

ANNEXURE A: WATER DEMAND SUMMARY OF THE ORANGE RIVER SYSTEM

Category	Expected Gross Water Demand (Mm ³ /a)									
	RSA					NAMIBIA				
	2005	2010	2015	2020	2025	2005	2010	2015	2020	2025
Irrigation - Mm³/a										
Vaal (Loxten Venn)	796.0	796.0	796.0	796.0	796.0					
Orange upstream of 20° Longitude	1 381.2	1 398.1	1 415.0	1 415.0	1 415.0					
Supplied from Gariep & Vanderkloof dams	1 210.1	1 224.9	1 245.6	1 245.6	1 245.6					
Remaining upstream of 20° Longitude	171.1	173.2	169.4	169.4	169.4					
Eastern Cape	617.5	634.4	651.3	651.3	651.3					
Diffuse Irrigation from Orange & Riet/Modder	397.3	397.3	397.3	397.3	397.3					
Lower Orange (Common Border Area)	81.7	101.7	121.7	121.7	121.7	59.7	102.8	150.0	196.5	226.7
20° Longitude - Vioolsdrift site	51.3	61.3	71.3	71.3	71.3	20.7	31.6	46.3	61.7	63.8
Vioolsdrift site - Mouth	30.4	40.4	50.4	50.4	50.4	39.0	71.2	103.7	134.8	162.9
Subtotal Irrigation	3 273.7	3 327.5	3 381.3	3 381.3	3 381.3	59.7	102.8	150.0	196.5	226.7
Urban, Industrial & Mining										
Vaal	1 968.2	2 038.6	2 088.1	2 162.6	2 270.0					
Orange upstream of 20° Longitude	110.1	121.9	134.0	143.5	153.4					
Supplied from Gariep & Vanderkloof dams	27.7	30.0	33.0	34.4	36.8					
Remaining upstream of 20° Longitude	82.4	91.9	101.0	109.1	116.6					
Eastern Cape	20.0	20.0	20.0	20.0	41.3					
Lower Orange (Common Border Area)	16.6	23.0	23.7	21.9	22.7	15.8	31.2	46.7	47.4	47.7
20° Longitude - Vioolsdrift site	9.3	15.0	15.5	16.1	16.8	0.0	0.0	0.2	0.4	0.4
Vioolsdrift site - Mouth	7.3	8.0	8.2	5.8	5.9	15.8	31.2	46.5	47.0	47.3
Subtotal Urban, Industrial, Mining	2 115	2 204	2 266	2 348	2 487	15.8	31.2	46.7	47.4	47.7
TOTAL	5 388.6	5 531.0	5 647.2	5 729.4	5 868.8	75.5	134.0	196.7	243.9	274.4
Lesotho										
Irrigation	8.8	8.8	8.8	8.8	8.8					
Urban	11	12.3	13.7	15.2	17					
Subtotal	19.8	21.1	22.5	24.0	25.8					
TOTAL (RSA, Namibia & Lesotho)	5 483.9	5 686.1	5 866.4	5 997.3	6 169.0					

Note:

- All other projections are medium projections
- 2025 Urban, industrial, mining demand of Vaal is extrapolated figure
- Eastern Cape irrigation allows for 4000 ha development from present to 2010 @ 11 000m³/ha/a
- Upper & middle Orange allows for 4000 ha development from present to 2010 @ 11 000m³/ha/a
- Lower Orange RSA allows for 4000 ha development; 2000ha downstream of dam site and 2000ha upstream of the dam site, from now to 2015 @ 15 000m³/ha/a
- The irrigation figures used for the Vaal are those used in the yield modelling and estimated by Loxton Ven.
- The Diffuse Irrigation refers to irrigation from farm dams and from tributaries of the Orange. There are no irrigation allocations for these irrigators.
Estimated area is based on a 10 000 m³/ha/a requirement.
The hectares under irrigation vary annually and are not known. Only the irrigation consumption has been estimated.
- Category highlighted with yellow is supplied with water from Gariep and Vanderkloof dams