:	Delivering environmental flows		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Hanson-Young asked:

1. Has the Authority modeled the environmentally sustainable level of take prior to factoring in the impact of system constraints on the feasibility of delivering environmental flows?

Answer:

1. The Murray–Darling Basin Authority has modelled the reductions in diversions along with the allocation and delivery of environmental water within the current river management practices. This includes all operational/system constraints present within current river management practices.

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Sustainability, Environment, Water, Population and Communities portfolio

Supplementary Budget Estimates, October 2011

Program: Division or Agency:	4: MDBA	**Question No:**	137
Topic:	System constraints in the Basin		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Hanson-Young asked:

1. Please provide a complete list of the system constraints that were factored into the Authority's modeling and the hydrological impacts and ecological consequences of each constraint.
2. Has the Authority investigated how these system constraints could be overcome to improve the environmental outcomes of the Basin Plan?

Answer:

1. The system constraints are included from page 45 of the Environmentally Sustainable Level of Take report which is available on the Murray-Darling Basin Authority (the Authority) website.

2. The Authority has modelled the reductions in diversions along with the allocation and delivery of environmental water within the current river management practices. This includes all operational/system constraints present within current river management practices. It is not within the scope of the proposed Basin Plan to require these operational/system constraints be changed.

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Supplementary Budget Estimates, October 2011

Program: Division or Agency:	4: MDBA	**Question No:**	138
Topic:	CSIRO review of "Ecologically Sustainable Level of Take" method for the Basin Plan		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Hanson-Young asked:

1. The Authority has commissioned CSIRO to lead a Review of its "Ecologically Sustainable Level of Take" Method for the Basin Plan. A draft review report was presented to the Authority earlier in the year. What were the findings in the draft and how have they been incorporated in the Authority's development of a Draft Basin Plan since then?

Answer:

1. On 26 July 2011, a preliminary draft of the Science Review of the Estimation of an Environmentally Sustainable Level of Take for the Murray-Darling Basin was provided to the Murray-Darling Basin Authority (MDBA) Board.

The final report will be made available during the consultation period on the proposed Basin Plan and the MDBA will ensure that relevant forums are established so that the review and methods can be considered by the broader science community and other interested parties.

The MDBA have incorporated the immediate recommendations made by the science reviewers in their current work, which focus on clearly documenting the methodology undertaken to determine the Environmentally Sustainable Level of Take.

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Program: Division or Agency:	4: MDBA	**Question No:**	139
Topic:	Sustainable diversion limits		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Hanson-Young asked:

1. How has the Authority's methodology for calculating groundwater SDLs changed since the Guide, and how has this impacted on the SDL volumes to be proposed in the Draft Basin Plan?
2. Is the Authority confident that the SDL scenario of returning an additional 2,800GL to the environment will meet the requirements of the Water Act 2007, particularly in relation to the key environmental assets of the Lower Murray floodplain?
3. When did the Murray Darling Basin Authority begin modelling a 2800 gigalitre sustainable diversion limit? Does this volume of water provide low, medium or high levels of protection to the basins key environmental assets – like the Coorong, Lower Lakes and Chowilla?
4. Has the MDBA assessed the impacts of a 2800 GL sustainable diversion limit on the water quality of the Murray in South Australia? Can I obtain copies of these assessments?
5. Why is the MDBA not modelling a sustainable diversion limit of 4000 GL? Are there any constraints on the MDBA being able to model this figure before the final MDB Plan is completed?
6. Can the Authority clearly outline who will be benefit from the modelling based on 2800? At this stage can you outline the benefits and the risks?
7. The authority is apparently now using groundwater SDL figures which represent an increase in extraction in the vicinity of 800GL/year. This compared with a much more minor growth that was proposed in the Guide. What is the rationale behind this?

Answer:

1. There have been a number of factors that have changed within the methodology that the Murray-Darling Basin Authority (the Authority) used to calculate groundwater Sustainable Diversion Limits (SDLs), however the overall methodology has not changed. These changes have lead to an increase in the Basin wide groundwater SDL. The rationale for the changes to the groundwater SDLs has come about through the supply of updated information from the states and changes to the Authority's consideration of a number of groundwater issues. The additional updated information relates to current levels of entitlement and its distribution, stock and domestic consumption, SDL area boundaries, new groundwater models, recharge estimations, and the connectivity between surface and groundwater in a number of areas.

The issues that the Authority has considered and changed since the Guide are the:

- inclusion of aquifers not included in the Guide (deep groundwater resources);
- updated and improved data on current levels of extraction;
- potential baseline groundwater diversion limit;
- assessment of the extent to which identified aquifers can sustain additional extraction; and
- consideration of existing and proposed state based reduction schemes.

The effect of these changes is an overall increase in the Basin wide groundwater SDL.

2. The Authority is of the view the proposed scenario in the draft plan will meet the requirements of the Act.

3. The Authority has spent much of the time since the release of the Guide to the Proposed Basin Plan, developing improved techniques for assessing reductions in diversions against the environmental watering objectives for the indicator sites set out in the Guide to the Proposed Basin Plan Volume 2 Part 2, with revision of this work having been undertaken since this time in some cases. The Authority commenced specific modelling of a diversion reduction of 2,800 GL in May 2011. In the 2,800 GL model scenario the Authority assessed the success in achieving both the high uncertainty and low uncertainty targets associated with each objective for each of the indicator sites including Coorong, Lower Lakes and Chowilla.

4. The hydrological modelling undertaken by the Authority of the Murray includes assessment of salinity levels in the Murray River, however only those related to the salinity of the Coorong are being assessed against the environmental water requirements in the hydrological indicator site method. The details of the assessment are available in the Environmentally Sustainable Level of Take report that was published on 28 November 2011 at the same time as the release of the proposed Basin Plan.

5. The recent hydrological modelling undertaken by the Authority has not included an assessment of a 4,000 GL reduction in diversions using the hydrological indicator site method. The development of a complete modelled scenario for any alternative reduction in diversions takes approximately 8 weeks to complete. The Authority has modelled a 3,200 GL reduction and this work has shown that system constraints (physical and operating rules) limit the ability for higher reduction volumes to improve the achievement of environmental objectives.

6. The description of the benefits and risks of the proposed SDLs is set out in the accompanying documentation for the proposed Basin Plan which was released for public consultation on 28 November 2011.

7. See answer to Question 1.

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Supplementary Budget Estimates, October 2011

Program: Division or Agency:	4: MDBA	**Question No:**	140
Topic:	Establishment of the environmental water plan		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Hanson-Young asked:

1. Did the Authority use 'best available science' (as required in the Water Act) in establishing the environmental watering plan, the water quality and salinity management plan and the SDLs? Where is the evidence of that? Was the exact methodology peer reviewed? What about 2,800 GL being proposed? Where is the peer review of that?

Answer:

1. Evidence for use of best available science

Yes, best available science was used in preparing the proposed Basin Plan. Gathering evidence involved examining existing scientific knowledge and data, as well as using the expertise of national and international scientists to undertake studies and provide peer review. This included using information from over 1,500 scientific reports, peer-reviewed journal articles and current datasets. This information is available on the *Basin Plan Knowledge and Information Directory* (BPKID), which is accessible on the Murray–Darling Basin Authority (the Authority) website.

Peer review of methodology

Yes, peer review processes have included examining the methodologies used in preparing the proposed Basin Plan. In the case of the 2,800GL reduction scenario, the Authority invited CSIRO in June 2011 to lead a review how the hydrological indicator sites method has been applied to determine the sustainable level of diversion in the Basin. The CSIRO review report has been made available during the consultation period of the proposed Basin Plan. The Authority will also ensure that relevant forums are established so that the review methods can be considered by the broader science community and other interested parties.

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Supplementary Budget Estimates, October 2011

Program: Division or Agency:	4: MDBA	**Question No:**	141
Topic:	Goyder report		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Hanson-Young asked:

1. Why is it that peer reviewed, published, recent work like the Goyder Report says it will need 4,000 GL to properly export salt from the Basin and protect the ecological assets at Chowilla and the Coorong, Lower Lakes and Murray Mouth and yet the MDBA is proposing that 2,800 GL will be adequate? Why are these numbers so different?

Answer:

1. The Goyder review reflects the modelling and policy settings set out in the Guide to the Basin Plan. The Authority has significantly improved the hydrologic modelling assessments since the release of the Guide to the Basin Plan. As such, the daily flow sequences represented by the Basin Plan scenarios analysed by Goyder Institute for Water Research contained several limitations including:

- Inefficient scheduling of environmental water, in particular that it did not try to sequence environmental watering actions to inundate multiple sites with the one event and therefore make best use of the water available.
- Environmental watering actions were given priority and were delivered with no consideration of storage volumes and the needs of other users. In doing so the modelling process had significant impacts on irrigation reliability and did not reflect Held Environmental Water.
- There was insufficient consideration of operational/system constraints.

Recognising the above, and consistent with feedback received during the Guide consultation phase, the Authority has revised both the modelling approach and the key policy settings which underpin the determination of SDLs. Consistent with existing time frames the Authority has developed and applied an approach which:

- clearly links SDLs and environmental outcomes;
- identifies underpinning assumptions; and
- determines environmental watering actions that are operationally feasible and consistent with physical constraints.

There are a range of environmental demands set out in the Goyder report, some of these are considered to be beyond what can be achieved within the current policy settings such as, managing water for the environment as held environmental water, and delivering water within the normal operational constraints of the regulated river system.

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Program: Division or Agency:	4: MDBA	**Question No:**	142
Topic:	Modelling increments		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Hanson-Young asked:

1. Why did the MDBA choose to model 2400 and 3200 GL in 400 gigalitre increments? Why have other numbers not been modelled?

Answer:

1. There has been significant work undertaken that has contributed to final modelling scenarios undertaken to support the proposed Basin Plan. Based on the knowledge gained in undertaking this work, the Authority expected that an increment of 400GL above and below the reduction being considered would be sufficiently large to test the sensitivity of outcomes to a larger or smaller reduction in diversions.

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Program: Division or Agency:	4: MDBA	**Question No:**	143
Topic:	Economic viability of irrigation industries		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Hanson-Young asked:

1. Has the MDBA assessed the impact on non-water related trends in the economic viability irrigation industries (such as enterprise consolidation, non-water input costs such as fertiliser and fuel, pricing and global market access) within the Murray Darling Basin? Can I obtain copies of these assessments?

Answer:

1. In reaching its assessment of the likely social and economic impacts of the Basin Plan, the Murray-Darling Basin Authority (the Authority) has considered the economic context of the agricultural sector in Australia generally, and in the Murray Darling Basin specifically. This has included analysis of trends such as strong historical productivity growth in agriculture, the declining terms of trade, demographics, debt levels, and commodity prices.

The results of the Authority's analysis were made public along with the proposed draft Basin Plan, particularly Chapter 2: The social and economic context of *Socioeconomic analysis and the draft Basin Plan: Part A – Overview and analysis*, which is available on the Authority's website.

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Program: Division or Agency:	4: MDBA	**Question No:**	144
Topic:	Ramsar wetlands commitments		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Hanson-Young asked:

1. Is the Authority looking at redefining its Ramsar wetlands commitments by lowering targets from 80% to 60%?.

Answer:

1. The Murray-Darling Basin Authority does not have "RAMSAR wetlands commitments" of 80 per cent.

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Program: Division or Agency:	4: MDBA	**Question No:**	145
Topic:	Basin plan proposals		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Hanson-Young asked:

1. Can the Authority nominate a 'base case' that it is pursuing or are its current proposals contingent on distinct regions?

Answer:

1. The proposed Basin Plan sets out the objectives and outcomes to be achieved by the Basin Plan across the Basin. These include overall objectives, as well as objectives and outcomes in relation to outcomes for water dependent ecosystems, water quality and salinity outcomes, long term average sustainable diversion limits and the trading of tradable water rights.

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Supplementary Budget Estimates, October 2011

Program: Division or Agency:	4: MDBA	**Question No:**	146
Topic:	Social and Economics References Committee		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. I note that on 1 March 2011 it was decided to "discontinue the establishment of the Social and Economic Reference Committee." Why was that decision made given that one of the criticisms of the Guide was that it did not take into account economic and social factors enough?
2. At the next meeting on 5 April 2011 the minutes state that "Members noted the concerns of nominees of the proposed Social and Economic Reference Committee at the disbandment of the Committee … ". What were these concerns and have they been addressed in any way?

Answer:

1-2. Section 203 of the *Water Act 2007* (Cth) enables the Murray-Darling Basin Authority (the Authority) to establish advisory committees to assist it in performing any of its functions.

One committee proposed under section 203 was a Social and Economic Reference Committee. However, a number of operational arrangements were reviewed following the appointment of the new Chair of the Authority in early 2011. As part of those arrangements, two working groups were formed to provide additional expert input into the development of the proposed Basin Plan. A considerable program of analysis into the potential social and economic impacts of the proposed Basin Plan was also underway at the time. This work built on the extensive analysis already undertaken for the release of the Guide and is continuing as the Authority moves towards release of the draft Basin Plan. Consequently, after considering its overall needs, the Authority decided that, rather than form a Social and Economic Reference Committee, it would put in place a broader program of engagement with community leaders, academics and State and Commonwealth officials on social and economic issues.

Stakeholders have been involved in a range of workshops and meetings addressing aspects of the social economic analysis including ecological response and valuation, the social implications of the Basin Plan and economic modelling and costs analysis. All but one of the original nominees to the Social and Economic Reference Committee participated in those workshops and meetings.

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Program: Division or Agency:	4: MDBA	**Question No:**	147
Topic:	Responding to media requests		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. At the meeting on 5 April it was decided that non-executive board members should seek clearance from the Chair or the Chief Executive, rather than the media unit as previously agreed, before responding to media requests, but that they should also check with the media unit in case there were any matters that they needed to be aware of. Did all board members agree with this decision?
2. How many requests from non-executive board members have been made to the Chair to request media appearances? Have any requests been rejected by the Chair?

Answer:

1. Yes.

2. There has been one request from a non-executive board member, which was agreed.

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Program: Division or Agency:	4: MDBA	**Question No:**	148
Topic:	Governance structures		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. On 3 May 2011 the minutes note that:

The Secretary stated that, in his review of governance arrangements and the management of risk through current governance structures, it had emerged that written disclosures of conflicts of interest had not been completed by most Authority members for 2011. The Authority's own protocols (adopted on 1 February 2010, and reflecting the requirement of the Water Act 2007) required a written disclosure to be made on an annual basis, and as individual member's circumstances changed. The Chair therefore requested that all members provide a current written disclosure of conflicts of interest as soon as convenient.

Have all board members now disclosed conflicts of interests? Were these matters outstanding when the Guide was released last year?

Answer:

1. Yes. Some matters were outstanding when the Guide was released insofar as it related to providing any updated written disclosures on an annual basis, as agreed under the Conflict of Interest Policy adopted on 1 February 2010.

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Program: Division or Agency:	4: MDBA	**Question No:**	149
Topic:	MDBA - Expenditure on Basin Plan		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. How much has the Authority spent on the Basin plan to date?
2. How much does the Authority expect to spend on the Basin plan over the next financial year?

Answer:

1. During the period September 2008 to 31 October 2011 the Authority has spent $74.5 million on the Basin Plan functions, including contributing to the corporate overheads of the Authority.
2. The Authority expects to spend approximately $45.4 million on the Basin Plan functions (including contributing to the corporate overheads of the authority) in 2011-12.

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Program: Division or Agency:	4: MDBA	**Question No:**	150
Topic:	Basin Plan Staff		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. How many staff does the Authority have working on the Basin plan?

Answer:

1. As at 31 October 2011, the Murray-Darling Basin Authority (the Authority) had 140 staff working on the Basin Plan function across the Authority.

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Program: Division or Agency:	4: MDBA	**Question No:**	151
Topic:	Basin Community Committee		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. Have applications closed for the second term of the Basin Community Committee? How many applications have been received?

Answer:

1. Yes and 66 applications were received.

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Program: Division or Agency:	4: MDBA	**Question No:**	152
Topic:	Briefings given by MDBA to the Minister		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. Could you please provide the Committee with a list of the briefings the MDBA has given to the Minister for Water or his staff, and the Prime Minister, or her staff, in the last 3 months?

Answer:

1. The Murray-Darling Basin Authority (MDBA) has provided a total of seven briefings to the office of the Minister for Sustainability, Environment, Water, Population and Communities in the last three months to 18 October 2011. Details are as follows:

- Myth and the Murray - Management Of The Lower Lakes;
- Australian National Audit Office (ANAO) Report: Confidentiality in Government Contracts: Senate Order for Departmental and Agency Contracts (2010 Calendar Year);
- MDBA - Engagement and Communications Activities Leading up to the Release of the Draft Basin Plan;
- MDBA Report - Social Assessment of the Lower Murray 2011. Life After Less Water;
- Outcomes from Murray-Darling Basin Authority Meeting 35 - 6 September 2011;
- MDBA - Certificate of Compliance 2010-11; and
- MDBA - Release of Report - Benefits and Costs of the Proposed Basin Plan.

The MDBA has not provided any briefings to the Prime Minister, or her staff, in the last 3 months.

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Program: Division or Agency:	4: MDBA	**Question No:**	153
Topic:	Records of decisions made by the MDBA		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. Could the Authority please provide this Committee with all the decisions it has made since 3 May in accordance with Section 198 of the Water Act which requires the Authority to keep records of all of its decisions?

Answer:

1. No decisions have been made in accordance with Section 198 of the Water Act between 3 May 2011 and 18 October 2011.

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Supplementary Budget Estimates, October 2011

Program: Division or Agency:	4: MDBA	**Question No:**	154
Topic:	Minutes of meetings from 3 May 2011		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. Could you please provide the minutes to any of the meetings the Authority has held since 3 May 2011?

Answer:

1. See the answer to Question on Notice number 124.

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Program: Division or Agency:	4: MDBA	**Question No:**	155
Topic:	Communications of MDBA with Federal and state governments		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. What communications has the MDBA had since the release of the Guide with state and federal governments regarding the timetable for implementation of the Plan? Please provide lists of and copies of all relevant correspondence and meetings.

Answer:

1. The timetable for implementation of the plan has been discussed with state and federal governments in a number of forums. The Basin Plan Working Group (BPWG) (chaired by the Murray-Darling Basin Authority with representatives from each jurisdiction) has been the primary forum for communication on the timetable for implementation of the Basin Plan.

The timetable for implementation has been discussed at the following BPWG meetings:

- BPWG 1, 27 June 2011;
- BPWG 2, 15 July 2011;
- BPWG 4, 11 August 2011;
- BPWG 5, 1 September 2011;
- BPWG 7, 21 September 2011;
- BPWG 8, 5 October 2011; and
- BPWG 9, 13 October 2011.

The timetable for implementation was also discussed in bilateral meetings held with the state governments on the following dates:

- Victoria, Tuesday 16 August 2011;
- New South Wales, Wdnesday 17 August 2011;
- Queansland, Thursday 18 August 2011;
- South Australia, Tuesday 23 August 2011;
- Commonwealth, Thursday 25 August 2011;
- Commonwealth, Monday 29 August 2011;
- Australian Capital Territory, Tuesday 6 September 2011;
- Victoria, Wednesday 7 September 2011;
- South Australia, Wednesday 7 September 2011;
- Queansland, Friday 9 September 2011; and
- New South Wales, Thursday 15 September 2011.

The timetable for implementation has also been raised at the Senior Officials on Water Reform meetings of:

- 15 August 2011;
- 8 September 2011; and
- 6 October 2011.

The timetable for implementation has also been raised at the Ministerial Forum meetings of:

- 1 July 2011;
- 19 August 2011; and
- 7 October 2011.

In addition the timetable for implementation is also on the agenda for the Legislative and Governance Forum on the Murray Darling Basin (formerly Murray Darling Basin Ministerial Council) meeting to be held on 4 November 2011.

The timetable for implementation has also been discussed in a number of letters from the chair to the basin jurisdictions. These comprise:

- Letter to Minister Nolan of 29/09/2011 (**Attachment A**);
- Letter to Minister Walsh of 29/09/2011 (**Attachment B**); and
- Letter to Minister Hodgkinson of 29/09/2011 (**Attachment C**).

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Attachment A

Australian Government

MURRAY–DARLING BASIN AUTHORITY

Craig Knowles
Chair

TRIM Ref: D11/26503

Hon Rachel Nolan MP
Minister for Natural Resources
GPO Box 661
Brisbane QLD 4000

Dear Minister Nolan

As a follow up to my response to you on 10 August 2011, please find below further information addressing some of the matters you raised in your letter dated 3 August 2011 concerning the draft Basin Plan.

I appreciate the support you have expressed for the Murray-Darling Basin reform process, and for the Authority's decision to delay the release of the draft Basin Plan to allow more time to work through key issues with the jurisdictions.

I note your primary concern relates to the proposed sustainable diversion limit (SDL) for the Condamine-Balonne and the potential social and economic impacts this may have. I acknowledge that the proposed reduction in the Condamine-Balonne is significant and that it is important the Authority provides a sound scientific basis for its proposal. To this end, the Authority is preparing a suite of reports on the assessment of environmental water requirements, and the modelling and associated science base for the proposed sustainable diversion limits (SDLs), which . The reports are being progressively provided to states for consultation as they are available. These issues are still under active consideration by the Authority, and I understand that ongoing discussions are taking place at the officer level.

With regard to your concerns about the social and economic impacts of the draft Basin Plan, the Authority has commissioned a number of studies examining the potential impact of the draft Basin Plan on communities and their economies. The Authority recognises that impacts of the proposed reductions will not be distributed evenly across the Basin and is working to identify opportunities to address the impacts on communities. These opportunities may include how environmental water is acquired and delivered, approaches to environmental works and measures, river operations and river management, and water markets and trading.

The work taking place through the Basin Strategy Working Group, being convened by the Department of Sustainability, Environment, Water, Population and Communities to consider broader approaches to supporting communities in the Basin, is also critical to this discussion, as is the time allowed for adjustment by the pathway for implementing Basin Plan from 2012 to 2019. You will recall the timeframe for commencing the elements of the Basin Plan was discussed at the 19 August Ministerial Forum, and that further work on the transitional pathway will be progressed through that Forum.

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I note your concerns regarding the level of prescription in the draft Basin Plan and what might best sit in supporting instruments or guidelines. I agree this is an important issue and one that is being considered by the Basin Plan Working Group. I understand that the Working Group has agreed to a set of principles for deciding the level of detail that should be in the Basin Plan, as a precursor to moving some material from the statutory Plan to a non-statutory companion document.

I would like to take the opportunity to respond to the letter of 17 June from the then Minister, the Honourable Kate Jones, concerning Queensland's approach to localism. I welcome the advice on Queensland's approach to engaging at the local and regional level and have asked Authority staff to work closely with Queensland officers to develop a strong program for local engagement.

I look forward to working constructively with Queensland in the coming months as we finalise the draft Basin Plan.

Yours sincerely

Craig Knowles
Chair

19/2011

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Attachment B

Australian Government | MURRAY–DARLING BASIN AUTHORITY

Craig Knowles
Chair

TRIM Ref: D11/26505

Hon Peter Walsh MLA
Minister for Water
GPO Box 4440
Melbourne Victoria 3001

Dear Minister Walsh

Thank you for your letter of 26 July 2011 following up on our discussion about the draft Basin Plan. In addition to my initial response dated 10 August 2011, please find below further information addressing some of the matters you have raised.

I appreciate your acknowledgement of the Authority's new approach to involving the states in developing the Basin Plan, including through the Basin Plan Working Group. I also note your statement that you are receptive to a delay in the release of the draft Basin Plan, to allow more time to work through the issues you raise in your letter.

I note your primary concern is about the social and economic impacts that the proposed sustainable diversion limits (SDLs) could have on Victorian communities. The Authority has commissioned a number of studies examining the potential impact of the draft Basin Plan on communities and their economies. Whilst it is evident from these studies that the costs to the Basin may be small overall, the impacts of the proposed reductions will not be distributed evenly across the Basin.

The Authority is working to identify opportunities to address the impacts on communities. This may include how environmental water is acquired and delivered, approaches to environmental works and measures, river operations and river management, and water markets and trading. The work taking place through the Basin Strategy Working Group being convened by the Department of Sustainability, Environment, Water, Population and Communities on broader approaches to supporting communities in the Basin is also critical to this discussion, as is the time allowed for adjustment by the pathway for implementing the Basin Plan from 2012 to 2019. As you will recall, the timeframe for commencing of various elements of the Basin Plan was discussed at the 19 August Ministerial Forum, and further work on the transitional pathway for implementing the Basin Plan will be progressed through that Forum.

I note your concerns about the process for managing the unassigned downstream component of the SDLs. The objective of shared reductions is to provide more flexibility in recovering water. This will help to reduce social and economic impacts, as water will be sold from areas where it has a lower economic value.

In relation to your request that the Department of Sustainability and the Environment (DSE) be provided with the opportunity to fully understand the methodology underpinning the Authority's approach to determining the SDLs, I agree this is important. To this end, the Authority is preparing a suite of reports on the assessment of environmental water requirements, and the modelling and associated science base for the proposed sustainable

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diversion limits (SDLs). These reports are being progressively provided to states for consultation as they are available.

With regards to the proposed recovery targets for the Victorian Riverine Sedimentary Plain groundwater system, Authority staff met DSE on 19 August 2011 to discuss this and other issues including the arrangements for the boundaries of the Authority's groundwater resource units. The outcomes of this meeting included a way forward on the boundary issues and agreement to follow up on the Sedimentary Plain issue in the near future.

I look forward to working constructively with you in the coming months as we finalise the draft Basin Plan.

Yours sincerely

Craig Knowles
Chair

/ 9/2011

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Attachment C

Australian Government | MURRAY–DARLING BASIN AUTHORITY

Craig Knowles
Chair

TRIM Ref: D11/26504

Hon Katrina Hodgkinson MP
NSW Minister for Primary Industry
NSW Minister for Small Business
Level 30, Governor Macquarie Tower
1 Farrer Place
Sydney NSW 2000

Dear Minister Hodgkinson

In addition to my response to you on 10 August 2011, please find below further information addressing some of the matters raised in the letter dated 20 July 2011 from Commissioner David Harriss, and in our meeting of 18 July 2011 concerning the draft Basin Plan.

I agree it is important that the methodology for determining environmental water requirements and sustainable diversion limits (SDLs) be clearly explained. To this end, the Authority is preparing a suite of reports on the assessment of environmental water requirements, and the modelling and associated science base for the proposed SDLs. These reports are being progressively provided to states for consultation as they are completed.

I understand the Authority provided a paper to jurisdictions at a workshop on 6 May 2011 which gives background on the studies used and the methodologies applied in estimating impacts of interception activities for the Guide. The paper also provided information on more recent studies that may assist in improving the estimation of the impact of interception activities for the draft Basin Plan. The Authority is currently undertaking further work to improve interception estimations and I would welcome any input you may have regarding estimating the impact of interception activities.

I note your concerns about the process for applying SDL reductions. The objective of shared reductions is to provide more flexibility in recovering water. This will help to reduce the social and economic impact, as water will be sold from areas where it has a lower economic value.

With regards to your specific concerns about groundwater, the Authority has now received additional information from NSW regarding the NSW Porous and Fractured Rock groundwater systems. Following discussions at officer level, the NSW proposal is now under consideration by Authority staff.

In relation to the timing for commencement of the Basin Plan, following discussions at the Ministerial Forum on 19 August 2011, further work on the transitional pathway for implementing the Basin Plan is now underway and will be progressed through the Basin Plan Working Group. A key objective of the pathway will be to smooth the adjustment process and market impacts through progressive implementation of reforms over the period from commencement of the Basin Plan until 2019, and to provide certainty of process and outcomes for water users and the wider public.

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The Authority is considering a number of changes to the Environmental Water Management Plan as a result of feedback received from jurisdictions. In particular, the targets by which to measure progress towards the objectives are being reconsidered, along with changes to the management framework for environmental water to simplify and limit the obligations for long-term planning and promote opportunities for adaptive management. This includes linking long-term plans to priority assets and functions, and moving some content from the proposed legislative instrument to accompanying guidelines. These matters are still under active consideration by the Authority and proposed changes will be provided to the Basin Plan Working Group in the near future.

The water quality objectives and targets proposed in the draft Basin Plan have been developed following procedures endorsed by jurisdictions through the National Water Quality Management Strategy. These objectives and targets are being refined and I appreciate the specific advice recently received from NSW on a better way to provide for targets for raw water. Some other aspects of water quality targets are being discussed and developed through the Basin Plan Working Group. Through this process, I am confident that a set of water quality objectives and targets can be agreed that are realistic, achievable and meet the requirements of the Water Act and the States. Changes proposed to the water resource plan requirements will also allow for alternative, state developed targets in place of the targets in the Basin Plan.

With respect to the relationship between SDLs and environmental works and measures, the issue of assessing the impact of works and measures on SDLs is currently the subject of discussions involving all jurisdictions, including via a recent full day workshop on 31 August 2011.

Finally, I note your view regarding more time to allow the inter-jurisdictional Basin Plan Working Group to work through these issues before the draft Basin Plan is released. As you know, the Authority has extended the release date of the Basin Plan and I look forward to working constructively with you in the coming months to finalise the draft Basin Plan.

Yours sincerely

Craig Knowles
Chair

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Program: Division or Agency:	4: MDBA	**Question No:**	156
Topic:	Legal advice		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. Has the Authority received or requested any legal advice in relation to balancing the needs of the environment, communities and rural economies under the Water Act 2007, since Mr Knowles was appointed as Chair?

Answer:

1. No.

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Program: Division or Agency:	4: MDBA	**Question No:**	157
Topic:	Proposed Basin Plan Testing Committee		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. Please provide a list of all of the meetings of the Proposed Basin Plan Testing Committee?
2. How much has been spent on the Proposed Basin Plan Testing Committee to date?

Answer:

1. The Proposed Basin Plan testing committee (the committee) has met nine times on the following dates:

Meeting 1: 9 March 2011
Meeting 2: 25 March 2011
Meeting 3: 8 April 2011
Meeting 4: 18 April 2011
Meeting 5: 5 May 2011
Meeting 6: 19 May 2011
Meeting 7: 8 June 2011
Meeting 8: 24 June 2011
Meeting 9: 17 August 2011

2. The total cost to date to the Murray-Darling Basin Authority of the committee is $195,165.50 (GST inclusive). This amount includes fees paid to members, airline tickets and other meeting expenses including venue hire and catering.

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Program: Division or Agency:	4: MDBA	**Question No:**	158
Topic:	Proposed Basin Plan Development Working Group		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Joyce asked:

1. Please provide a list of all of the meetings of the Proposed Basin Plan Development Working Group?

2. How much has been spent on the Proposed Basin Plan Development Working Group to date?

Answer:

1. The Proposed Basin Plan development working group (working group) met nine times on the following dates:

Meeting 1 - 11 March 2011
Meeting 2 - 18 March 2011
Meeting 3 - 25 March 2011
Meeting 4 - 1 April 2011
Meeting 5 - 7 April 2011
Meeting 6 - 15 April 2011
Meeting 7 - 27 April 2011
Meeting 8 - 29 April 2011
Meeting 9 - 13 May 2011

The working group ceased its functions on 30 May 2011.

2. The total cost to the Authority on the development working group was $570,975.24 (GST inclusive).

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Program: Division or Agency:	4: MDBA	**Question No:**	159
Topic:	The Windsor report		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Birmingham asked:

1. Has the MDBA had any involvement in assisting the Government respond to the Windsor report? Please provide details of involvement.

Answer:

1. The Murray-Darling Basin Authority (the Authority) has assisted the Department of Sustainability, Environment, Water, Population and Communities (the department) in formulating the government response to the Windsor inquiry report by providing technical input to the department's draft response, relating to those recommendations which refer to the Authority's areas of responsibility.

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Program: Division or Agency:	4: MDBA	**Question No:**	160
Topic:	Salinity in Lake Albert		
Proof Hansard Page and Date *or* Written Question:	Written		

Senator Birmingham asked:

1. Has the MDBA investigated any further works to reduce salinity in Lake Albert? Please detail any such proposals and provide an update on their status/progress?

Answer:

1. The most significant activity to reduce the salinity in Lake Albert is the removal of the blocking bank, which is already underway.

The Murray-Darling Basin Authority (the Authority) has not assessed any further infrastructure works specifically for the purpose of lowering the current salinity levels in Lake Albert.
The Authority has however undertaken operational activities in the river and lakes to address salinity in Lake Albert as per the details below:

- Variations to the release of water through the barrages have been managed in such a way as to vary the level of the Lower Lakes between 0.55 and 0.85 m AHD. This action has aimed at improving salinity levels in Lake Albert, by drawing saline water out of the lake via its connection with Lake Alexandrina as the lake levels fall and then subsequently replacing it with fresher water as the lake levels are raised again;
- Due to the limited area for water exchange between Lake Alexandrina and Lake Albert this action has lead to a reasonable but not dramatic change in salinity with the salinity in Lake Albert gradually reducing from 6,500 EC to about 5,500 EC between October 2010 and October 2011; and
- In so far as possible within the bounds of managing the river for multiple purposes, this action will continue to be implemented whilst water availability and weather conditions permit.