12. Strategic Objectives and Development Goals

12.1 KZN PGDS Strategic Framework

The ZDM WSDP supports the KZN PGDS Strategic Framework. WSDP goals, objectives, interventions and projects are aligned to place ZDM in a position to fulfil its role as WSA in achieving the provincial PGDS for 2035.

While the focus has been predominantly on providing each person with sustainable infrastructure and eradicating backlogs, the status of existing and aging infrastructure, as well as the availability and sustainability of water resources has been neglected. An extract of the KZN PGDS can be reviewed below.

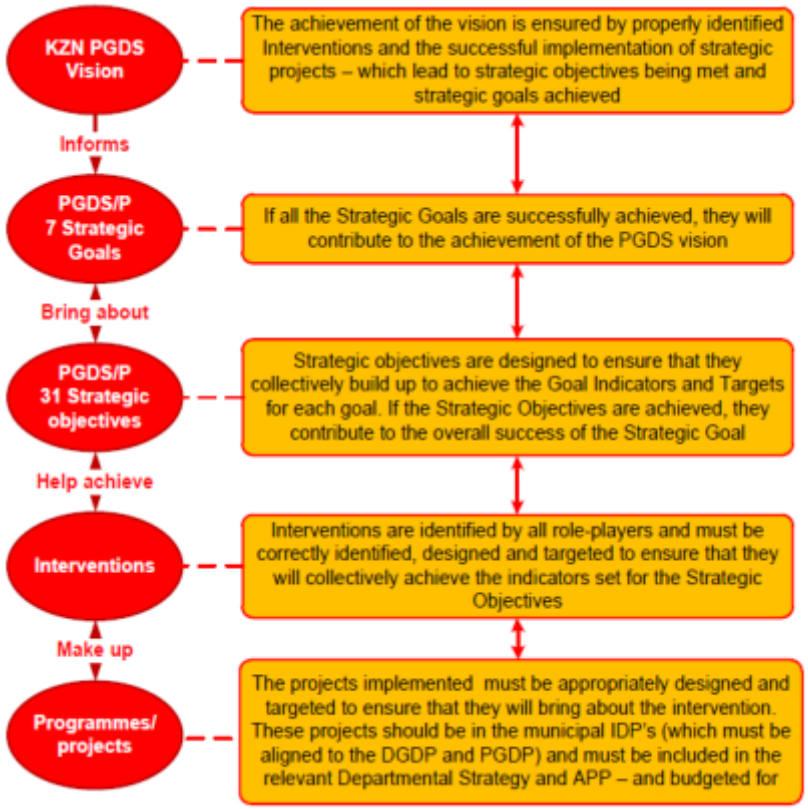
> *"The 2015/2016 drought experienced in the country and more so in the Province has had a severe impact on the citizens of the Province and their livelihoods. The most severe impact has been felt by the rural communities of KZN whose livelihoods depend on agriculture, including livestock. The Province, through various initiatives and programs, has attempted to ensure a reliable supply of water to its citizens. The continued low rainfall has made this task increasingly challenging. National and Provincial government have spent millions of rand to ensure citizens have access to water.*
>
> ***The discourse on reliable and affordable water supply has forced the water sector to re-look at several aspects of the water source management and water supply**. In terms of water source it is being argued that the Province requires a better understanding of groundwater and its catchment areas. This strategy argues that water planning and resource management should be done at a quaternary catchment level - the focus should not only be at regional level. Alternative water sources, like grey water and desalination must become viable options as sources of supply.*
>
> ***There is also a school of thought that the severity of the drought is a direct correlation to the poor maintenance programs of water services authorities**. These related to poor borehole upgrades and spring protection, high water losses due to leakages not been attended to urgently, water theft and lack of bulk and reticulation planning.*
>
> *Skills development and capacity building, in the water sector continues to be an area of investigation in this review. There is a school of thought that argues that the skills required are more at an artisan level rather than at engineering level. This relates to the **maintenance issue around boreholes and spring protection and attendance of water leaks**. There is, however, another school of thought that water services authorities have focused more on **water demand** rather than water source management and that shift must be emphasised. Further, there is increasing pressure being put on the water sector institution to begin to develop a **sustainable water sector capacity building model**. The water services boards, the water services departments and the water services authorities all have various levels and type of expertise within their institutions. Therefore, these institutions along with engineering councils and the private sector must begin to provide a holistic sustainable **capacity***

> ***building model*** *that contributes to a new water sector investment strategy. In addition, there is a growing demand for* ***localized water skills*** *at all levels as well as employment and business opportunities. The water sector through the vast capital spend have the potential to improve* ***employment opportunities and create entrepreneurs in decentralized local spaces****.*
>
> ***The financial cost of water supply cannot be underestimated and the Province needs to have a funding model to address this****. Like energy, water costs will increase and become increasingly expensive for consumers and business, thus the importance of having a* ***reliable and affordable water supply****. The Department of Water and Sanitation in the Province have several key capital water projects that will ensure a relative supply of water in the province. The growing concerns will be the pace at which our province is urbanizing and the greater demand this will have on water provision in these urbanized areas as well as to ensure reliable access to water, in rural areas.*
>
> *Given the above, the Province in the next five years must engage in the development of a new water sector investment strategy. This strategy must include* ***elements of water loss and maintenance, water availability, cost of water supply****. In addition, the strategy should include water source plans that consider ground water, desalination, grey-water. Further a discussion on localized skills and local business development. Greater emphasis on improving rural access to water and increasing mitigating measures to this section of our population."*

As water provision will increase, so will water resources needs, operation and maintenance of existing infrastructure, efficient institutional and financial capacity to manage infrastructure and revenue etc. The KZN PGDS Framework aims to achieve at least 90% reliable services by 2035.

An overview of the KZN PGDS framework with associated goals and objectives for water and sanitation services can be reviewed in the next figure.

Figure 12.1: KZN PGDS Framework



The 2016 Revised PGDS Strategic Framework

Figure 10: PGDS Strategic Framework

2016 PGDS STRATEGIC GOALS and OBJECTIVES

STRATEGIC GOAL	No	STRATEGIC OBJECTIVE 2016
1 INCLUSIVE ECONOMIC GROWTH	1.1	Develop and promote the agricultural potential of KZN
	1.2	Enhance sectoral development through trade investment and business retention
	1.3	Enhance spatial economic development
	1.4	Improve the efficiency, innovation and variety of government-led job creation programmes
	1.5	Promote SMME and entrepreneurial development
	1.6	Enhance the Knowledge Economy
2 HUMAN RESOURCE DEVELOPMENT	2.1	Improve early childhood development, primary and secondary education
	2.2	Support skills development to economic growth
	2.3	Enhance youth and adult skills development and life-long learning
3 HUMAN AND COMMUNITY DEVELOPMENT	3.1	Eradicate poverty and improve social welfare services
	3.2	Enhance health of communities and citizens
	3.3	Safeguard and enhance sustainable livelihoods and food security
	3.4	Promote sustainable human settlements
	3.5	Enhance safety and security
	3.6	Advance social cohesion and social capital
	3.7	Promote youth, gender and disability advocacy and the advancement of women
4 INFRASTRUCTURE DEVELOPMENT	4.1	Development of seaports and airports
	4.2	Develop road and rail networks
	4.3	Develop ICT infrastructure
	4.4	Ensure availability and sustainable management of water and sanitation for all
	4.5	Ensure access to affordable, reliable, sustainable and modern energy for all
	4.6	Enhance KZN waste management capacity
5 ENVIRONMENTAL SUSTAINABILITY	5.1	Enhance resilience of ecosystem services
	5.2	Expand the application of green technologies
	5.3	Adapt and respond climate change
6 GOVERNANCE AND POLICY	6.1	Strengthen policy, strategy coordination and IGR
	6.2	Build government capacity
	6.3	Eradicate fraud and corruption
	6.4	Promote participative, facilitative and accountable governance
7 SPATIAL EQUITY	7.1	Enhance the resilience of new and existing cities, towns and rural nodes, ensuring equitable access to resources, social and economic opportunities
	7.2	Ensure integrated land management use across the Province, ensuring equitable access to goods and services, attracting social and financial investment

Strategic Objectives and Interventions for the KZN PGDS can be reviewed below.

Figure 12.2: KZN PGDS Strategic Objectives and Interventions

Strategic Objective 4.4 Indicators:

4.4.1 Percentage mean annual runoff water stored in each district.
4.4.2 Quantity of water abstracted per annum in each district.
4.4.3 Number of households receiving minimum standards of sanitation.
4.4.4 Percentage households with access to safe drinking water
4.4.5 Cubic meters of water available.
4.4.6 Surface Water storage as a percentage of surface mean annual runoff per district.
4.4.7 Non-Revenue Water loss – (physical and non-physical water loss).
4.4.8 Number of projects not approved due to bulk Water and Sanitation Infrastructure constraint.
4.4.9 Number of MIG and WSIG projects meeting 75 litres of water per person per day.

Strategic Objective 4.4 Interventions:

4.4(a) Review and implement the Provincial Water Sector Investment Strategy.
4.4(b) Policy and guidelines on the inclusion of quaternary catchment for groundwater, grey water and desalination.
4.4(c) Develop and implement water sector capacity building programme with all water institutions.
4.4(d) Develop new water and sanitation tariff policy.
4.4(e) Expedite the approval of Water Use Licences.
4.4(f) Programme for development of water sources (desalination, rainwater, recycling, groundwater).
4.4(g) Expedite the planning and implementation of sub-transmission networks in the Province.

The ZDM WSDP support the above framework, and will elaborate on each aspect in more details throughout the document under each relevant chapter. The following provides a framework for these topics under 11 categories as depicted in the KZN PGDS document.

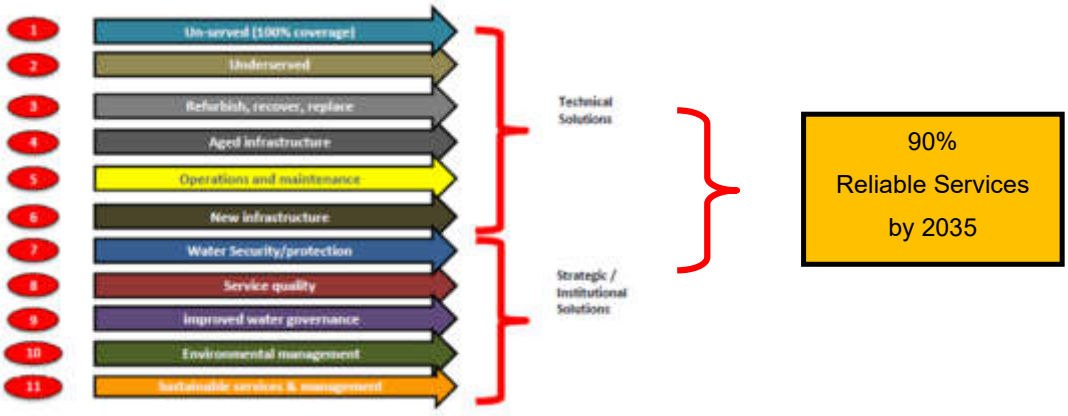


Figure 12.3: KZN PGDS Strategic Framework

These 11 categories are consolidated in the WSDP under the following topics as required by the web-based WSDP template of DWS:

- CHAPTER 1: Socio-Economic Profile
- CHAPTER 2: Service Level & Associated Services Profiles
- CHAPTER 3: Water Resources Profile
- CHAPTER 4: Operation and Maintenance
- CHAPTER 5: Water Conservation & Demand Management
- CHAPTER 6: Water & Sanitation Services Profile
- CHAPTER 7: Water Balance
- CHAPTER 8: Institutional Profile
- CHAPTER 9: Customer Service
- CHAPTER 10: Financial Profile
- CHAPTER 11: Project Rollouts
- CHAPTER 12: Strategic Goals

This section will therefore elaborate on strategic objectives, goals and mitigation interventions in the light of the 2035 KZN PGDS. Associated KPI's for each KPA will be summarised and monitored.

CHAPTER 1. Demographic Profile

ZDM aims to maintain an accurate up-to-date demographic profile of the entire district. Household counts are spatially updated when new aerial imagery is available from NGI. This allows for spatial analysis on actual water and sanitation access points on the ground and not merely figures per ward. Settlements types, densities and population figures are updated with each household review.

Demographics are also compared against the 2011 Census figures.

Table 12.4: ZDM and STATSSA Census 2011 household growth analysis (2005 - 2017)

	Actual Household Statistics (Captured from aerial photography over 4 consequtive periods) vs CENSUS Data												
Local Municipality	**2006**	**2009 (AERIALS)**	**2010**	**2011 (CENSUS)**	**2012**	**2013 (AERIALS)**	**2014**	**2015**	**2016 (COMM SURVEY)**	**2016 (AERIALS)**	**Annual household growth rate**	**Average Population per household**	**Total Population (ZDM)**
AbaQulusi	36 069	40 302				45 918				47 119	0.9%	4.90	230 883
eDumbe	15 011	16 880				16 671				17 641	1.9%	5.10	89 969
Nongoma	34 056	38 171				45 670				44 376	-0.9%	4.40	195 254
Ulundi	35 309	37 365				46 450				44 987	-1.1%	5.70	256 426
uPongolo	22 098	25 136				28 468				29 519	1.2%	5.40	159 403
Total	**142 543**	**157 854**		**157 748**		**183 177**			**178 516**	**183 642**	**0.41%**	**5.10**	**931 935**

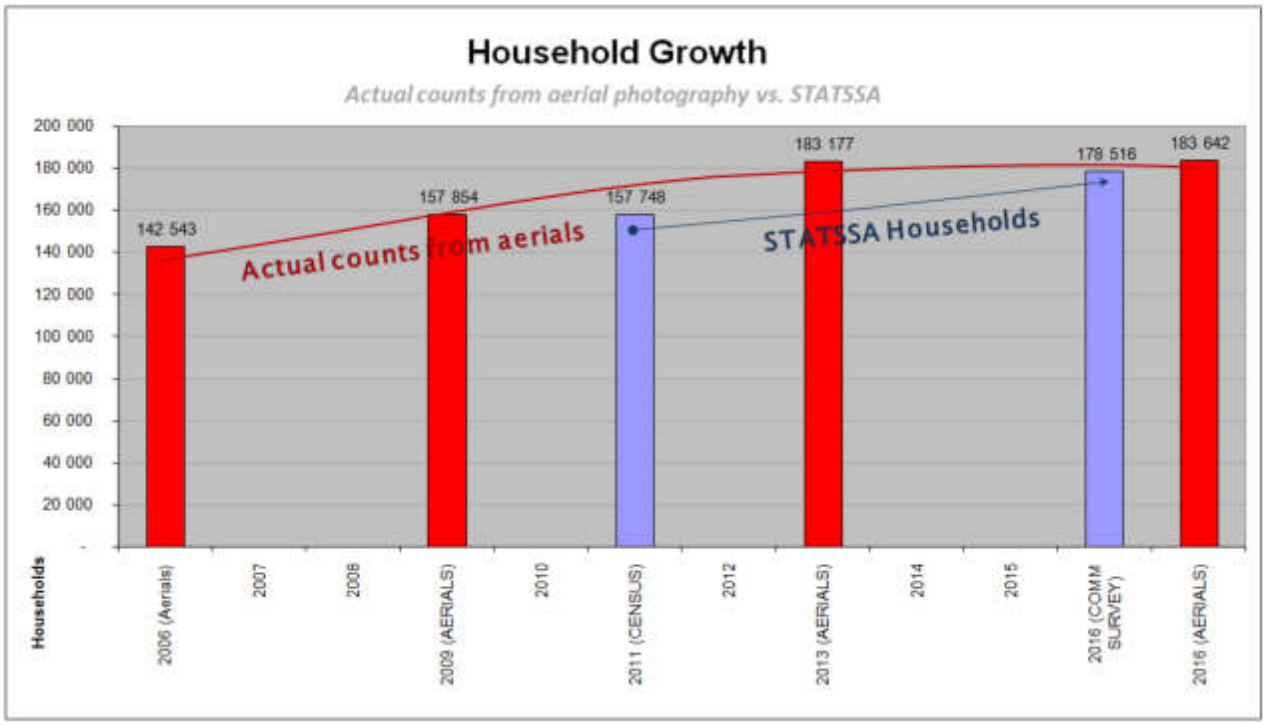


Figure 12.5: ZDM household growth analysis (2005 - 2017)

KPI's for this topic include updating and maintaining the household and settlement data set.

CHAPTER 2. Service Level & Associated Services Profile

ZDM maintain its service level profile throughout the year, ensuring that all service level data is relevant and up-to-date as projects are completed. There is however limited data available on Public Institutions and Industries, and will need to be addressed in future.

Backlogs are systematically and progressively eradicated based on prioritisation models for each type of project. Rollout projects are listed per financial year based on each prioritisation model and available funding for each year.

Table 12.1: Settlement Types for ZDM

Class	Settlement Type	Nr of Settlements	Total households
URBAN	Urban - Formal Town	4	6 425
	Urban - For hip	5	14 675
	Urban - Ex own	13	10 233
	Urban - Working Town	6	1 335
	Urban - Service Centre	8	1 549
	Urban - Squatter Camp	1	115
RURAL	Urban Fringe - Informal Settlement	19	8 906
	Peri-Urban - Squatter Camp	1	284
	Rural - Formal Dense >5000	2	3 046
	Rural - Formal Dense <5000	35	10 310
	Rural - Scattered Dense	5	2 612
	Rural - Scattered Medium Density	5	223
	Rural - Scattered Low Density	59	10 732
	Rural - Scattered Very Low Density	1 106	107 422
	Rural - Scattered households	N/A	5 775
	TOTAL	**1 269**	**183 642**

CHAPTER 2A. Un-served (Backlogs)

ZDM aims to eradicate all water and sanitation backlogs through various programmes. All settlements have been prioritised per individual programme, and implementation will continue as funding allocations allow it.

WATER

At present there are approximately 21 540 households regarded as backlogs for water (no formal water services). The total outstanding planned budget for regional and stand-alone schemes at present is R4 247 313 477, with a MIG funding allocation of R251 033 350 for the previous financial year. This results in ZDM being able to eradicate all existing backlogs with regional and stand-alone schemes by 2034/2035.

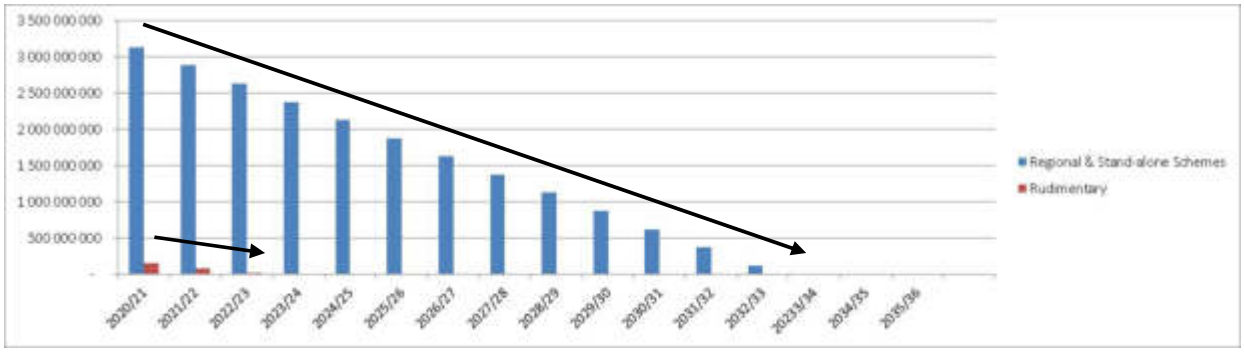


Figure 12.6: Water Backlog Eradication Goals

SANITATION

Sanitation backlogs in terms of rural RDP standards comprises of a total of 30 586 households. With a total cost of R380 070 000 and an annual budget allocation of R51 312 000, it will take approximately 7 years to eradicate all rural sanitation backlogs. This is well within the reach of the 2035 goals.

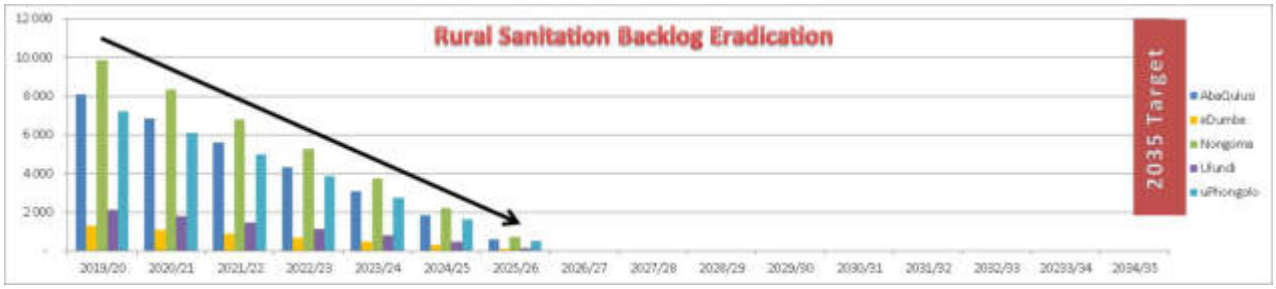


Figure 12.7: Sanitation Backlog Eradication Goals

CHAPTER 2B. Under-served (Below RDP)

ZDM aims to provide all households with RDP level services. However, due to the difficult topology of ZDM and water scarcity in various places, water services in the form of sustainable schemes up to RDP level are not possible. In these cases ZDM aims to provide at least a rudimentary level of service in the form of rudimentary boreholes equipped with 800m communal standpipes, handpumps, or protected springs with standpipes where possible. At present approximately 21 171 households fall in this category, at a cost of R328 378 000. The funding allocation for rudimentary projects at present is R 39 378 000. ZDM aims to provide rudimentary services to these settlements by 2026/2027. Should alternative options such as a new production borehole allow for more sustainable water supply, settlements will be upgraded from rudimentary to RDP level of services.

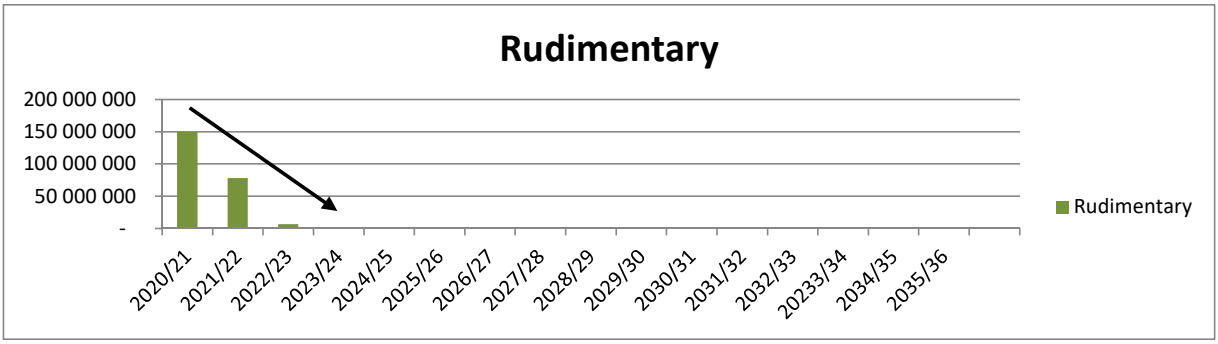


Figure 12.8: Under-served Water Provision Goals

KPI's include reaching the planned backlogs indicated on the rollout projects per financial year.

CHAPTER 3. Water Resource Profile

The ZDM falls within the Mfolozi (W2), Mkuze (W3) and Pongola (W4) secondary catchments of the Usuthu/Mhlathuze Water Management Area (WMA)[1]. The aerial extent of the ZDM occupies approximately 22% of this WMA. . The total available water and requirements as at year 2000, based on a 98% assurance of supply within these sub-areas, is summarised in Table 12.3. It is evident that apart from the Pongola catchments, water from these sub-areas is currently over-utilised and a deficit is created. However, according to Basson and Rossouw[2], this deficit is a result of the provision made for future implementation of the Reserve. The Reserve is a legislated requirement of the amount of water required to satisfy the ecological needs of a river system (provisionally estimated at 20%) as well as the basic human needs (that have been established as 25 litres per person per day).

Table 12.3: Water balance - summary of the water available and required within Zululand District Municipality for the year 2000 (Million m^3 (kℓ) per annum).

			Mfolozi	Mkuze	Pongola	Total
Available water	Natural resource	surface water	36	15	616	667
		groundwater	5	12	8	25
	Usable return flow	Irrigation	5	6	21	32
		Urban	4	0	0	4
		Mining & bulk	1	0	0	1
	Total local yield*		**51**	**33**	**645**	**729**
	Transfers in		0	30	0	30
		Total available	**51**	**63**	**645**	**759**
Water requirements	Consumer groups	Irrigation	51	61	213	325
		Urban**	12	1	1	14
		Rural**	11	10	6	27
		Mining & bulk industrial***	4	0	1	5
		Afforestation****	2	6	34	42
	Total local requirements		**80**	**78**	**255**	**413**
	Transfers out		18	0	30	**48**
		Total used	**98**	**78**	**285**	**461**
Balance			**-47**	**-15**	**360**	**298**

[1] *The Usuthu/Mhlathuze WMA is one of 19 areas defined across South Africa in terms of the National Water Act, 1998 (Act 36 of 1998). These WMAs have been defined to improve water resource management within South Africa. With time, each of the WMAs will establish a catchment management agency (CMA) for the regulation and control of water use in the WMA.*
[2] *Op cit 2 at 23.*

Source: Basson and Rossouw (2003).
**Includes allowance for impacts of the ecological component of the Reserve, river losses, alien vegetation, rain-fed agriculture and urban run-off on yield.*
***Includes allowance for basic human needs component of the Reserve (25 ℓ/c/d).*
****Mining and bulk industrial water uses that are not part of the urban system.*
*****Afforestation quantities refer to the impact on yield only.*

CHAPTER 4: Operation & Maintenance

Of critical importance is the funding of Operations and Maintenance of existing and future schemes as they are being commissioned. Correct O&M of physical infrastructure is arguably more important than infrastructure construction because unless successful preventative maintenance procedures are instituted schemes will become inoperative. As a large proportion of expenditure relates to staff, competent personnel are required to ensure that the large investments in water services are not negated through dysfunction or dereliction.

This section looks at existing infrastructure which have reached its end of lifespan, and whether refurbishment, O&M or replacement is necessary for sustainable service delivery. This is applicable for water and sanitation components such as WTW's or Pump Stations, but also for scheme networks where infrastructure has deteriorated or reached the end of its lifespan. It furthermore entails O&M for all borehole and spring protection services where O&M plays a significant role.

Other factors influencing proper O&M include Staff capacity, external resources, equipment and budget requirements.

Table 12.4 below shows the operational costs associated with the provision of water services in the district against the total income. At present a significant deficit exists for O&M, and ZDM is addressing these issues through various means.

Table 12.4: Operational costs and income

Operating costs and income	Total 5yr projected	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Operational costs	R 2 584 611 744	R 431 009 527	R 470 231 394	R 513 022 451	R 559 707 494	R 610 640 876
Personnel costs	R 915 267 755	R 152 629 935	R 166 519 259	R 181 672 512	R 198 204 710	R 216 241 339
Total O&M costs	**R 3 499 879 499**	**R 583 639 462**	**R 636 750 654**	**R 694 694 963**	**R 757 912 205**	**R 826 882 215**
Equitable share: FBS	R 2 328 387 910	R 388 281 673	R 423 615 306	R 462 164 298	R 504 221 250	R 550 105 383
Income: sales (actual payment)	R 133 386 724	R 22 243 553	R 24 267 717	R 26 476 079	R 28 885 402	R 31 513 974
Total income	**R 2 461 774 634**	**R 410 525 227**	**R 447 883 022**	**R 488 640 377**	**R 533 106 652**	**R 581 619 357**
Deficit/surplus	**R -1 038 104 865**	**R -173 114 236**	**R -188 867 631**	**R -206 054 586**	**R -224 805 553**	**R -245 262 859**

KPI's include maintaining proper O&M on relevant assets, as well as keeping staff and budget requirements in place.

CHAPTER 5. Water Conservation & Demand Management

This section looks at water conservation such as waterlosses due to leaks and illegal connections, and preventative measures to reduce waterlosses.

At present ZDM suffers significant waterlosses in some areas due to old leaking infrastructure as well as illegal connections. A waterloss programme was initiated but will need to be expanded to all water schemes.

<table>
<tr><td rowspan="8">System Input Volume</td><td rowspan="3">Authorized Consumption</td><td rowspan="2">Billed Authorized Consumption</td><td>Billed Metered Consumption</td><td rowspan="2">Revenue Water</td></tr>
<tr><td>Billed Unmetered Consumption</td></tr>
<tr><td rowspan="2">Unbilled Authorized Consumption</td><td>Unbilled Metered Consumption</td><td rowspan="6">Non Revenue Water</td></tr>
<tr><td>Unbilled Unmetered Consumption</td></tr>
<tr><td rowspan="5">Water Losses</td><td rowspan="2">Apparent Losses</td><td>Unauthorized Consumption</td></tr>
<tr><td>Customer Meter Inaccuracies and Data Handling Errors</td></tr>
<tr><td rowspan="3">Real Losses</td><td>Leakage on Transmission and Distribution Mains</td></tr>
<tr><td>Leakage and Overflows at Storage Tanks</td></tr>
<tr><td>Leakage on Service Connections up to point of Customer Meter</td></tr>
</table>

Figure 12.9: IWA Method of categorizing water use

KPI's include reducing unaccounted water and water inefficiencies identified by a waterloss programme.

CHAPTER 6. Water and Sanitation Services Profile

Water and sanitation level of services and classifications as per web-based WSDP requirements are maintained throughout the year as projects are completed.

Table 12.3: Access to water (households)

Water	None or Inadequate	Rudimentary <RDP	Communal standpipes RDP	Yard/House connections >RDP	TOTALS
AbaQulusi LM	0	0	0	16 000	16 000
eDumbe LM	0	0	0	5 458	5 458
Nongoma LM	0	0	0	632	632
Ulundi LM	0	0	0	5 912	5 912
uPhongolo LM	0	0	0	4 009	4 009
Total (urban)	**0**	**0**	**0**	**32 011**	**32 011**
AbaQulusi LM	6 768	3 886	10401	9 749	31 119
eDumbe LM	2 775	726	1628	6 940	12 183
Nongoma LM	6 547	10 626	10 969	15 601	43 744
Ulundi LM	3 143	2 256	14 333	19 208	39 075
uPhongolo LM	1 307	1111	2570	16 478	25 510
Total (rural)	**20 540**	**18 605**	**39 901**	**67 976**	**151 631**
Total (households)	**20 540**	**18 605**	**39 901**	**99 987**	**183 642**

Table 12.4: Access to sanitation

	None or Inadequate (Excl. Infills/Replacemen	VIP RDP	Septic tank RDP	Waterborne >RDP	TOTALS
AbaQulusi LM	0	0	1035	14 965	16 000
eDumbe LM	0	2981	498	1 979	5 458
Nongoma LM	0	283	0	349	632
Ulundi LM	0	635	0	5 277	5 912
uPhongolo LM	0	698	0	3 311	4 009
Total (urban)	**-**	**4 597**	**1 533**	**25 881**	**32 011**
AbaQulusi LM	8 098	22 597	424	0	31 119
eDumbe LM	1 288	10 629	266	0	12 183
Nongoma LM	9 854	33 890	0	0	43 744
Ulundi LM	2 123	36 900	52	0	39 075
uPhongolo LM	7 223	17 951	336	0	25 510
Total (rural)	**28 586**	**121 967**	**1 078**	**0**	**151 631**
Total (households)	**28 586**	**126 564**	**2 611**	**25 881**	**183 642**

KPI's include reaching the planned backlogs indicated on the rollout projects per financial year.

KPI's for this topic include updating and maintaining the household and settlement data set with regards to level of services.

CHAPTER 7. Water Balance

Water resources looks at availability and sustainability of groundwater, surface water, bulk raw water purchases, rain water harvesting and the sustainability and cost-effectiveness of obtaining water from the various resources.

Water balance for ZDM was done in 2000 but will need a complete update.

Table 12.8: Water balance - summary of the water available and required within Zululand District Municipality for the year 2000 (Million m^3 (kℓ) per annum).

			Mfolozi	Mkuze	Pongola	Total
Available water	Natural resource	surface water	36	15	616	667
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	Total local requirements		**80**	**78**	**255**	**413**
	Transfers out		18	0	30	**48**
	Total used		**98**	**78**	**285**	**461**
Balance			**-47**	**-15**	**360**	**298**

KPI's include maintaining updated information on all water resources, and monitoring their sustainability.

Chapter 8. Institutional Profile

This section looks at the functioning of ZDM itself in terms of personnel efficiency, management capacity, Customer Care and PMU-related responsibilities. It also looks at the WSDP function and its efficiency to assist ZDM in reaching its water and sanitation services goals and targets.

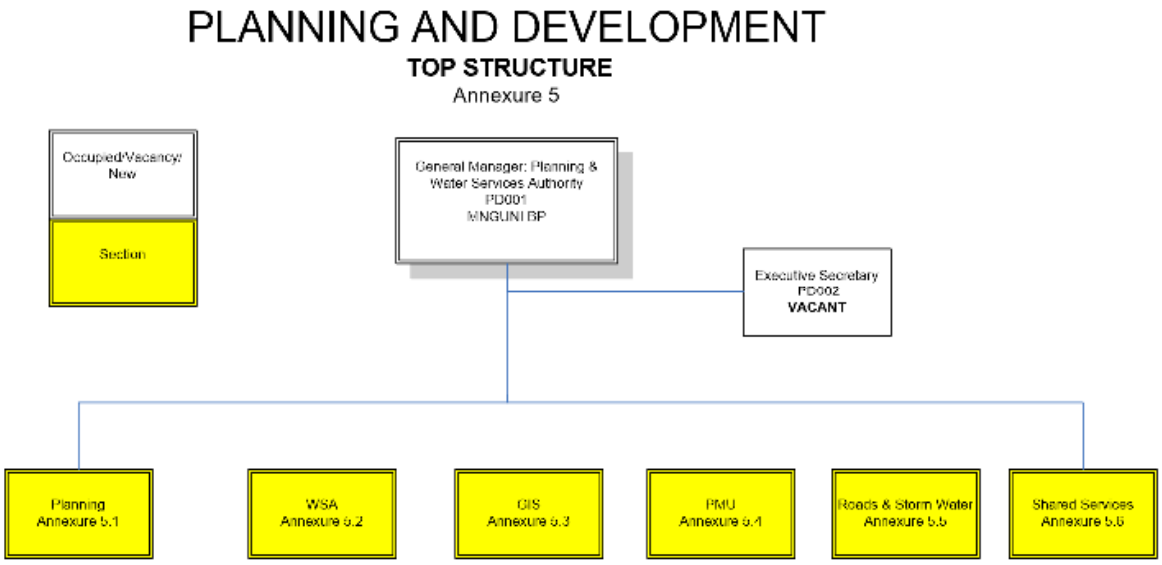

Figure 12.10: Organogram

KPI's include reducing bottlenecks in staff shortages and inefficiencies in the WSDP process.

Chapter 9. Customer Services

ZDM views the provision of a high quality service to customers as one of the highest priorities of the organisation. This can be seen in the fact that most of the KPI's in the organisation's Performance Management System relates to the provision of quality services to customers.

ZDM has developed a system for the capturing and tracking of customer complaints, from the point where the complaint is recorded by the Customer Care centre, referred to specific individuals to deal with and closed out when finally dealt with. The system is called SIZA and records the time from when the complaint was lodged until the issue has been successfully completed. Response time to consumer complaints and the time it takes to deal with issues are therefore measured and can be reported on. Figures 12.11 provide a view of system functionality.

Figure 12.11: Siza Dashboard

CHAPTER 10. Financial Profile

The financial profile looks at the ability of ZDM to spend its funding allocations, the sustainability of income versus expenses, and measures to reduce a possible deficit such as decreasing non-revenue water or obtain additional funding sources. Due to a large percentage indigent people within ZDM receiving free basic water, revenue from these large water schemes is not possible. ZDM however has to pay for raw water provision for

these large water schemes, and relies mostly on external funding such as MIG and RBIG to implement water and sanitation provision.

Table 12.9: Capital requirements: water

WATER	Capital requirements	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023
Regional bulk	R 2 204 249 853			R -	R 294 572 595	R 313 011 521	R 1 596 665 737
Secondary bulk	R 1 036 030 068			R -	R 33 478 526	R 35 896 523	R 966 655 019
Reticulation	R 361 760 667			R -	R 11 452 635	R 14 758 965	R 335 549 067
Total capital (new)	**R 3 602 040 588**	**R -**	**R -**	**R -**	**R 339 503 756**	**R 363 667 009**	**R 2 898 869 823**
Regional bulk (WTW)	R 599 570 000						
Secondary bulk	TBA						
Reticulation	TBA						
Total capital (refurbishment)	**R 599 570 000**			R -			
Total capital	**R 4 201 610 588**	**R -**	**R -**	**R -**	**R 339 503 756**	**R 363 667 009**	**R 2 898 869 823**

Table 12.10: Capital requirements: sanitation

SANITATION	Capital requirements	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023
Bulk infrastructure	R -						
Reticulation	R -						
VIP toilets	R 385 911 000				59 721 750	59 721 750	59 721 750
Total capital (new)	**R 385 911 000**	**R -**	**R -**	**R -**	**R 59 721 750**	**R 59 721 750**	**R 59 721 750**
Bulk infrastructure (WWTW)	322 510 000				-	-	-
Reticulation	TBA				-	-	-
VIP toilets (Replacement Prgrm)	551 988 000				-	-	-
Total capital (refurbishment)	**R 874 498 000**	**R -**		**R -**	**R -**	**R -**	**R -**
Total capital	**R 1 260 409 000**	**R -**	**R -**	**R -**	**R 59 721 750**	**R 59 721 750**	**R 59 721 750**

KPI's include tracking expenditure progress against planned expenditure and reducing financial deficits.

12.2 KPA's and KPI's

The following section details KPA's and KPI's as per above-mentioned topics.

The web-based WSDP allows for a DM to perform a self-assessment on each topic discussed. Topics are rated in terms of 90% reliable services by 2035 according to the KZN PGDS, and associated KPI's track progress on each topic. Mitigation measures are put in place with each annual review should a KPI not reach its desired progress.

The outcome for the 2019 self-assessment can be reviewed in the next two graphs. KPI's can be reviewed in the next table to track progress on each topic in the above graph. Topic 1 and Topic 3 are reliant on Census data and will be updated with every new Census done (2021 & 2031) after which data becomes progressively outdated.

TOPIC	Assessment Quality	Assessment Quantity	Future Planning Assessment	Strategy Assessment	2019	KPI Targets 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
TOPIC 1: Demographic Profile	93%	93%	0%	0%	**93.0%**	92.0%	100.0%	99.0%	98.0%	97.0%	96.0%	95.0%	94.0%	93.0%	92.0%	91.0%	100.0%	99.0%	98.0%	97.0%	96.0%
TOPIC 2: Service Level Profiles	77%	77%	77%	71%	**75.5%**	80.0%	85.0%	90.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
TOPIC 3: Socio-Economic Background	59%	59%	0%	0%	**59.0%**	58.0%	100.0%	99.0%	98.0%	97.0%	96.0%	95.0%	94.0%	93.0%	92.0%	91.0%	100.0%	99.0%	98.0%	97.0%	96.0%
TOPIC 4: Water & Sanitation Services Profile	51%	51%	53%	55%	**52.5%**	60.0%	65.0%	70.0%	75.0%	80.0%	85.0%	90.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
TOPIC 5: Operation & Maintenance	59%	59%	61%	61%	**60.0%**	62.5%	65.0%	67.5%	70.0%	72.5%	75.0%	77.5%	80.0%	82.5%	85.0%	87.5%	90.0%	90.0%	90.0%	90.0%	90.0%
TOPIC 6: Associated Services	90%	90%	80%	80%	**85.0%**	86.0%	87.0%	88.0%	89.0%	90.0%	91.0%	92.0%	93.0%	94.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
TOPIC 7: Conservation & Demand Management	43%	43%	45%	45%	**44.0%**	50.0%	55.0%	60.0%	65.0%	70.0%	75.0%	80.0%	85.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
TOPIC 8: Water Resources	44%	44%	40%	40%	**42.0%**	45.0%	50.0%	55.0%	60.0%	65.0%	70.0%	75.0%	80.0%	85.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
TOPIC 9: Financial Profile	74%	74%	65%	66%	**69.8%**	72.5%	75.0%	77.5%	80.0%	82.5%	85.0%	87.5%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
TOPIC 10: Institutional Profile	90%	90%	52%	52%	**71.0%**	75.0%	80.0%	85.0%	90.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
TOPIC 11: Customer Services	90%	90%	90%	90%	**90.0%**	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%

Figure 11.12: Self-assessment improvement scores for 2019

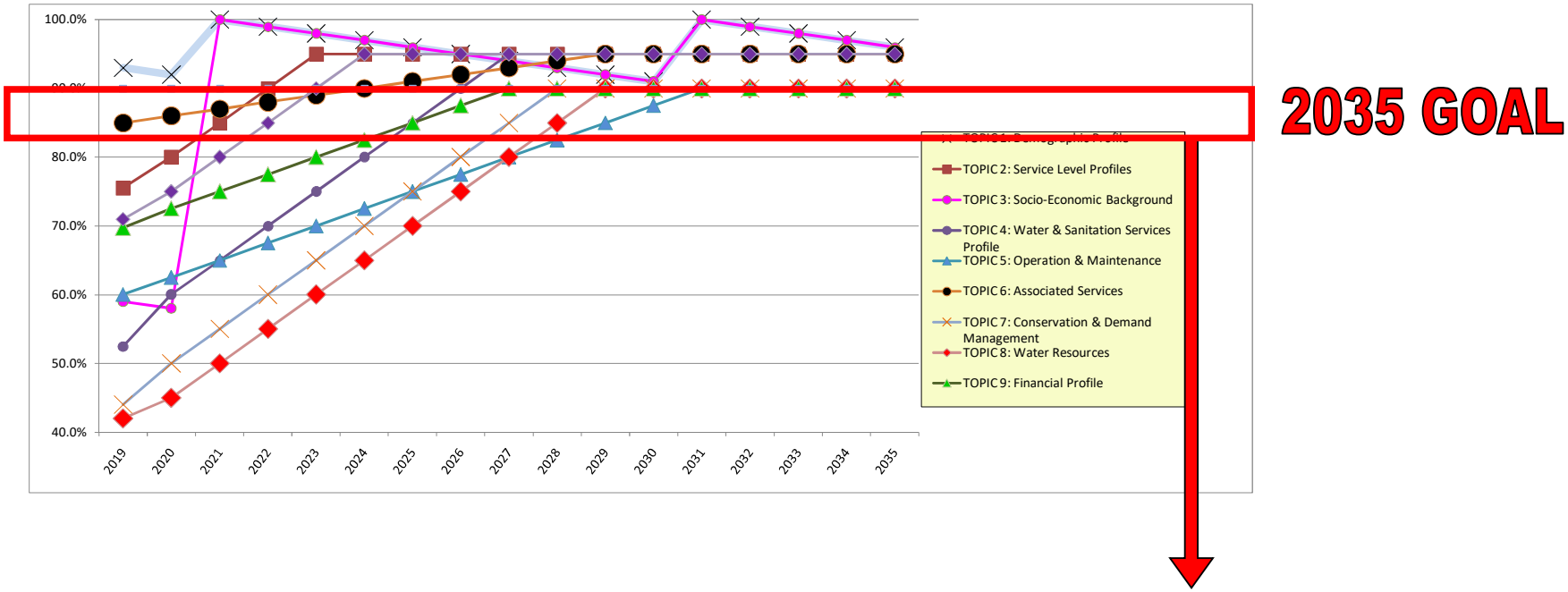

Figure 11.12: Self-assessment improvement goals for 2035

Table 12.2: Performance Management KPI's for the provision of water and sanitation services

Annual Target Score Indicator:

1. Meet KPI Objective (75-100%)
2. Not Fully Effective (50-75%)
3. Poor (25-50%)
4. Unacceptable (0-25%)

Program driver	KPI for 2019	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Annual Target Score	Evidence reference	Comments & mitigations for non-performance (Scoring below 1)
		Target	Actual	Target	Actual	Target	Actual	Target	Actual	1-5 Rating		
TOPIC 1: Demographic Profile	Demographic data sets updated with Census reviews.	2021/2031 Census Review		N/A	N/A	N/A	N/A	N/A	N/A		Updated Settlement dataset on GIS	
	Household & settlement spatial data sets updated with new aerial imagery	Expected 2020		N/A	N/A	N/A	N/A	N/A	N/A		Updated Settlement & household datasets on GIS	
TOPIC 2: Service Level Profile	Maintain updated settlement data set on GIS with regards to water and sanitation services	Submission of data set with draft WSDP		N/A	N/A	Submission of data set after final WSDP		N/A	N/A		Settlement data set submitted to GIS office	
TOPIC 3: Socio-economic Profile	WSDP updated with Census stats.	2021/2031 Census Review		N/A	N/A	N/A	N/A	N/A	N/A		Updated Settlement dataset on GIS	
	Update STATSSA spatial data sets on GIS	Expected 2020		Expected 2020		Expected 2020		Expected 2020			Updated STATSSA related spatial data sets on GIS	

Program driver	KPI for 2019	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Annual Target Score	Evidence reference	Comments & mitigations for non-performance (Scoring below 1)
		Target	Actual	Target	Actual	Target	Actual	Target	Actual	1-5 Rating		
TOPIC 4: Water & Sanitation Services Profile	Number of households served with rudimentary water supply a. Number of households	TBA		TBA		TBA		TBA			Completion reports	
	b. % of total households in DM	TBA		TBA		TBA		TBA				
	c. Number of total households in DM	TBA		TBA		TBA		TBA				
	Number of households served with RDP water level of services a. Number of households	TBA		TBA		TBA		TBA			Completion reports	
	b. % of total households in DM	TBA		TBA		TBA		TBA				
	c. Number of total households in DM	TBA		TBA		TBA		TBA				
	Number of households served with RDP sanitation level of services a. Number of households	TBA		TBA		TBA		TBA			Completion reports	
	b. % of total households in DM	TBA		TBA		TBA		TBA				
	c. Number of total households in DM	TBA		TBA		TBA		TBA				
TOPIC 5: Operation & Maintenance	Number of water quality tests										Lab results	
	% planned O&M completed	25%		50%		75%		100%			O&M progress report	
TOPIC 6: Associated Services	Reliable water access to educational & health facilities a. % issues resolved	0.25%		0.25%		0.25%		0.25%			Completion reports	
	b. % of total DM issues resolved	85.25%		85.5%		85.75%		86%				
TOPIC 7: Conservation & Demand Management	Resolve 5% of the total Conservation & Demand issues a. % issues resolved	1%		1%		1%		2%			Water Demand Management Report Progress	
	b. % of total DM issues resolved	45%		46%		47%		49%				
TOPIC 8: Water Resources	Resolve 3% of the total Water Resources issues a. % issues resolved	N/A	N/A	1%		1%		1%			Water Demand Management Report Progress	
	b. % of total DM issues resolved	N/A	N/A	1%		1%		1%				
	Water quality monitoring: Nr. of monthly reports submitted?	3		3		3		3				
	Water quality % within acceptable standards	90%		90%		90%		90%				

Program driver	KPI for 2019	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Annual Target Score	Evidence reference	Comments & mitigations for non-performance (Scoring below 1)
		Target	Actual	Target	Actual	Target	Actual	Target	Actual	1-5 Rating		
TOPIC 9: Financial Profile	Improved revenue to reduce financial deficit	TBA		TBA		TBA		TBA			Quarterly Financial Statements	
	Spend planned funding to reach full expenditure at financial year end.	25%		50%		75%		100%			PMU Progress Report	
TOPIC 10: Institutional Profile	Fill vacant posts	TBA		TBA		TBA		TBA			Approved organogram	
	Create and fill additional recommended posts	TBA		TBA		TBA		TBA			Approved organogram	
	Training & skills development for existing personnel	TBA		TBA		TBA		TBA			Training schedule	
	Quarterly WSDP meetings	1 meeting		1 meeting		1 meeting		1 meeting			Minutes & Attendance Registers	
	Submit WSDP review in time	Draft Review in March		Final Review in June		N/A	N/A	N/A	N/A		WSDP document	
	Updated GIS data sets submitted with WSDP reviews	Submission of data sets with draft WSDP		N/A	N/A	Submission of data sets after final WSDP	N/A	N/A	N/A		ArcReader project file with all updated GIS data sets submitted to GIS office.	
TOPIC 11: Customer Services	% responses to SIZA customer complaint within 24H										SIZA report	
	Notify community of planned or anticipated water supply interruptions 48H ahead of time	100%		100%		100%		100%			Memo's / notifications	