

# MAINTENANCE OF THE VAAL RIVER RECONCILIATION STRATEGY

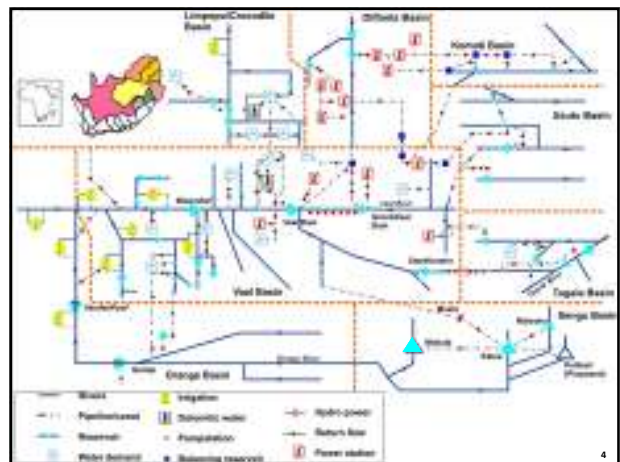
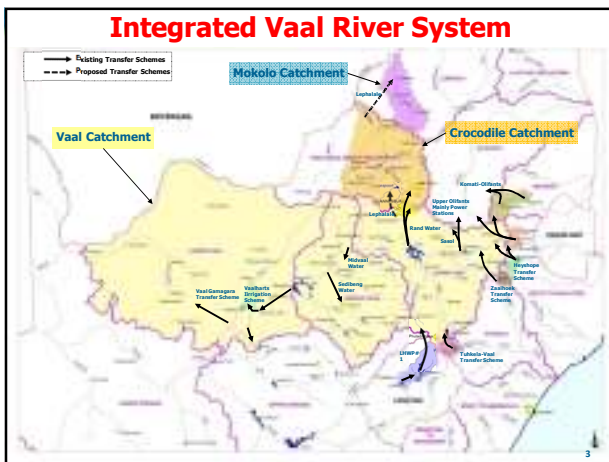
## Reconciliation Scenarios Review

Presentation at the Vaal River Strategy Steering  
Committee Meeting  
13 April 2011

Seef Rademeyer  
Directorate: National Water Resource Planning

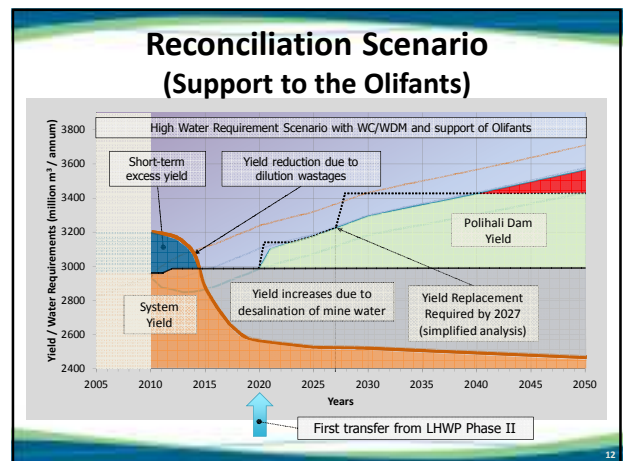
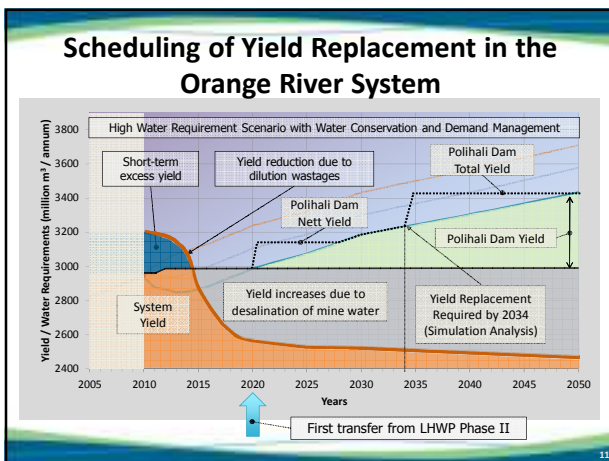
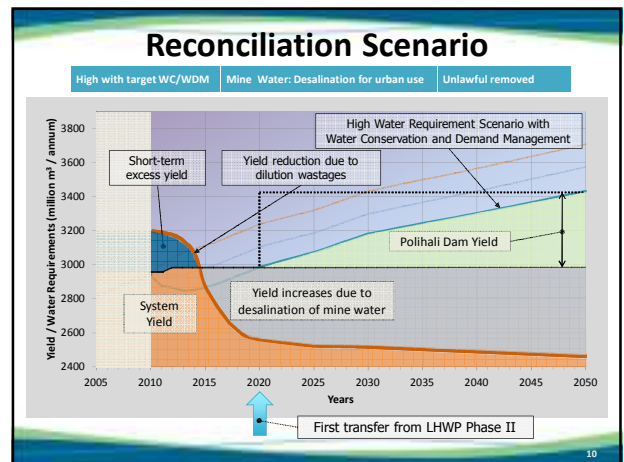
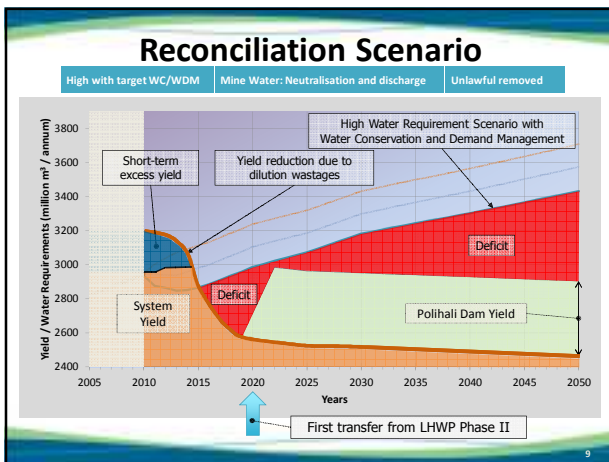
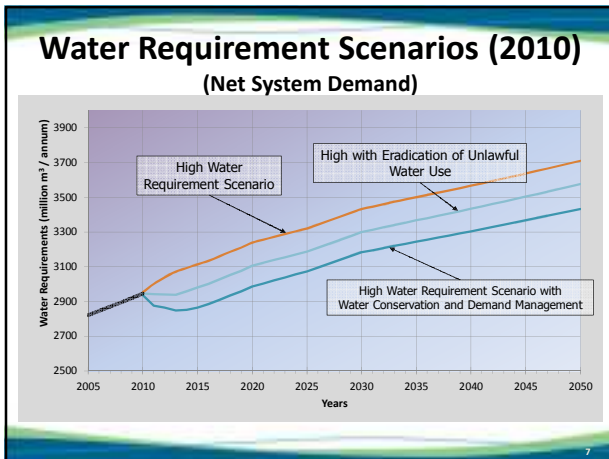
## Presentation Layout

- Introduction
- Summary of Water Requirement and Return Flow Scenarios
- Reconciliation Scenarios
- Strategic Interventions
- Information under review



### Water Requirements and Return Flows Summary (High Scenario no further WC/WDM)

DESCRIPTION	2010	2015	2020	2025	2030	2040	2050
<b>DEMANDS:</b>							
Rand Water	1438	1591	1735	1838	1973	2180	2408
Mittal Steel	12	13	14	16	17	17	17
ESKOM	382	405	420	423	423	423	423
SASOL Sasolburg (Raw water)	24	28	31	34	38	42	46
SASOL Secunda	92	103	109	116	124	129	129
Midvaal Water Company	45	46	46	46	46	46	46
Sedibeng Water (Balkfontein only)	45	51	57	61	66	66	66
Other towns and industries	189	193	193	192	193	193	197
Vaalharts/Lower Vaal irrigation	542	542	542	542	542	542	542
Other irrigation in Vaal	612	612	612	612	612	612	612
Wetland/River losses	326	327	328	330	331	333	338
<b>RETURN FLOWS:</b>							
Southern Gauteng (Rand Water)	-405	-423	-462	-491	-523	-577	-638
Midvaal Water Company	-1	-1	-1	-1	-1	-1	-1
Sedibeng Water	-2	-2	-2	-2	-3	-2	-2
Other towns and industries	-73	-79	-82	-86	-90	-93	-97
Irrigation	-61	-61	-61	-61	-61	-61	-61
Mine dewatering	-109	-126	-126	-126	-126	-126	-126
Increased urban runoff	-103	-107	-113	-121	-129	-150	-178
<b>OVERALL GROSS SYSTEM DEMAND:</b>	<b>3706</b>	<b>3911</b>	<b>4086</b>	<b>4209</b>	<b>4365</b>	<b>4683</b>	<b>4824</b>
<b>OVERALL NET SYSTEM DEMAND:</b>	<b>2951</b>	<b>3114</b>	<b>3238</b>	<b>3320</b>	<b>3432</b>	<b>3572</b>	<b>3721</b>



### Strategic Interventions

- Eradication of unlawful water use by 2013
- Implementation of WC/WDM (Project 15%) – achieve target savings by 2015
- Implementation of Phase 2 of LHWP by 2020
- Mine water effluent treatment and use by 2014
- Plan yield replacement scheme in Orange – 2034
- Manage uncertainties: Vaal, Crocodile and Olifants

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### Information Under review

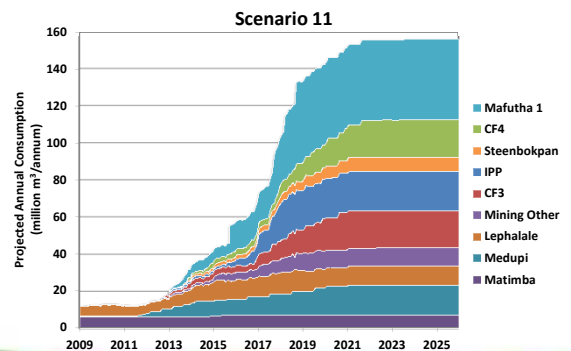
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### Crocodile West System Reconciliation Strategy Under Review



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### Water Requirements Lephhalale Area



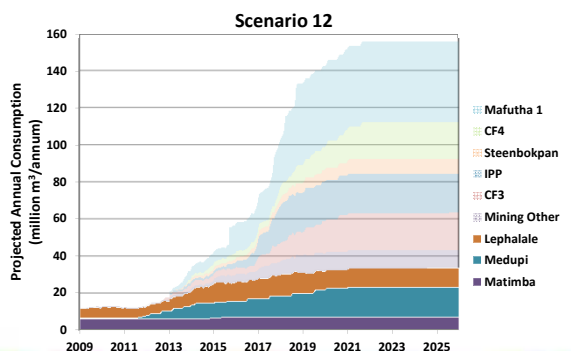
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### Demand Changes

- Initial planning with Scenarios 8, 9, and 11
- Scenario 11 provided for up to 4 Eskom power stations (incl Matimba and Medupi) plus IPP & Sasol's Mafutha 1
- Department of Energy's Draft Integrated Electricity Resource Plan (October 2010)
- Recommended plan focus on renewable energy sources and nuclear power
- Next coal power station only in 2028
- Sasol's development plan delayed

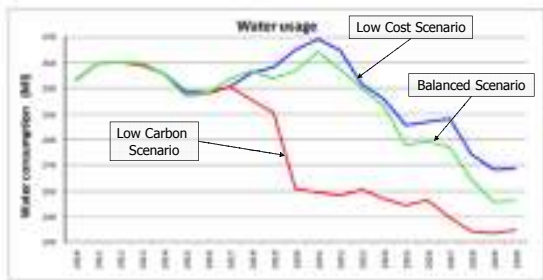
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### Water Requirements Lephhalale Area



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### Water Requirements Electricity Industry



Source: Executive Summary of the Draft Integrated Electricity Resource Plan for South Africa – 2010 to 2030 (22 October 2010)

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### Information Under Review

- **Transfers required to the Olifants River**  
(Scenario available by September 2011)
- **Integrated Electricity Resource Plan**  
(Eskom water requirement scenario available by May 2011)
- **Revised Crocodile West River Strategy and transfer needs, if any** - September 2011
- **Compare 2010/11 water use and return flows against scenarios** - May 2011

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Thank You

Questions for clarity?

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