

WSA ANNUAL BUSINESS PLAN

**AUDIT REPORT ON IMPLEMENTATION OF THE WSDP
2009/2010**

NGWATHE LOCAL MUNICIPALITY: MARCH 2011



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WATER SERVICE AUTHORITY NAME	: Ngwathe
TITLE	: Ngwathe Water Services Authority: Water Services Audit for 2010/2011
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1. INTRODUCTION

Responsibility

Every Water Service Authority has a duty to all customers or potential customers in its area of jurisdiction to progressively ensure efficient, affordable, economical and sustainable access to Water Services [Water Services Act of 1997 Section 11].

Thus, a Water Service Authority has the duty to provide water services with the focus on: Ensure, Efficient, Affordable, Economical and Sustainable deliverables.

Principles of Water Service Provision

- To ensure: effectiveness, efficiency, viability, sustainability
- Requires: proactive approach, pre-thinking, deliberation, understanding, thus coordinated planning
- Therefore: Every Water Services Authority must Prepare a Water Services Development Plan for its area of jurisdiction [Water Service Act of 1997 Section 12].

WSAs Area of Jurisdiction

Areas within the jurisdiction of the WSA are:

Urban areas:

KOPPIES
KWAKWATSI
NGWATHE
PHIRITONA
SANDERSVILLE
HEILBRON
PARYS
TUMAHOLE
MOKWALLO
VREDEFORT
ABAZENELI
EDENVILLE
PHIRITONA EXTENSION

Peri-urban/rural dense areas:

Ngwathe Rural

The total number of residents living within the area of jurisdiction is: 109626

During the period 2009 - 2010 the WSA provided:

- **Water services** to 108926 consumers, thus 99.36% of residents received water services, and
- **Sanitation services** to 61964 consumers, thus 56.52% of residents received sanitation services from the WSA.

<i>Reference to Source Documents:</i>		
<i>Date</i>	<i>Title</i>	<i>Author</i>
2011 March	Ngwathe Municipality: Water Services Development Plan	PULA srm (Pty) Ltd

2. LEGAL REQUIREMENTS

Water Services Act

Section 18 of the Water Services Act stipulates the following with regard to the water services audit on the implementation of the WSDP:-*-

- (1) A water services authority must report on the implementation of its development plan during each financial year,
- (2) The report-
 - a) must be made available within four months after the end of each financial year; and
 - b) must be given to the Minister, the Minister for Provincial and Local Government, the Member of the Executive Council responsible for local government in the relevant province and all the organisations representing municipalities having jurisdiction in the area of the water services authority.
- (3) The water services authority must publicise a summary of its report.
- (4) A copy of the report and of its summary must be-
 - a) Available for inspection at the offices of the water services authority; and
 - b) Obtainable against payment of a nominal fee.

Regulations under Section 9 of the Water Services Act, which include the water services audit as Section 10 of the Guidelines for Compulsory National Standards stipulates the following:

- (10) (2) A water services audit must contain details for the previous financial year and, if available, comparative figures for the preceding two financial years of-
 - (a) the quantity of water services provided, including at least
 - (i) the quantity of water used by each sector;
 - (ii) the quantity of water provided to the water services institution by another water services institution;
 - (iii) the quantity of effluent received at sewage treatment plants; and
 - (iv) the quantity of effluent not discharged to sewage treatment plants and approved for use by the water services institution;
 - (b) the levels of services rendered, including at least
 - (i) the number of user connections in each user sector;
 - (ii) the number of households provided with water through communal water services works;
 - (iii) the number of consumers connected to a water reticulation system where pressures rise above 900 kPa at the consumer connection;
 - (iv) the number of households provided with sanitation services through consumer installations connected to the sewerage system;
 - (v) the number of households with access to basic sanitation services;
 - (vi) the number of new water supply connections made; and
 - (vii) the number of new sanitation connections made;
 - (c) the numbers provided in compliance with paragraph (b) expressed as a percentage of the total number of connections or households;
 - (d) cost recovery, including at least
 - (i) the tariff structures for each user sector;
 - (ii) the income collected expressed as a percentage of total costs for water services provided; and
 - (iii) un-recovered charges expressed as a percentage of total costs for water services provided;

- (e) meter installation and meter testing, including at least
 - (i) the number of new meters installed at consumer installations; and
 - (ii) the number of meters tested and the number of meters replaced expressed as a percentage of the total number of meters installed at consumer connections;
- (f) the water quality sampling programme contemplated in regulation 5(1), the results of the comparison set out in regulation 5(3) and any occurrence reported in compliance with regulation 5(4)

Guidelines for Compulsory National Standards Regulation 5(1), stipulates:

Within two years of the promulgation of these Regulations, a water services authority must include a suitable programme for sampling the quality of potable water provided by it to consumers in its water services development plan.

Guidelines for Compulsory National Standards Regulation 5(3), stipulates:

A water services institution must compare the results obtained from the testing of the samples with SABS 241: Specifications for Drinking Water, or the South African Water Quality Guidelines published by the Department of Water Affairs and Forestry.

Guidelines for Compulsory National Standards Regulation 5(4), stipulates:

Should the comparison of the results as contemplated in sub regulation (3) indicate that the water supplied poses a health risk, the water services institution must inform the Director-General of the Department of Water Affairs and Forestry and the head of the relevant Provincial Department of Health and it must take steps to inform its consumers -

- (a) *that the quality of the water that it supplies poses a health risk;*
- (b) *of the reasons for the health risk;*
- (c) *of any precautions to be taken by the consumers; and*
- (d) *of the time frame, if any, within which it may be expected that water of a safe quality will be provided.*

- (g) water conservation and demand management, including at least
 - (i) the results of the water balance as set out in regulation 11;
 - (ii) the total quantity of water unaccounted for;
 - (iii) the demand management activities undertaken; and
 - (iv) the progress made in the installation of water efficient devices.

Guidelines for Compulsory National Standards Regulation 11, stipulates:

- (1) *Within two years of the promulgation of these Regulations, a water services institution must every month -*
 - (a) *measure the quantity of water provided to each supply zone within its supply area;*
 - (b) *determine the quantity of unaccounted for water by comparing the measured quantity of water provided to each supply zone with the total measured quantity of water provided to all user connections within that supply zone;*
 - (c) *measure the quantity of effluent received at each sewage treatment plant; and*
 - (d) *determine the quantity of water supplied but not discharged to sewage treatment plants by comparing the measured quantity of effluent received at all sewage treatment plants with the total measured quantity of water provided to all user connections.*
- (2) *A water services institution must -*
 - (a) *take steps to reduce the quantity of water unaccounted for; and*
 - (b) *keep record of the quantities of water measured and of the calculations made.*

Strategic Framework for Water Services (September 2003)

A water services authority must report annually and in a public way on progress in implementing the plan. The requirement that water services authorities regularly update their plans and report annually on progress against their plans will assist local communities and DWAF to assess how well water services authorities are performing relative to their stated

intentions and their capacity.

3. AVAILABILITY OF THE AUDIT REPORT

The report-

- a) Was made available at the end of **month year**, within four months after the end of the 2009/2010 financial year (before end of October) ; and
- b) By the middle of **December 20-- submitted** to the Minister, the Minister for Provincial and Local Government, the Member of the Executive Council responsible for local government in the relevant province and all the organisations representing municipalities having jurisdiction in the area of the water services authority.

The water services authority **did** publicise a summary of its report.

A copy of the report and of its summary was-

- a) made available for inspection at the following offices of the water services authority:
 - Office
 - Office
 - Office
- b) was obtainable against payment of a nominal fee of **Rxx.00**.

4. REPORT ON THE IMPLEMENTATION OF THE WATER SERVICES FOR THE 2009/2010 FINANCIAL YEAR

A water services audit must contain details for the previous financial year (2009/2010) and, if available, comparative figures for the preceding two financial years (2007/2008 and 2008/2009). Thus, this document focuses on reporting on the implementation of its WSDP for the 2009/2010 Financial Year.

COMPARATIVE FIGURES FOR THE PRECEDING TWO FINANCIAL YEARS		PREVIOUS FINANCIAL YEAR	CURRENT FINANCIAL YEAR	FOLLOWING FINANCIAL YEAR
2 ND Previous Financial Year	1 ST Previous Financial Year	Report On The Implementation Of Its WSDP	Currently Busy With The Implementation Of Its WSDP	Currently Busy With The Compiling Process Of The New WSDP
2007/2008	2008/2009	2009/2010	2010/2011	2011/2012

5. 2010/2011 WATER SERVICES AUDIT REPORT

Regulations under Section 9 of the Water Services Act, which include the water services audit as Section 10 of the Guidelines for Compulsory National Standards stipulates the following:

- (10) (2) A water services audit must contain details for the previous financial year and, if available, comparative figures for the preceding two financial years of-

5.1. QUANTITY OF WATER SERVICES PROVIDED [MI/y]

The quantity of water services provided, including the following: the quantity of water used by each sector; the quantity of water provided to the water services institution by another water services institution; the quantity of effluent received at sewage treatment plants; and the

quantity of effluent not discharged to sewage treatment plants and approved for use by the water services institution.

Sectors refer to urban and rural consumers. It may not be possible to carry out a full water balance outside of urban areas in the short term. It is for this reason that the tables require a distinction between urban and rural areas. As a start figures for the bigger schemes in rural areas need to be gathered and consolidated. As more information becomes available, a full water balance will be able to be achieved for the area as a whole.

Treated Water is normally supplied to the following sectors:

- Residential consumers refer to communal water supply, controlled volume supply and uncontrolled volume supply. Residential uncontrolled volume supply might include the following categories: Fully serviced houses [large erven], fully serviced town houses, fully serviced houses on small erven, Small houses [water connections, no sewage], Hostels, military camps, etc.
- Commercial supply refer normally to business
- Industrial Supply which implies Wet and Dry Industries.
- Other sector of supply include water supplied to other water services institutions

Raw Water refers to:

- The volume untreated water supplied
- Recycled water, from treated effluent (must be reported as a negative figure)

In order for a municipality to know the volume of water supplied, they also need to calculate their Physical water losses. Thus, the urban- and rural bulk water supply, raw and treated.

5.1.1. Quantity Of Water Used By Each Sector

The total quantity of water provided by the WSA to all consumers was 00.00M during 2010/2011. This is an indication of an increase / decrease of 00.00% the total volume provided to consumers over the past three years, due to

With Reference to: DWAf WSDP Guideline Aug 2010		Description	WSDP Implementa tion Report	Comparative Figures for the Preceding 2 Financial Years	
			Previous Financial Year	1 ST Previous Financial Year	2 ND Previous Financial Year
Chapter & Table	No.		2010/2009	2009/2008	2008/2007
8.2		Total Water supplied to Urban Consumers			
8.2		Total Water supplied to Rural Consumers			
		Total Water supplied			
8.3.1		Total raw water bulk losses			
8.3.2		Total treated water losses: Bulk			
8.3.3		Total treated water losses: Internal			
		Total Losses			

5.1.2. QUANTITY OF WATER PROVIDED TO THE WSA BY ANOTHER WATER SERVICES INSTITUTION

The total quantity of water provided to the WSA by another Water Services Institution or purchased from any external sources was 00.00M during 2009/2010. This is an indication of an increase / decrease of 00.00% the total volume provided to consumers over the past two three, due to

With Reference to: DWAF WSDP Guideline Aug 2010		Description	WSDP Implementa tion Report	Comparative Figures for the Preceding 2 Financial Years	
			Previous Financial Year	1 ST Previous Financial Year	2 ND Previous Financial Year
Chapter & Table	No.		2010/2009	2009/2008	2008/2007
9.1	ToT	Total Amount of Bulk Water Purchased from External Sources (Bulk purchase)			

5.1.3. QUANTITY OF EFFLUENT RECEIVED AT SEWAGE TREATMENT PLANTS

The total quantity of effluent received at sewage treatment plants was **00.00Ml** during 2009/2010. This is an indication of **an increase / decrease** of **00.00%** the total volume provided to consumers over the past two three, due to

With Reference to: DWAF WSDP Guideline Aug 2010		Description	WSDP Implementa tion Report	Comparative Figures for the Preceding 2 Financial Years	
			Previous Financial Year	1 ST Previous Financial Year	2 ND Previous Financial Year
Chapter & Table	No.		2010/2009	2009/2008	2008/2007
8.2 (11)	ToT	Total Quantity of Effluent Received at Waste Water Treatment Plants			

5.1.4. QUANTITY OF EFFLUENT NOT DISCHARGED TO SEWAGE TREATMENT PLANTS AND APPROVED FOR USE BY THE WATER SERVICES INSTITUTION

The total quantity of effluent not discharged to sewage treatment plants and approved for use by the WSA was **00.00Ml** during 2009/2010. This is an indication of **an increase / decrease** of **00.00%** the total volume provided to consumers over the past two three, due to

With Reference to: DWAF WSDP Guideline Aug 2010		Description	WSDP Implementa tion Report	Comparative Figures for the Preceding 2 Financial Years	
			Previous Financial Year	1 ST Previous Financial Year	2 ND Previous Financial Year
Chapter & Table	No.		2010/2009	2009/2008	2008/2007
8.2 (11)	ToT	The total quantity of effluent received at Waste Water Treatment Plants			
8.2 (11a)	ToT	The total quantity discharged from Waste Water Treatment Plants			
8.2 (13)	ToT	The total quantity returned to source from Waste Water Treatment Plants			
8.2 (14)	ToT	The total quantity recycled from Waste Water Treatment Plants			

5.2. LEVELS OF SERVICES RENDERED

NUMBER OF USER CONNECTIONS IN EACH USER SECTOR

The total number of user connections during 2009/2010 in each user sector indicates the following:

Consumer Units With Reference to: DWA WSDP Guideline Aug 2010
3.3 Residential, Public Institutions and Industries

With Reference to: DWA WSDP Guideline Aug 2010		Description	WSDP Implementa tion Report	Comparative Figures for the Preceding 2 Financial Years	
			Previous Financial Year	1 ST Previous Financial Year	2 ND Previous Financial Year
Chapter & Table	No.		2009/2010	2008/2009	2007/2008
3.3	TOT	Total Residential Consumer Units for Water	35949		
3.3	TOT	Total Residential Consumer Units for Sanitation	23852		
3.3	TOT	The number of Urban households provided with water through communal water services works			
3.3	TOT	The number of Rural households provided with water through communal water services works			
3.3	TOT	The number of Urban households provided with water through controlled volume water services works			
3.3	TOT	The number of Rural households provided with water through controlled volume services works			
3.3	TOT	The number of Urban households provided with water through uncontrolled volume water services works			
3.3	TOT	The number of Rural households provided with water through uncontrolled volume services works			
3.3	TOT	Residential Consumer Units for Water with none or inadequate supply	231		
3.3	TOT	Residential Consumer Units for Sanitation with none or inadequate supply	12328		
3.3	TOT	Police Stations Units for Water	5		
3.3	TOT	Police Stations Units for Sanitation	5		
3.3	TOT	Magistrate Offices Units for Water	0		
3.3	TOT	Magistrate Offices Units for Sanitation	0		
3.3	TOT	Businesses Units for Water			
3.3	TOT	Businesses Units for Sanitation			
3.3	TOT	Public Institutions and 'dry' industries for Water			
3.3	TOT	Public Institutions and 'dry' industries for Sanitation			
3.3	TOT	Prison Units for Water	0		
3.3	TOT	Prison Units for Sanitation	0		
3.3	TOT	School Units for Water	208		
3.3	TOT	School Units for Sanitation	208		
3.3	TOT	Hospital Units for Water	2		
3.3	TOT	Hospital Units for Sanitation	2		
3.3	TOT	Clinic Units for Water	15		
3.3	TOT	Clinic Units for Sanitation	15		
3.3	TOT	Wet Industries: Urban and Rural			
3.3	TOT	'Raw' Water Consumers: Urban and Rural			

Total Residential Consumer Units (New)

- Total Residential Consumer Units for Water, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to
- Total Residential Consumer Units for Sanitation, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

Residential Consumer Units: Communal Supply

- The number of Urban households provided with water through communal water services

- works indicate an increase decrease of 00.00% over the past three years, due to
- The number of Rural households provided with water through communal water services works indicate an increase decrease of 00.00% over the past three years, due to

Residential Consumer Units: Controlled Volume

- The number of Urban households provided with water through controlled volume water services works indicate an increase decrease of 00.00% over the past three years, due to
- The number of Rural households provided with water through controlled volume services works indicate an increase decrease of 00.00% over the past three years, due to

Residential Consumer Units: Uncontrolled Volume

- The number of Urban households provided with water through uncontrolled volume water services works indicate an increase decrease of 00.00% over the past three years, due to
- The number of Rural households provided with water through uncontrolled volume services works indicate an increase decrease of 00.00% over the past three years, due to

Residential Consumer Units: None or Inadequate Supply

- Residential Consumer Units for Water with none or inadequate supply, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to
- Residential Consumer Units for Sanitation with none or inadequate supply, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

Police Stations

- Police Stations Units for Water, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to
- Police Stations Units for Sanitation, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

Magistrate Offices

- Magistrate Offices Units for Water, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to
- Magistrate Offices Units for Sanitation, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

Businesses

- Businesses Units for Water, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to
- Businesses Units for Sanitation, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

Public Institutions and 'dry' industries

- Public Institutions and 'dry' industries for Water, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to
- Public Institutions and 'dry' industries for Sanitation, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

Office Buildings

- Office Buildings Units for Water, an increase decrease of 00.00% with regard to the total

- number of user connections over the past three years, due to
- Office Buildings Units for Sanitation, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

Prisons

- Prison Units for Water, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to
- Prison Units for Sanitation, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

Schools

- School Units for Water, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to
- School Units for Sanitation, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

Hospital

- Hospital Units for Water, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to
- Hospital Units for Sanitation, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

Clinics

- Clinic Units for Water, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to
- Clinic Units for Sanitation, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

Wet Industries

- Wet Industries: Urban and Rural, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

'Raw' Water Consumers

- 'Raw' Water Consumers: Urban and Rural, an increase decrease of 00.00% with regard to the total number of user connections over the past three years, due to

5.3. NUMBERS OF CONNECTIONS/HOUSEHOLDS PROVIDED

the numbers provided in compliance with paragraph (b) expressed as a percentage of the total number of connections or households

5.4. COST RECOVERY

With Reference to: DWA WSDP Guideline Aug 2010	Fixed Tariff		Volume Charges						
	Current 2010/ 2011	1ST Previous Financial Year 2009/ 2010	Block Definition 1. Kl per month from: _____to_____		Block Definition 2. Kl per month from: _____to_____		Block Definition 3. Kl per month from: _____to_____		
			Current 2010/ 2011	1ST Previous Financial Year 2009/ 2010	Current 2010/ 2011	1ST Previous Financial Year 2009/ 2010	Current 2010/ 2011	1ST Previous Financial Year 2009/ 2010	
10.3.1 Residential	Values to be given in R / kl for Current and Previous Financial Years								
Water	Communal Water Supply								
	Controlled Volume Supply	26.08	24.79	0	0	3.72	3.54	3.97	3.77
	Uncontrolled Volume Supply								
Sanitation	On site dry								
	On site wet (conservancy tanks etc.)								
	Water borne reticulated sanitation								
10.3.2 Industrial	Values to be given in R / kl for Current and Previous Financial Years								
	Water Industrial	54.59	51.89	3.3	2.88	3.3	2.88	3.3	2.88
	Sanitation Industrial								
10.3.3 Commercial	Values to be given in R / kl for Current and Previous Financial Years								
	Water Commercial	83.75	79.61	3.3	2.88	3.3	2.88	3.3	2.88
	Sanitation Commercial								
10.3.4 Other	Values to be given in R / kl for Current and Previous Financial Years								
	Water			3.03	4.38	3.03	4.38	3.03	4.38

10.4.1 Subsidy Targeting Approach	% of HH Targeted: Water	% of HH Targeted: Sanitation
Rising block tariff		
Service level targeting		
* Credits to Water account		
* Credits to Sanitation account		
* Number of units requiring free basic services (Water)		
* Number of units requiring free basic services (Sanitation)		
Number of units with access to free basic services		

5.4.1. TARIFF STRUCTURES FOR EACH USER SECTOR

The Tariff Structures for each User Sector during 2010/ 2011 indicates the following:

Fixed Charges: Residential For Water (p/month)

- Communal water supply, **an increase decrease** of **00.00%** over the past three years, due to
- Controlled volume supply, **an increase decrease** of **00.00%** over the past three years, due to
- Uncontrolled volume supply, **an increase decrease** of **00.00%** over the past three years, due to
-

Fixed Charges: Residential For Sanitation (p/month)

- On site dry, **an increase decrease** of **00.00%** over the past three years, due to
- On site wet (conservancy tanks etc.), **an increase decrease** of **00.00%** over the past three years, due to
- Water borne reticulated sanitation, **an increase decrease** of **00.00%** over the past three years, due to

Volume charges or other charge mechanisms: residential sanitation

- On site dry, **an increase decrease** of **00.00%** over the past three years, due to
- On site wet (conservancy tanks etc.), **an increase decrease** of **00.00%** over the past three years, due to
- Water borne reticulated sanitation, **an increase decrease** of **00.00%** over the past three years, due to

Fixed charges and block tariffs: industrial for

- Fixed monthly charge Water Industrial, **increase decrease** of **00.00%** over the past three years, due to
- Volume charge Water Industrial, **increase decrease** of **00.00%** over the past three years, due to
- Fixed monthly charge Sanitation Industrial, **increase decrease** of **00.00%** over the past three years, due to
- Volume charge Sanitation Industrial, **increase decrease** of **00.00%** over the past three years, due to

Fixed charges and block tariffs: commercial for

- Fixed monthly charge Water Commercial, **increase decrease** of **00.00%** over the past three years, due to
- Volume charge Water Commercial, **increase decrease** of **00.00%** over the past three years, due to
- Fixed monthly charge Sanitation Commercial, **increase decrease** of **00.00%** over the past three years, due to
- Volume charge Sanitation Commercial, **increase decrease** of **00.00%** over the past three years, due to

Fixed charges and block tariffs: other for water

- Fixed monthly charge, **increase decrease** of **00.00%** over the past three years, due to
- Volume charge, **increase decrease** of **00.00%** over the past three years, due to

5.4.2. INCOME COLLECTED EXPRESSED AS A % OF TOTAL COSTS FOR WATER SERVICES PROVIDED

With Reference to: DWA WSDP Guideline Aug 2010	Current 2010/2011	1ST Previous Financial Year 2009/2010	2ST Previous Financial Year 2008/2009
10.5 Metering, Billing & Income			
* 10.5.1 Residential: Water			
* Units Supplied			
* Metered %			
* Billed %			
* Not Metered			
* Income Received %			
* Non Payment %			
10.5.2 Industrial: Water			
Units Supplied			
Metered %			
Billed %			
Not Metered			
Income Received %			
Non Payment %			
* 10.5.3 Commercial: Sanitation			
* Units Supplied			
* Metered %			
* Billed %			
* Not Metered			
* Income Received %			
* Non Payment %			
10.5.4 Industrial: Sanitation			
Units Supplied			
Metered %			
Billed %			
Not Metered			
Income Received %			
Non Payment %			

- That the income collected expressed as a percentage of total costs for water services provided indicate **increase decrease** of **00.00%** over the past three years, due to
- That the un-recovered charges (non payment) expressed as a percentage of total costs for water services provided indicate **increase decrease** of **00.00%** over the past three years, due to

5.5. WATER QUALITY SAMPLING AND MONITORING PROGRAMME, RESULTS & ANY OCCURRENCE REPORTED ON

The water quality sampling programme contemplated in regulation 5(1), the results of the comparison set out in regulation 5(3) and any occurrence reported in compliance with regulation 5(4).

With Reference to: DWA WSDP Guideline Aug 2010	Current 2010/2011	1ST Previous Financial Year 2009/2010	2ST Previous Financial Year 2008/2009
9.2 Monitoring	% / 1-5 / Nr.		
9.2.1 % of water abstracted monitored: Surface water			
9.2.2 % of water abstracted monitored: Groundwater			
9.2.3 % of water abstracted monitored: External Sources (Bulk purchase)			
9.2.4 Water levels (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)			
9.2.5 Water quality? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)	3		
9.2.6 Borehole yields? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)	5		
9.2.7 Borehole abstraction? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)	3		
* 9.2.8 % Compliance to drinking water acceptable limits			
* 9.2.9 % Compliance to effluent release acceptable limits			
9.2.10 Number of monitoring points for drinking water sufficient			
9.2.11 Number of monitoring points for effluent release sufficient			
9.3 Water Quality			
9.3.1 Reporting on quality of water taken from source: urban & rural	Yes		
9.3.2 Quality of water returned to the resource: urban			
9.3.3 Quality of water returned to the resource: rural			
9.3.4 Is there a Pollution contingency measures plan in place?	Yes		
9.3.5 Quality of water taken from source: urban - % monitored by WSA self?	No		
9.3.6 Quality of water taken from source: rural - % monitored by WSA self?	No		
9.3.7 Quality of water returned to the source: urban - % monitored by WSA self?			
9.3.8 Quality of water returned to the source: rural - % monitored by WSA self?			
9.3.9 Are these results available in electronic format? (Yes/no)	No		
9.3.10 % Time (days) within SABS 241 standards per year	No		

- The % of water abstracted monitored: Surface water indicate **increase decrease** of **00.00%** over the past three years, due to
- The % of water abstracted monitored: Groundwater indicate **increase decrease** of **00.00%** over the past three years, due to
- The % of water abstracted monitored: External Sources (Bulk purchase) indicate **increase decrease** of **00.00%** over the past three years, due to
- The % of Water levels monitored: Surface water indicate **increase decrease** of **00.00%** over the past three years, due to

- The % of Water quality monitored: Surface water indicate **increase decrease** of **00.00%** over the past three years, due to
- The % of Borehole yields monitored: Surface water indicate **increase decrease** of **00.00%** over the past three years, due to
- The % of Borehole abstraction monitored: Surface water indicate **increase decrease** of **00.00%** over the past three years, due to
- The % Compliance to drinking water acceptable limits indicate **increase decrease** of **00.00%** over the past three years, due to
- The % Compliance to effluent release acceptable limits indicate **increase decrease** of **00.00%** over the past three years, due to
- The Number of monitoring points for drinking water sufficient indicate **increase decrease** of **00.00%** over the past three years, due to
- The Number of monitoring points for effluent release sufficient indicate **increase decrease** of **00.00%** over the past three years, due to
- The Reporting on quality of water taken from source: urban & rural indicate **increase decrease** of **00.00%** over the past three years, due to
- The Reporting on Quality of water returned to the resource: urban indicate **increase decrease** of **00.00%** over the past three years, due to
- The Reporting on Quality of water returned to the resource: rural indicate **increase decrease** of **00.00%** over the past three years, due to
- The Pollution contingency measures plan indicate **increase decrease** of **00.00%** over the past three years, due to
- The Reporting on Quality of water taken from source: urban - % monitored by WSA self indicate **increase decrease** of **00.00%** over the past three years, due to
- The Reporting on Quality of water taken from source: rural - % monitored by WSA self indicate **increase decrease** of **00.00%** over the past three years, due to
- The Reporting on Quality of water returned to the source: urban - % monitored by WSA self indicate **increase decrease** of **00.00%** over the past three years, due to
- The Reporting on Quality of water returned to the source: rural - % monitored by WSA self indicate **increase decrease** of **00.00%** over the past three years, due to
- The % results available in electronic format indicate **increase decrease** of **00.00%** over the past three years, due to
- The % Time (days) within SABS 241 standards per year indicate **increase decrease** of **00.00%** over the past three years, due to

00.00% over the past three years, due to

5.5.1. COMPARE WATER QUALITY RESULTS WITH REGULATIONS & STANDARDS

Quality of water taken from source

- Urban: % Time (days) within SABS 241 standards per year
- Rural: % Time (days) within SABS 241 standards per year

Quality of water returned to the resource

- Urban: Wastewater treatment works discharges to water resource: % time within requirements of special or general standards (Regulation 991)
- Rural: For wastewater treatment works discharges to water resource: % time within requirements of special or general standards (Regulation 991)

5.6. WATER CONSERVATION AND DEMAND MANAGEMENT

(i) the results of the water balance as set out in regulation 11 & (ii) the total quantity of water unaccounted for is already dealt with under (a) Quantity of Water Services Provided

5.6.1. DEMAND MANAGEMENT ACTIVITIES UNDERTAKEN

Water resource management interventions should be dealt with in supporting text and should deal with interventions such as the removal of invading plants, artificial recharge of aquifers, and rehabilitation of wetlands and clean up campaigns of rivers.

One of the key elements of a sustainable WC/WDM strategy is to develop and promote activities that are also beneficial to consumers. WSAs are encouraged to adopt a win-win approach and not introduce punitive measures unless they have to. One of the most effective ways to encourage consumers to use water more efficiently is through tariff mechanisms.

Unaccounted for water is defined as the difference between the measured volumes of water put into the supply system and the total volume of water measured to authorized consumers.

Internal plumbing leaks are leaks past the consumer meter. Such leaks can be assessed through sample surveys of consumer households and by analysing the minimum night flow of bulk meters.

Public information and school education programmes are key to highlighting the need and benefits of initiating WDM/WC strategies. These programmes could include brochures, paid advertising, newsletters or magazine inserts, demonstrations, exhibits, Internet web pages, informative billing, and demonstration gardens.

For DWAFs monitoring role, WSAs should report the information in the tables that follow.

Water Resource Management Interventions

With Reference to: DWA WSDP Guideline Aug 2010	Current 2010/2011	1ST Previous Financial Year 2009/2010	2ST Previous Financial Year 2008/2009
Number Of			
* 8.1.1 Reducing unaccounted water and water inefficiencies			
8.1.1.1 Night flow metering			
8.1.1.2 Day flow metering			
8.1.1.3 Reticulation leaks			
8.1.1.4 Illegal connections			
8.1.1.5 Un-metered connections			
8.1.1.6 Internal plumbing leaks			
* 8.1.2 Reducing high pressures for residential consumers			
Number of consumer units with water supply pressure of:			
8.1.2.1 <300kPa			
8.1.2.2 300 - 600kPa			
8.1.2.3 600 - 900kPa			
8.1.2.4 >900kPa (>9Bar)			
* 8.1.3 Leak and meter repair programmes			
Consumer units targeted by:			
8.1.3.1 Leak repair assistance programme			
8.1.3.2 Retro-fitting of water efficient toilets			
8.1.3.3 Meter repair programme			
8.1.4 Consumer/end-use demand management: Public Information & Education Programmes			
8.1.4.1 % Schools targeted by education programmes			
8.1.4.2 % Consumers targeted by public information programmes			

With Reference to: DWA WSDP Guideline Aug 2010	Current 2010/2011	1ST Previous Financial Year 2009/2010	2ST Previous Financial Year 2008/2009
Yes /No			
8.1.7 Does the municipality have a Water Conservation Demand Management Plan(WCDM)?			
8.1.8 Does the municipality have a strategy to meet 2014 targets?			
8.1.9 Is there an internal budget?			
8.1.10 Does the municipality apply through IDP funds for WCDM?			

- The% **Reducing unaccounted water and water inefficiencies** indicate **increase decrease** of **00.00%** over the past three years, due to
- The% **Reducing high pressures for residential consumers** indicate **increase decrease** of **00.00%** over the past three years, due to

- The% **Leak and meter repair programmes** indicate **increase decrease** of **00.00%** over the past three years, due to
- The% **Consumer/end-use demand management: Public Information & Education Programmes** indicate **increase decrease** of **00.00%** over the past three years, due to

5.6.2. PROGRESS MADE IN THE INSTALLATION OF WATER EFFICIENT DEVICES

Assistance projects are interventions of best management practices, which are funded or partially funded by WSAs. Examples include projects to repair plumbing leaks, to retrofit dual-flush toilets, installation of dual water distribution systems (i.e. the use of readily available saline groundwater for the flushing of toilets and treated potable water for drinking and other purposes) and to replace exotic gardens with alternative water wise gardens. More efficient use can also be made through recycling of water. This can be to different standards depending on what it will be used for. For example, consumers can be encouraged to use grey water, i.e. bath, shower, etc. for watering of their gardens.

6. CONCLUSIONS, RECOMMENDATIONS & THE WAY FORWARD

Strategic Framework for Water Services (September 2003):

A water services authority must report annually and in a public way on progress in implementing the plan. The requirement that water services authorities regularly update their plans and report annually on progress against their plans will assist local communities and DWA to assess how well water services authorities are performing relative to their stated intentions and their capacity.