



## water affairs

Department:  
Water Affairs  
REPUBLIC OF SOUTH AFRICA

MINISTRY OF WATER AND  
ENVIRONMENTAL AFFAIRS

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MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS

NATIONAL ASSEMBLY: QUESTION 611 FOR WRITTEN REPLY

A draft reply to the above question asked by Mr G R Morgan (DA) is attached for your consideration.

DIRECTOR-GENERAL

DATE: 14/03/12

DRAFT REPLY APPROVED/AMENDED

MRS B E E MOLEWA, MP  
MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS

DATE: 20/03/12

NATIONAL ASSEMBLY

FOR WRITTEN REPLY

QUESTION NO 611

DATE OF PUBLICATION IN INTERNAL QUESTION PAPER: 09 MARCH 2012  
(INTERNAL QUESTION PAPER NO. 07)

**611. Mr G R Morgan (DA) to ask the Minister of Water and Environmental Affairs:**

- (1) (a) Which water courses' ecological reserves have been determined and (b) when was the study concluded in each case;
- (2) (a) which water courses' ecological reserves have not been determined and (b) in each case, when is it expected that the determination will be concluded;
- (3) whether she has been informed of any challenges to determining the ecological reserves of water courses; if not, what is the position in this regard; if so, what are the relevant details;
- (4) whether the information on water courses of which the ecological reserves have been determined has been considered during decision making on allocations of water use; if not, why not; if so, what are the relevant details? NW777E

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**REPLY:**

- (1) Kindly refer to the attached **Annexure A** which provides details of completed Ecological Reserves for the respective areas, the level of confidence of the reserves and the year in which they were completed. Reserves have been concluded in various quaternary drainage areas in all the 19 Water Management Areas of South Africa starting from 1999. In addition, preliminary ecological desktop Reserves (low confidence Reserves) have been completed at the outlet of all 1 946 quaternary catchments in South Africa.
- (2)(a) As indicated above, preliminary Ecological Desktop Reserves (low confidence Reserves) have been completed at the outlet of all 1 946 quaternary catchments in South Africa. Varying levels of confidence of reserves have been determined in all the Water Management Areas based on the available resources and the different impacts of water use in the various water resources.
- (2)(b) Currently, the High Confidence Ecological Reserves for the Outeniqua catchment, Upper Vaal catchment, and Crocodile East catchment are under review by my Department and will be finalised by the end of April 2012. High Confidence Reserves for the Middle and Lower Vaal catchments, Mzimvubu to Keiskamma, and Mvoti to Umzimkhulu are in the final stages and will be completed during 2012. In April 2012, my Department will initiate high confidence reserve studies in the Gouritz and the Usutu to Mhlathuze Water Management Areas.
- (3) I am aware of the challenges experienced in determining the Reserve for the significant water resources in the country, which include limited availability of skilled technical personnel and funds. High Confidence Reserves are costly, highly technical and require several years to complete as the environmental flow patterns, and impacts thereof cannot be determined in a year.

Inadequate availability of data such as relevant and updated hydrology, (observed flow records of rivers), sufficient water quality data records, and a lack of flow recorders at estuarine mouths, poses challenges for the successful conducting and implementation of Reserves. This would require additional work in the form of simulations that would be carried out based on information available from the nearest water resource.

- (4) The Ecological Reserve is taken into account when the Yield modelling for a catchment is being determined as part of water reconciliation or infrastructure development projects. The Reserve is then used to determine what is allocable within that catchment, and this allocable portion is considered in decisions regarding water use authorisations. Specific conditions are then recommended to either safe guard the Reserve requirements or to provide mitigation options to improve the present state of the water resource in cases where the catchment is stressed and over committed.

The Ecological Reserve requirements have been utilised in the development of Catchment Management Strategies, such as the Breede/Overberg and the Inkomati, as well as in provincial plans such as Estuarine Management Plans.

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## Ecological Water Reserves Completed

Water Management Area	Quaternary Catchment	Water Body	Level of Reserve	Date approved
1	A42D	Friekie se loop	Rapid	2000
2	A91G	Mutshindudi River	Rapid	2000
2	B81A	Great Letaba River	Comprehensive	2006
2	B81B	Great Letaba River	Comprehensive	2006
2	B81C	Letsitele River	Comprehensive	2006
2	B81D	Mutale River	Comprehensive	2007
2	B81E	Letsitele River	Comprehensive	2006
2	B81F	Mutale River	Comprehensive	2010
2	B81G	Molototsi River	Comprehensive	2006
2	B81J	Great Letaba River	Comprehensive	2006
2	B82F	Letsitele River	Comprehensive	2006
2	B82G	Klein Letaba River	Comprehensive	2006
2	B83A	Great Letaba River	Comprehensive	2006
2	B83D	Great Letaba River	Comprehensive	2006
3	A21C	Darrenwood Wetland	Rapid	2002
3	A22J	Crocodile River	Rapid	2009
3	A23A	Pienaars River	Rapid	2008
3	A23B	Pienaars River	Rapid	2002
3	A23C	Pienaars River	Rapid	2002
3	A23D	Apies River	Rapid	2006
3	A23E	Pienaars River	Rapid	2010
3	A23F	Apies River	Rapid	2010
3	A23G	Apies River	Rapid	2002

3	A23K	Pienaars River	Intermediate	2003
4	B11J	Olifants River	Comprehensive	2001
4	B12E	Klein Olifants River	Comprehensive	2001
4	B20J	Wilge River	Comprehensive	2001
4	B31C	Elands River	Comprehensive	2001
4	B31D	Elands River	Comprehensive	2001
4	B31G	Elands River	Comprehensive	2003
4	B32A	Olifants River	Comprehensive	2003
4	B32D	Olifants River	Comprehensive	2004
4	B41C	Masala River	Rapid	2001
4	B41H	Dwars River	Intermediate	2010
4	B41J	Steelpoort River	Comprehensive	2001
4	B41K	Steelpoort River	Comprehensive	2001
4	B51G	Olifants River	Comprehensive	2002
4	B60J	Blyde River	Comprehensive	2002
4	B71B	Olifants River	Comprehensive	2002
4	B71J	Olifants River	Comprehensive	2002
4	B72D	Olifants River	Comprehensive	2001
4	B72K	Selati River	Comprehensive	2001
4	B72K	Selati River	Comprehensive	2002
4	B73C	Olifants River	Comprehensive	2001
4	B73H	Olifants River	Comprehensive	2002
5	X11B	Boesmanspruit River	Rapid	2003
5	X11F	Komati River	Comprehensive	2006
5	X11J	Gladdespruit River	Comprehensive	2006
5	X12F	Teespruit River	Comprehensive	2006
5	X12K	Komati River	Comprehensive	2006
5	X13D	Komati River	Comprehensive	2006
5	X13J	Komati River	Comprehensive	2006
5	X14H	Lomati River	Comprehensive	2006
5	X21A	Crocodile River	Intermediate	2002
5	X21B	Lunsklip	Comprehensive	2010

5	X21E	Crocodile River	Intermediate	2002
5	X21F	Elands River	Intermediate	2004
5	X21G	Elands River	Comprehensive	2007
5	X21H	Ngodwana River	Rapid	2003
5	X21K	Elands River	Comprehensive	2007
5	X22H	White River	Rapid	2007
5	X22K	Crocodile River	Comprehensive	2010
5	X23F	Suidkaap River	Rapid	2008
5	X23G	Kaap River, tributary of Crocodile River	Intermediate	2005
5	X23H	Kaap River, tributary of the Crocodile River	Rapid	2001
5	X24B	Gutshwa River	Rapid	2006
5	X24C	Nsikazi River	Rapid	2006
5	X24D	Crocodile River	Intermediate	2002
5	X24H	Crocodile River	Intermediate	2002
5	X31M	Sabie River	Intermediate	2003
5	X32D	Mutlumuvi River	Rapid	2004
5	X32H	Sand River	Intermediate	2003
5	X40D	Nwatsisonso River	Rapid	2003
6	W12A	Mhlatuze River	Rapid	2000
6	W12C	Mfule River	Rapid	2001
6	W12D	Mhlatuze River	Comprehensive	2003
6	W12E	Mhlatuze River	Comprehensive	2003
6	W12F	Mhlatuze River	Comprehensive	2003
6	W12H	Lake Nsezi	Comprehensive	2003
6	W12J	Nhlabane Estuary	Comprehensive	2003
6	W13B	Siyaya Estuary	Rapid	2006
6	W21B	Lenjane River	Rapid	2001
6	W23A	Mfolozi River	Rapid	2003
6	W42M	Pongola River	Rapid	2003
6	W44C	Pongola River	Rapid	2003
6	W56A	Klein Usutu River	Rapid	2003
6	W70A	Lake Sibayi	Intermediate	2003

7	V11C	Khombe River	Rapid	2006
7	V11J	Thukela River	Comprehensive	2004
7	V11K	Venterspruit River	Rapid	2006
7	V11L	Thukela River	Intermediate	2002
7	V11M	Thukela River	Comprehensive	2004
7	V12A	Klip River	Rapid	2005
7	V13A	Tributary of Little Thukela	Rapid	2000
7	V13B	Hattingspruit	Rapid	2002
7	V13C	Tributary of Little Thukela	Rapid	2002
7	V13D	Lindequespruit	Rapid	2002
7	V13E	Little Thukela River	Comprehensive	2004
7	V14A	Thukela River	Rapid	2002
7	V14E	Thukela River	Comprehensive	2004
7	V20A	Unknown tributary of the Mooi River	Rapid	2002
7	V20B	Little Mooi River	Rapid	2002
7	V20C	Hlathikhulu River	Rapid	2006
7	V20D	Mooi River	Rapid	2002
7	V20E	Mooi River	Comprehensive	2004
7	V20G	Mooi River	Comprehensive	2004
7	V20H	Mooi River	Comprehensive	2004
7	V31H	Ncandu River	Rapid	2005
7	V31K	Ngagane River	Rapid	2002
7	V32F	Upper Buffalo River	Comprehensive	2004
7	V33B	Lower Buffalo River	Comprehensive	2004
7	V40B	Thukela River	Comprehensive	2004
7	V50C	Thukela River	Comprehensive	2004
7	V60C	Upper Sundays River	Comprehensive	2004
7	V60F	Lower Sundays River	Comprehensive	2004
7	V60J	Thukela River	Comprehensive	2004
7	V70E	Roodepoortspruit	Rapid	2002
7	V70F	Bushmans River	Comprehensive	2004
7	V70G	Bushmans River	Comprehensive	2004

8	C11M	Tributary of the Vaal River	Rapid	2009
8	C12L	Vaal Dam	Rapid	2009
8	C21D	Blesbokspruit River	Rapid	2002
8	C21E	Blesbokspruit River	Rapid	2002
8	C21F	Blesbokspruit River	Rapid	2002
8	C22A	Klipspruit River, tributary of Klip River	Rapid	2003
8	C22B	Natalspruit River, tributary of Klip River	Rapid	2003
8	C22C	Rietspruit River, tributary of Klip River	Rapid	2003
8	C22D	Klip River	Rapid	2003
8	C22E	Klip River	Rapid	2003
8	C23H	Mooi River	Rapid	2002
8	C23K	Loopspruit River	Rapid	2002
8	C23L	Mooi River	Rapid	2002
8	C81E	Nuwejaarspruit River, tributary of Wilge River	Rapid	2004
9	C24A	Koekemoerspruit River	Rapid	2002
9	C24E	Skoonspruit River	Rapid	2002
9	C24J	Skoonspruit River	Rapid	2009
9	C42L	Sand River	Rapid	2010
10	C91E	Vaal River	Rapid	2002
10	C92A	Vaal River	Rapid	2002
11	T40E	Mtamvuna River	Rapid	2005
11	T51C	Mzimkulu River	Rapid	2006
11	T51E	Pholela River	Rapid	2006
11	T51F	Ngwangwane River	Rapid	2005
11	T51G	Ndawana River	Rapid	2001
11	T52G	Bisi River	Rapid	2005
11	U10D	Nzinga River	Rapid	2001
11	U10E	Mkomazi River	Intermediate	2003
11	U10G	Elands River	Rapid	2003
11	U10H	Mkomazi River	Intermediate	2003
11	U10J	Mkomazi River	Intermediate	2003
11	U10M	Mkomazi River	Intermediate	2003



11	U20A	Avenol River	Rapid	2006
11	U20M	Mgeni River	Rapid	2005
12	R10B	Keiskamma River	Rapid	2006
12	R10E	Keiskamma River	Rapid	2005
12	R20A	Buffalo River	Intermediate	2006
12	R20F	Buffalo River	Intermediate	2003
12	R20G	Buffalo River	Intermediate	2003
12	S10J	Middle White Kei River	Intermediate	2007
12	S32G	Klipplaat River	Intermediate	2007
12	S32K	Upper Black Kei River	Intermediate	2007
12	S32M	Lower Black Kei River	Intermediate	2007
12	S60B	Kubusi River	Intermediate	2003
12	S60E	Kubusi River	Intermediate	2003
12	S70A	Kei River	Rapid	2001
12	T20G	Mtata River	Rapid	2002
12	T31J	Umzimvubu River	Rapid	2009
12	T32A	Mzintlava River	Rapid	2007
12	T32B	Un-named tributary of the Mzintlava River	Rapid	2007
12	T32C	Mzintlava River	Rapid	2003
12	T32D	Droewig River	Rapid	2004
12	T32H	Mzintlava River	Rapid	2005
12	T33C	Morulane River	Rapid	2007
12	T33D	Paballong River	Rapid	2007
12	T34C	Upper Ntata River	Rapid	2003
12	T34J	Tina River	Rapid	2003
12	T52M	Mzimkulu River	Rapid	2005
12	T60K	Mngazi River	Rapid	2001
12	T70E	Mtakatye River	Rapid	2001
12	T70G	Nzulwini River	Rapid	2001
12	T80A	Mpako River	Rapid	2001
12	T80C	Mbanyana River	Rapid	2001
12	T80D	Mbanyana River	Rapid	2009

13	C51A	Fouriespruit River	Rapid	2004
13	C51F	Upper Riet River	Rapid	2009
13	C51G	Riet River	Rapid	2004
13	C51K	Middle Riet River	Rapid	2009
13	C51L	Lower Riet River	Rapid	2009
13	C52A	Upper Modder River	Rapid	2009
13	C52H	Modder River	Rapid	2009
13	D21D	Little Caledon	Rapid	2003
13	D21E	Little Caledon	Rapid	2003
13	D21G	Grootspruit River	Rapid	2004
13	D21H	Caledon River	Rapid	2004
13	D22A	Meulspruit River	Rapid	2004
13	D22B	Meulspruit River	Rapid	2003
13	D22H	Caledon River	Rapid	2003
13	D23D	Leeuspruit	Rapid	2003
13	D23H	Rietspruit River	Rapid	2003
13	D24E	Caledon River River	Rapid	2003
14	C92C	Vaal River	Rapid	2001
14	D73B	Orange River	Rapid	2001
14	D73F	Orange River	Rapid	2001
14	D82A	Orange River	Rapid	2001
14	D82E	Orange River	Rapid	2001
14	D82K	Orange River	Rapid	2001
14	F30D	Buffels River	Rapid	2003
15	Q94B	Kat river	Intermediate	2008
15	Q94C	Balfour River	Rapid	2008
15	Q94D	Kat River	Intermediate	2008
15	Q94F	Kat River	Intermediate	2008
15	K80C	Sanddrift River	Rapid	2003
15	K80D	Groot River	Rapid	2003
15	K80E	Tsitsikamma River	Rapid	2010
15	K80F	Tsitsikamma River	Rapid	2010

15	K90A	Klipdrift (East) River	Intermediate	2006
15	K90D	Kromme River	Intermediate	2010
15	K90E	Kromme River	Comprehensive	2010
15	K90F	Geelhoutboom River	Intermediate	2007
16	H80B	Klip River	Rapid	2003
16	H80C	Duivenhoks River	Rapid	2003
16	H80E	Duivenhoks River	Rapid	2003
16	H90D	Goukou River	Rapid	2009
16	J33E	Olifants River	Rapid	2001
16	J35D	Wynands River	Rapid	2010
16	J35E	Olifants River	Rapid	2002
16	J40A	Slang River	Rapid	2004
16	J40C	Weyers River	Rapid	2007
16	K10F	Moordkuil River	Rapid	2001
16	K20A	Vaarings River	Rapid	2004
16	K30A	Witels River	Rapid	2003
16	K30D	Klein Keurbooms River	Rapid	2004
16	K40E	Goukamma River	Rapid	2008
16	K60D	Keurbooms River	Rapid	2007
16	K60E	Keurbooms River	Rapid	2007
16	K60F	Bitou River	Rapid	2002
16	K60G	Piesang River	Rapid	2006
16	K70A	Sout River	Intermedaite	2009
16	K70B	Bloukrans River	Rapid	2001
17	E10A	Olifants River	Comprehensive	2008
17	E10B	Olifants River	Comprehensive	2008
17	E10C	Ratel River	Comprehensive	2008
17	E10D	Oliphants River	Comprehensive	2008
17	E10E	Oliphants River	Comprehensive	2008
17	E10F	Olifants River (WC)	Comprehensive	2010
17	E10G	Olifants River	Comprehensive	2008
17	E10H	Jan Dissels	Comprehensive	2008

17	E10J	Olifants River	Comprehensive	2008
17	E10K	Olifants	Comprehensive	2007
17	E21A	Olifants River (WC)	Comprehensive	2008
17	E21B	Kruis	Comprehensive	2008
17	E21C	Welgemoed	Comprehensive	2008
17	E21D	Winkelhaak	Comprehensive	2008
17	E21E	Houdenbeks	Comprehensive	2008
17	E21F	Riet	Comprehensive	2010
17	E21G	Riet	Comprehensive	2008
17	E21H	Groot/Leeu	Comprehensive	2009
17	E21J	Groot	Comprehensive	2008
17	E21K	Maatjies	Comprehensive	2008
17	E21L	Maatjies	Comprehensive	2008
17	E22A	Doring	Comprehensive	2008
17	E22B	Doring	Comprehensive	2008
17	E22C	Tankwa	Comprehensive	2008
17	E22D	Tankwa	Comprehensive	2008
17	E22E	Doring	Comprehensive	2008
17	E22F	Doring	Comprehensive	2008
17	E22G	Doring	Comprehensive	2008
17	E23A	Tankwa	Comprehensive	2008
17	E23B	Tankwa	Comprehensive	2008
17	E23C	Tankwa	Comprehensive	2008
17	E23D	Tankwa	Comprehensive	2008
17	E23E	Tankwa	Comprehensive	2008
17	E23F	Tankwa/Renoster	Comprehensive	2008
17	E23G	Ongeluks	Comprehensive	2008
17	E23H	Ongeluks	Comprehensive	2008
17	E23J	Ongeluks	Comprehensive	2008
17	E23K	Tankwa	Comprehensive	2008
17	E24A	Tra-tra	Comprehensive	2008
17	E24B	Tra-tra	Comprehensive	2008

17	E24C	Bos	Comprehensive	2008
17	E24D	Bos	Comprehensive	2008
17	E24E	Wolf	Comprehensive	2008
17	E24F	Wolf	Comprehensive	2008
17	E24G	Wolf	Comprehensive	2008
17	E24H	Doring	Comprehensive	2008
17	E24J	Doring	Comprehensive	2008
17	E24K	Doring	Comprehensive	2008
17	E24L	Brandewyn	Comprehensive	2008
17	E24M	Doring	Comprehensive	2008
17	E31B	Kromme	Comprehensive	2008
17	E31C	Kromme	Comprehensive	2008
17	E31D	Kromme	Comprehensive	2008
17	E31F	Kromme	Comprehensive	2008
17	E31G	Hantmas	Comprehensive	2008
17	E31H	Kromme	Comprehensive	2008
17	E32A	Hantmas	Comprehensive	2008
17	E32B	Hantmas	Comprehensive	2008
17	E32C	Hantmas	Comprehensive	2008
17	E32E	Hantmas	Comprehensive	2008
17	E33A	Hantmas	Comprehensive	2008
17	E33B	Sout	Comprehensive	2008
17	E33C	Sout	Comprehensive	2008
17	E33D	Sout	Comprehensive	2008
17	E33E	Sout	Comprehensive	2008
17	E33F	Sout	Comprehensive	2008
17	E33G	Hoi	Comprehensive	2008
17	E33H	Olifants	Comprehensive	2010
17	E40A	Oorlogskloof	Comprehensive	2008
17	E40B	Oorlogskloof	Comprehensive	2008
17	E40C	Oorlogskloof/Koebee	Comprehensive	2008
17	E40D	Oorlogskloof/Koebee	Comprehensive	2008

17	G30B	Spoornetkloof Spring	Rapid	2001
17	G30D	Kruismans River	Rapid	2001
17	G30E	Bergvallei River	Rapid	2001
17	G30F	Langvlei River	Rapid	2005
17	G30G	Wadrif Pan	Rapid	2007
18	G40G	Hermanus River	Rapid	2003
18	G50D	Kars River	Rapid I	2010
18	H10F	Breede River	Intermediate	2004
18	H10H	Papenkuils wetland	Intermediate	2004
18	H40F	Breede River	Intermediate	2004
18	H40J	Willem nels river	Intermediate	2001
18	H60F	Riviersonderend River	Intermediate	2004
18	H70G	Lower Breede River	Intermediate	2004
18	H70K	Breede Estuary Head	Intermediate	2004
19	G10A	Berg River	Comprehensive	2003
19	G10C	Berg River	Rapid	2005
19	G10E	Moordenaarskloof River	Rapid	2003
19	G10F	Lower Berg River	Rapid	2001
19	G10H	Pyls	Rapid	2004
19	G10J	Lower Berg River	Intermediate	2005
19	G10K	Lower Berg River	Intermediate	2005
19	G10L	Groen River, a tributary of the Berg River	Rapid	2005
19	G21C	Riebeeks River	Rapid	2004
19	G21D	Swart River	Rapid	2004
19	G21E	Klapmuts River	Rapid	2003
19	G21F	Diep River	Rapid	2003
19	G22B	Hout Bay/Disa River	Rapid	2002
19	G22C	Elsiekraal River	Rapid	2003
19	G22D	Keysers River	Rapid	2008
19	G22E	Kuils River	Rapid	2004
19	G22F	Eerste & Blaauklippen River, tributary of Eerste River	Rapid	2007

19	G22G	Eerste River	Rapid	2003
19	G22J	Lourens River	Rapid	2001