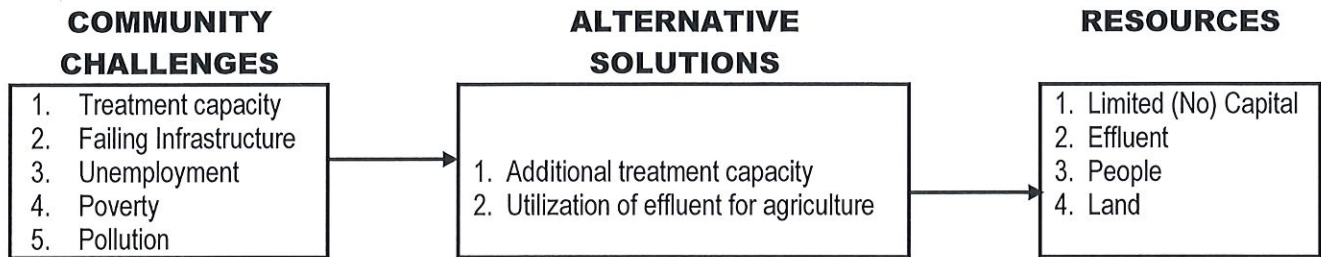




**EMFULENI COMMUNITY SANITATION
INITIATIVE
UTILIZATION OF WASTE WATER EFFLUENT
AND SLUDGES FOR AGRICULTURE
CONDENSED PROJECT PROPOSAL**



ALTERNATIVE SOLUTION COMPARISON

Existing WWTW : Leeuwkuil 36 Ml, Rietspruit 36 Ml/d, Sebokeng 150 Ml/d
 Total present potential flow = ± 240 Ml/d
 Required short – medium term additional capacity = ± 80 Ml/d

ITEM	ALTERNATIVE SOLUTIONS	
	ADDITIONAL CAPACITY WWTW EXTENSIONS	UTILIZATION OF EFFLUENT AND INCREASING CAPACITY BY UTILIZING EXISTING INFRASTRUCTURE
1. Additional treatment capacity created	80 Ml/day	80 Ml/d
2. Total Capex required	R1 000 x 10 ⁶	R500 x 10 ⁶
3. Saving : Chlorine Saving : Power	- -	R4 x 10 ⁶ pa R0,5 x 10 ⁶ pa
4. Present worth comparable Capex (25 years @ 6 %)	R1 000 x 10 ⁶	R433 x 10 ⁶
5. Comparable annual cost capital recovery + interest (25 years @ 6 %)	R78 x 10 ⁶ pa	R34 x 10 ⁶ pa
6. Jobs created	35	40 000
7. Capital input to community (income generated)	R0,00	R2 000 x 10 ⁶ pa
8. Access to land	0	4 000 ha
9. Funding required to rehabilitate pumpstations and pipe lines	R5 000 x 10 ⁶	R5 000 x 10 ⁶
10. Capital recovery and interest to finance (9)	R392 x 10 ⁶	R392 x 10 ⁶
11. Contribution to (10)	R0,00	50 % (6 % of Bruto capital generated) or 100 % @ (12 % of Bruto capital generated)
12. Challenges met	Capacity	Treatment capacity, failing infrastructure, unemployment, poverty and pollution

NOTES:

- 1 The costs are based on Preliminary Designs, but considered sufficiently accurate for comparing purposes.
- 2 Chlorine saving ± 15 c/kℓ and power saving has taken into consideration power required to pump effluent to agriculture areas.
- 3 The income for the community beneficiaries' estimates are based on the Netto estimate income from agriculture after operating costs have been deducted. Bruto income / ha \pm R750 000 pa.
- 4 Average income per beneficiary household \pm R 50 000 pa.
- 5 Generating income for the communities will put them in a financial position to pay for services which will assist in restoring the financial viability of the municipality. It will also assist in reducing the high levels of crime.

**HOW CAN THIS COMMUNITY
INITIATIVE **NOT** BE SUPPORTED
WITH VIGUOR ???**