**ANNEXURE 4**

**PROGRESS REPORT ON WC/WDM PER MUNICIPALITY**

A questionnaire was sent out to all municipalities to provide information on their progress with WC/WDM. Below is an example of the information received that will be used by the DWA to monitor the progress with WC/WDM in each municipality. Similar information was obtained from the West Coast District Municipality, and will still be sourced by the DWA from other municipalities.

Please note that this information is not really for discussion, but will allow the DWA in future to provide better feedback on WC/WDM in those towns reliant on the WCWSS for their water.

**WITZENBERG MUNICIPALITY**

**Historical data:**

The data below was also obtained for the towns Wolseley, Tulbach, PA Hamlet and Op die Berg

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Province** | | **Western Cape** | | | | | | | |
| **District Municipality** | | **Cape Winelands District Municipality** | | | | | | | |
| **Municipality** | | **Witzenberg** | | | | | | | |
| **Settlements** | | **Ceres** | | | | | | | |
| **Year ending June** | | | | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** |
| **Input Data (billed)** | | **Population** | |  |  |  |  | **35 506** |  |
| **Households** | |  |  |  |  | **7 797** |  |
| **Connections - metered** | | **5 831** | **5 831** | **5 831** | **5 835** | **5 839** | **5 859** |
| **Connections - Unmetered** | | **0** | **0** | **0** | **0** | **0** | **0** |
| **(A) System input volume** | **kl/annum** | **3 264 229** | **3 453 860** | **3 495 862** | **3 642 054** | **3 936 466** | **3 911 044** |
| **(B) Billed metered consumption** | **kl/annum** | **1 920 709** | **1 968 729** | **2 027 712** | **2 565 359** | **2 852 393** | **2 817 599** |
| **(C) Billed unmetered consumption** | **kl/annum** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Input Data (unbilled & lost)** | | **(D) Unbilled metered** | **kl/annum** | **0** | **0** | **0** | **0** | **0** | **0** |
| **(E) Unbilled un-metered** | **kl/annum** |  |  |  |  |  |  |
| **(F) Apparent losses** | **kl/annum** | **268 704** | **297 026** | **293 630** | **215 339** | **216 815** | **218 689** |
| **(G) Real losses** | **kl/annum** | **1 074 816** | **1 188 105** | **1 174 520** | **861 356** | **867 258** | **874 756** |
| **Unaccounted for water** | | **1 343 520** | **1 485 131** | **1 468 150** | **1 076 695** | **1 084 073** | **1 093 445** |
| **Water Balance Calculations** | | **Revenue water (B+C)** | **kl/annum** | **1 920 709** | **1 968 729** | **2 027 712** | **2 565 359** | **2 852 393** | **2 817 599** |
| **Non-Revenue water (D+E+F+G)** | **kl/annum** | **1 343 520** | **1 485 131** | **1 468 150** | **1 076 695** | **1 084 073** | **1 093 445** |
| **% Non-revenue water** | | **41%** | **43%** | **42%** | **30%** | **28%** | **28%** |
| **Key performance indicators** | **Based on input volume** | **Litres / capita / day** | |  |  |  |  | **304** |  |
| **m³ / household / month** | |  |  |  |  | **42** |  |
| **Based on billed authorised consumption (B+C)** | **Litres / capita / day** | |  |  |  |  | **220** |  |
| **m³ / household / month** | |  |  |  |  | **30** |  |
|  |  |  |  |  |  |  |  |  |  |
| ***A =*** *total water treated and measured at treatment works outlet + any other water pumped directly into reticulation system + total purified water purchased from bulk waster services provider* | | | | | | | | | |
| ***B =*** *water that is metered and billed* | | | | | | | | | |
| ***C =*** *water billed at a flat rate tariff + free basic water through un-billed, un-metered standpipes or connections* | | | | | | | | | |
| ***D =*** *Parks & possibly government buildings* | | | | | | | | | |
| ***E =*** *water used for legitimate purposes such as fire-fighting. Also usage above free basic water for unmetered unbilled standpipes and yard connection usage* | | | | | | | | | |
| ***F =*** *water used through illegal connections; water used but not billed because of inaccurate meters, data transfer errors, or any other structural failures and administrative errors* | | | | | | | | | |

**WATER DEMAND MANAGEMENT**

**Witzenberg Municipality**

Significant gaps in the database of the Witzenberg Municipal water figures results in a lack of accurate water meter readings and a general lack of the ability of the municipality to determine losses and Non Revenue water. This gap was already identified in 2006 and a consultant appointed with funding from the Masibambani program to developed a WDM strategy.

The Strategy includes the following:

* Synchronise the meter reading times between the financial and technical Departments.
* Monthly internal water audit.
* Set own benchmark values for performance indicators like water consumption and UAW and measure the success of interventions against these benchmarks.
* Purchase and install a data logger on a rotation base to determine night flows at critical points.
* Calculate safe yields from existing resources and do safe yield tests on ground water systems.
* Adopt a service level policy and use this policy to re-evaluate the long term water needs.
* Investigate alternative resources where applicable in collaboration with DWAF or CMA, where applicable. Ensure participation on these catchment structures.
* Implement a meter replacement program.
* Incorporate water saving devices into the existing bylaws.
* Ensure that an appropriate block tariff structure is in place that will assist with effective water use and support the free basic water policy.
* Design and implement a public participation process to ensure effective WDM.

**Actions taken based on the adopted strategy:**

* Repaired/replacement of damaged Bulk Supply meters – by municipality and contractor as part of annual maintenance program. (80% completed)
* Repaired/replacement of damaged Bulk Consumer meters – by municipality. Ongoing, depends on municipal funding – backlog erased.
* Repaired/replacement of damaged Household meters by the appointed plumbing contractor who repairs the lists of household water meters reported by water meter readers (Dept Finance – Treasury) – the fourth contract is currently in process. Total number repaired/replaced = ± 1000 meters.
* Adding an “extract” function to the SAMRAS system to easily extract water consumption sales figures used in determination of UAW - done as part of RBIG planning study and implemented.
* Creation of a spreadsheet data bank of monthly readings taken from Bulk Supply Meters.
  + Readings are collected monthly from the responsible persons.
  + Reports of damaged meters and actions to repair/replace are included in monthly reports from network teams.
* Creation of a spreadsheet data bank of monthly sales figures to consumers.
  + PUDJA consulting Engineers developed this data bank which is maintained by the municipality on a monthly basis.
* Water meters are now a store item in the municipal stores and bulk supply meters can be readily drawn from the stores versus long lead times previously. Bulk meters can now be purchased from preferred suppliers in accordance with procurement procedures.
* Monthly internal water audit required – regular auditing is being done.
* Purchase and install data loggers and rotate – completed (5 purchased) and in use.
* Implement a water meter replacement programme – Already busy with fourth contract via an annual tender process – own municipal funding.
* Formation of a databank of positional co-ordinates and photos of Bulk Supply meters for easy and readily available information of meter infrastructure.
* The municipal officials taking ownerships of the monthly water audit process (UAW). New initiatives proposed by DBSA and PUDJA consultants are embraced by the municipal staff and is beneficial to the UAW activities. Quarterly progress meetings held with support staff to monitor progress.
* Regular data recording and analyses.
* Pipe and Valve replacement programmes.
* Monthly water audit (UAW) calculations are done and included in the monthly report produced by Technical Department to the Technical committee and councillors.

**Work ahead (2010/11 to 2012/13):**

* Creation of smaller zones to be able to “pin point” unaccounted water.
* Determine night flows in different towns with the use of the data loggers.
* Update GIS/ArcView with the UAW data to have it accessible to more municipal officials.
* Signage all Bulk Supply water meters on site for easy identification, particularly during and after staff turnover when site knowledge is lost.
* Install telemetry at all bulk water meters which will allow real-time data collection, immediate alerts to faulty meters and easy manipulation of data to synchronise with timings of financial department consumer readings.
* Implement contract to verify the accuracy of all water meters in terms of installation, seizing and metering.
* Cooperate with Finance Dept to assure that reading of house hold meters and bulk meters takes place at the same time seeing that the difference in time are currently affecting the actual true calculation of UAW.
* Implement WDM social public participation structures to ensure awareness.
* Develop meter replacement strategy.

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