



# O&M and Associated Human Resources (challenges in the Region)

Waste Water Management Conference

East London

(13 June 2007)

# We do Face Challenges



# Where We Have Come From

- Elections 1994
- Elections 1999
- Local Government Elections 2001
- Powers and Functions 2003
- Transfer of DWAF personnel and assets

# CHDM Situation

- Range of service areas and types
  - City (Queenstown) (conventional)
  - Towns (16) (< 2 Ml per day, buckets)
  - Vast rural areas (pit latrines)
- Each of these presents a unique technical and operational challenge

# What Are We Doing

## Some monitoring in towns

### 5. Report on Towns

#### Cofimvaba

	January	February	March	April
Sus Solids (w-w)	61.7	17.7	17.3	15.3
Nitrate (w-w)	<0.5	0.56	2.48	3.16
Phosphate (w-w)	490	1250	1650	2580
COD (w-w)	52	38.8	<20	41.5
Ammonia (w-w)	<0.5	<0.5	0.51	<0.5
e-coli (w-w)	22	8	0	4
Comments (waste water)				

#### Tsomo

	January	February	March	April
<b>WWTW</b>				
Sus Solids (w-w)	48.1	6.93	13.7	18.1
Nitrate (w-w)	<0.5	<0.5	<0.5	<0.5
Phosphate (w-w)	<100	35	130	340
COD (w-w)	129	80.8	54.4	49.5
Ammonia (w-w)	<0.5	<0.5	<0.5	<0.5
e-coli (w-w)	0	0	0	0
Comments (waste water)				

**Elliot  
WWTW**

Sus Solids (w-w)	80.9	114	105	146
Nitrate (w-w)	4.44	1.85	1.51	1.11
Phosphate (w-w)	4130	4360	3210	2910
COD (w-w)	221	399	229	234
Ammonia (w-w)	4.41	4.11	2.39	3.6
e-coli (w-w)	870	30	40	0
Comments (waste water)	leak in ox pond wall has re-occurred	leak in ox pond wall has re-occurred	leak in ox pond wall has re-occurred	leak in ox pond wall has re-occurred

**Cala  
WWTW**

Sus Solids (w-w)	40.5	18.9	56	38.5
Nitrate (w-w)	<0.5	<0.5	<0.5	<0.5
Phosphate (w-w)	910	770	300	1130
COD (w-w)	153	107	123	102
Ammonia (w-w)	0.53	<0.5	<0.5	1.48
e-coli (w-w)	2	0	0	0
Comments (waste water)				

- Some preventative maintenance

## 11. Mechanical and Electrical Service Record

Proposed Db Id	Scheme	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
SCCH4011	Ndum-ndum							
SCCH4011	Ndum-ndum				I			
SCCH4012	Ndyavu							
SCCH4013	New Rest	RIMS	S/M	S/M	M/S	M/S		
SCCH4013	New Rest	RIMS	S/M	S/M	R/M			
SCCH4014	Nkunzaneni			S	S			
SCCH4015	Nyalasa							
SCCH4016	Sidakeni	S		S	M/S	S		
SCCH4017	Sweetline							
SCCH4018	Taleni	S		S	S			
SCCH4019	Tsengiwe	S	S	S	M/S	M/S		
SCCH4020	Upper Tsengiwe		I	I	M/I	I		
SCCH4021	Emmangweni	SIR	R/I	R/I/S	S	S		
SCCH4022	Cala Reserve				R			

# **What We Are Not Doing**

- No universal monitoring
- Limited preventative maintenance and poor process control

# Challenges

- Effluent non-compliance
- Skills and Capacity shortages
  - National challenge
  - Migration of skilled personnel
    - International
    - Private sector
    - Metros and big towns
    - Rural municipalities
- Technology choice is not always in line with skills availability

# How can Skills Shortage be Addressed?

- Can we buy skills? (insufficient funding)
- Can we train skills? (will take too long)
- Can we outsource?
- We need a culture of continual learning.

# Challenges cont.

- Skill challenge is not only in municipalities
- Poor design and construction



**Modifications to Inappropriate Sewer Pump Station Equipment**



**Poor Backfill of Small Bore  
Sewer Pipe**



**Collapsed Oxidation Pond Wall  
(Inadequate Design and Construction)**

# Challenges cont.

- No universal systems of monitoring and maintenance planning
- Unknown implications of pit moving or emptying

