Table A.16: Current Replacement Cost and Depreciated Replacement Cost of the water infrastructure - June 2016			
Asset Type	**CRC**	**DRC**	**% DRC / CRC**
Franskraal New WTW	R36 743 472	R29 578 119	80.5%
Franskraal Old WTW	R20 036 738	R8 114 719	40.5%
Baardskeerdersbos WTW	R6 724 089	R6 494 341	96.6%
Pearly Beach WTW	R8 154 514	R6 930 451	85.0%
De Kelders WTW	R18 982 042	R16 034 314	84.5%
Totals	**R1 232 854 768**	**R629 045 082**	**51.0%**

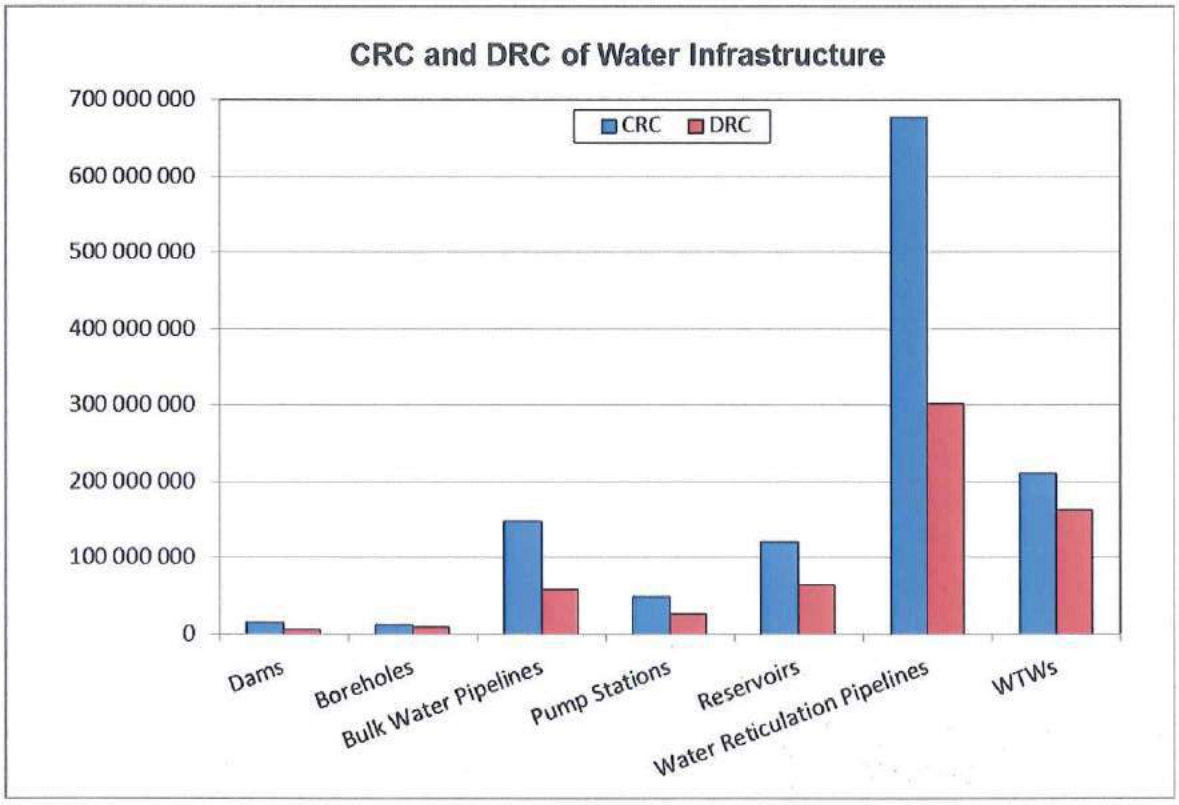

Figure A.3: CRC and DRC of the Water Infrastructure

The above table means that 49.0% of the value of the water supply infrastructure has been consumed.

The following table gives an overview of the remaining useful life by facility type for the water infrastructure (CRC):

Table A.17: Overview of the remaining useful life by facility type for the water infrastructure – June 2016 (CRC)					
Asset Type	**0 – 5 yrs**	**6 – 10 yrs**	**11 – 15 yrs**	**16 – 20 yrs**	**> 20 yrs**
			Remaining Useful Life		
Dams	R0	R134 772	R3 580 729	R0	R10 989 973
Boreholes	R186 545	R5 555 772	R980 399	R16 106	R4 880 512
Bulk Water Pipelines	R0	R69 186 368	R0	R1 975 841	R76 397 374
Pump Stations	R3 234 952	R19 151 083	R7 875 007	R384 692	R18 614 370
Reservoirs	R375 505	R11 460 662	R6 095 041	R414 640	R102 942 947
Water Reticulation Pipelines	R0	R435 589 079	R0	R21 947 656	R220 351 393
Buffels River WTW	R0	R4 083 118	R1 371 013	R0	R8 359 688
Kleinmond WTW	R7 919	R3 515 816	R422 128	R18 819	R23 603 501
Preekstoel WTW	R532 306	R1 967 360	R13 107 243	R976 366	R61 927 218
Franskraal New WTW	R14 721	R14 502 574	R354 761	R63 424	R21 807 992
Franskraal Old WTW	R2 274 059	R3 046 496	R2 260 796	R6 955	R12 448 432

Table A.17: Overview of the remaining useful life by facility type for the water infrastructure – June 2016 (CRC)					
Asset Type	**0 – 5 yrs**	**6 – 10 yrs**	**11 – 15 yrs**	**16 – 20 yrs**	**> 20 yrs**
Baardskeerdersbos WTW	R0	R10 486	R5 198 392	R65 430	R1 449 782
Pearly Beach WTW	R0	R584 561	R2 176 250	R2 652 030	R2 741 672
De Kelders WTW	R0	R86 730	R12 488 801	R0	R6 406 511
Totals	**R6 626 007**	**R568 874 877**	**R55 910 560**	**R28 521 960**	**R572 921 364**

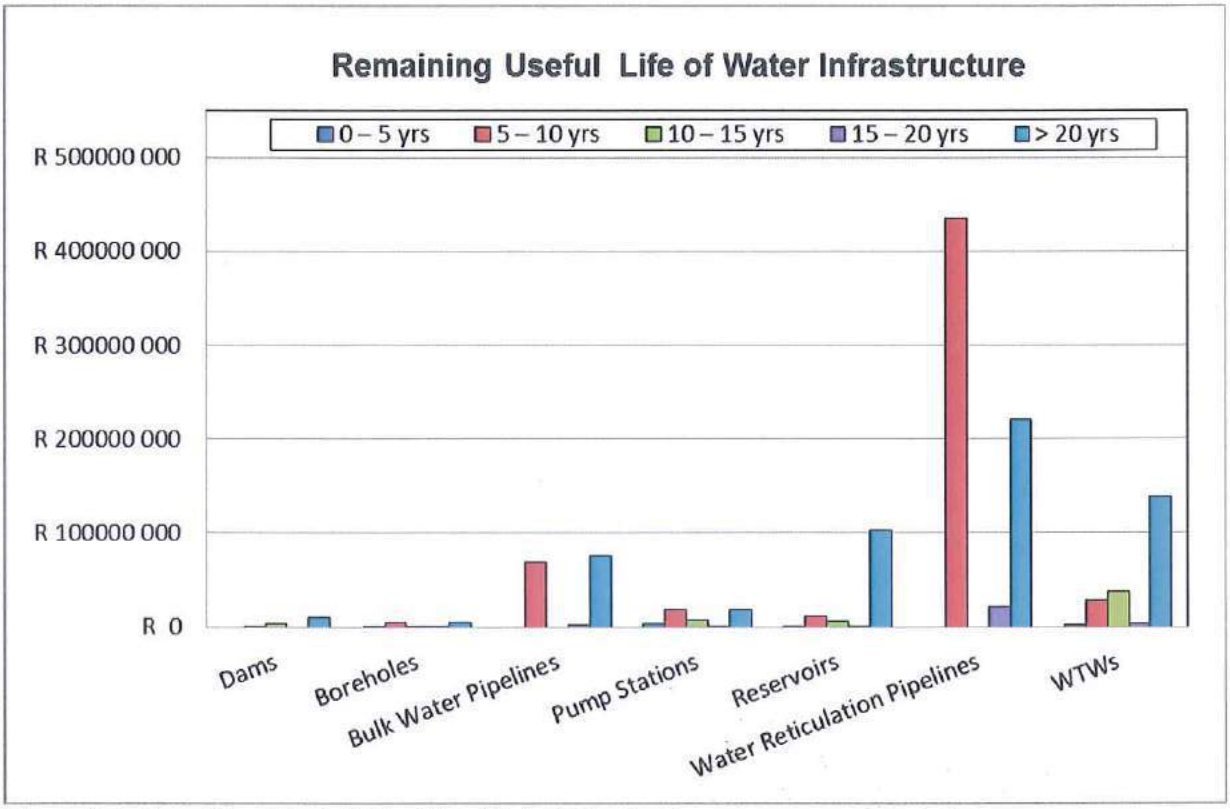

Figure A.4: Remaining Useful Life of the Water Infrastructure

The following table gives an overview of the age distribution by facility type for the water infrastructure (CRC):

Table A.18: Overview of the age distribution by facility type for the water infrastructure – June 2016 (CRC)					
Asset Type	**0 – 5 yrs**	**6 – 10 yrs**	**11 – 15 yrs**	**16 – 20 yrs**	**> 20 yrs**
Age distribution by Facility Type					
Dams	R8 053	R134 772	R0	R0	R14 562 649
Boreholes	R3 316 958	R7 591 997	R146 652	R47 614	R516 112
Bulk Water Pipelines	R17 776 013	R7 371 907	R0	R0	R122 411 663
Pump Stations	R7 023 888	R18 483 067	R10 333 594	R134 086	R13 285 470
Reservoirs	R4 342 617	R13 168 599	R20 563 450	R253 605	R82 960 525
Water Reticulation Pipelines	R156 126 481	R140 707 827	R0	R28 107 241	R352 946 579
Buffels River WTW	R112 335	R3 987 088	R80 770	R941 889	R8 691 737
Kleinmond WTW	R1 625 527	R3 513 404	R5 649 745	R195 174	R16 584 334
Preekstoel WTW	R76 023 040	R1 955 146	R532 306	R0	R0
Franskraal New WTW	R31 823	R36 711 648	R0	R0	R0
Franskraal Old WTW	R230 355	R332 615	R4 570 227	R182 481	R14 721 061
Baardskeerdersbos WTW	R6 724 089	R0	R0	R0	R0
Pearly Beach WTW	R6 293 841	R557 932	R934 953	R99 407	R268 380
De Kelders WTW	R18 982 042	R0	R0	R0	R0
Totals	**R298 617 062**	**R234 516 001**	**R42 811 697**	**R29 961 496**	**R626 948 511**

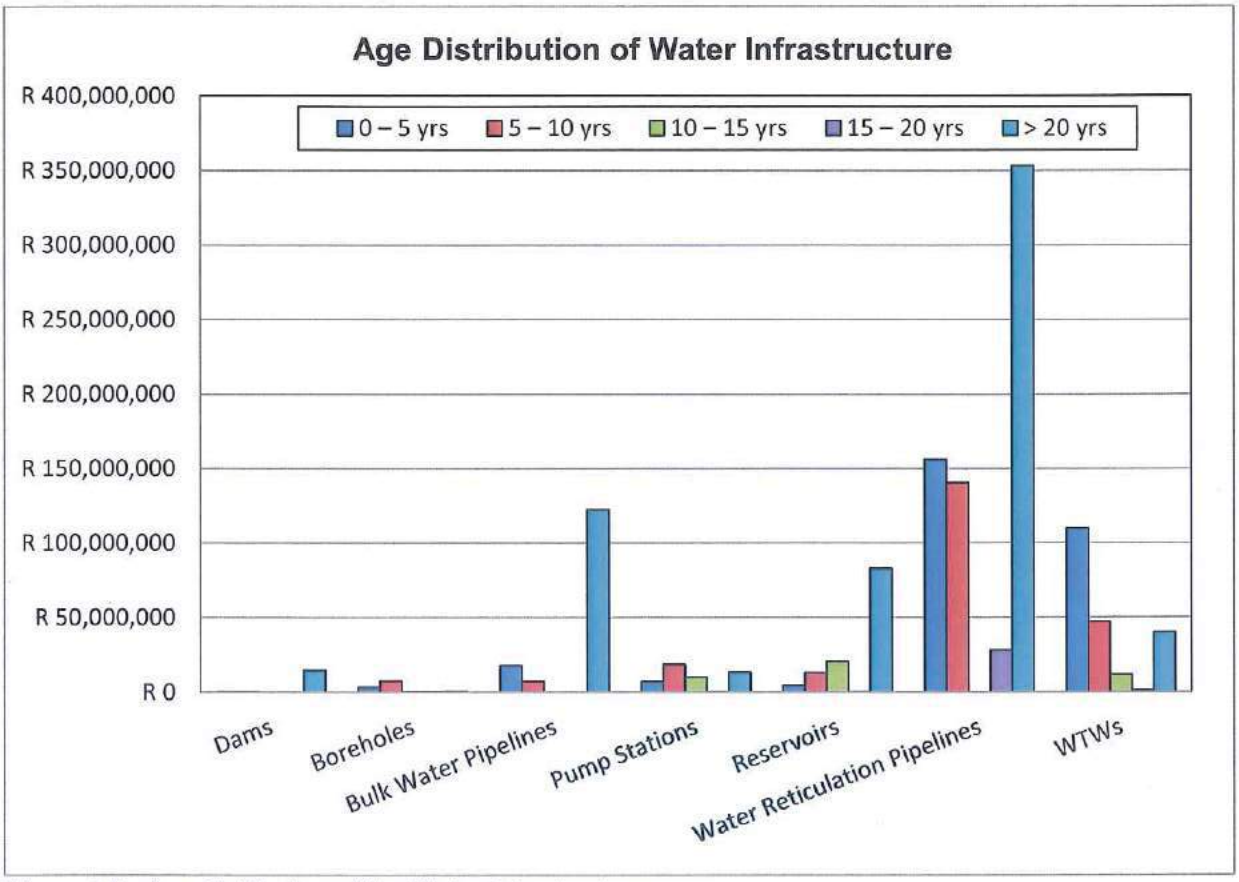

Figure A.5: Age distribution of the Water Infrastructure

Sewerage Infrastructure: The current replacement cost and depreciated replacement cost of the sewerage infrastructure of Overstrand Municipality is summarised in the table below (June 2016):

Table A.19: Current Replacement Cost and Depreciated Replacement Cost of the sewerage infrastructure – June 2015

Asset Type	CRC	DRC	% DRC / CRC
Sanitation Pump Stations	R52 341 513	R32 227 835	61.6%
Sewer Reticulation Pipelines	R550 869 620	R331 876 782	60.2%
Stanford WWTW	R26 379 445	R15 903 360	60.3%
Hermanus WWTW	R97 706 408	R73 284 892	75.0%
Hawston WWTW	R14 823 834	R9 476 983	63.9%
Kleinmond WWTW	R17 315 851	R11 034 290	63.7%
Gansbaai WWTW	R43 974 977	R25 043 377	56.9%
Pearly Beach WWTW	R14 240 616	R14 240 616	100.0%
Totals	**R817 652 264**	**R513 088 136**	**62.8%**

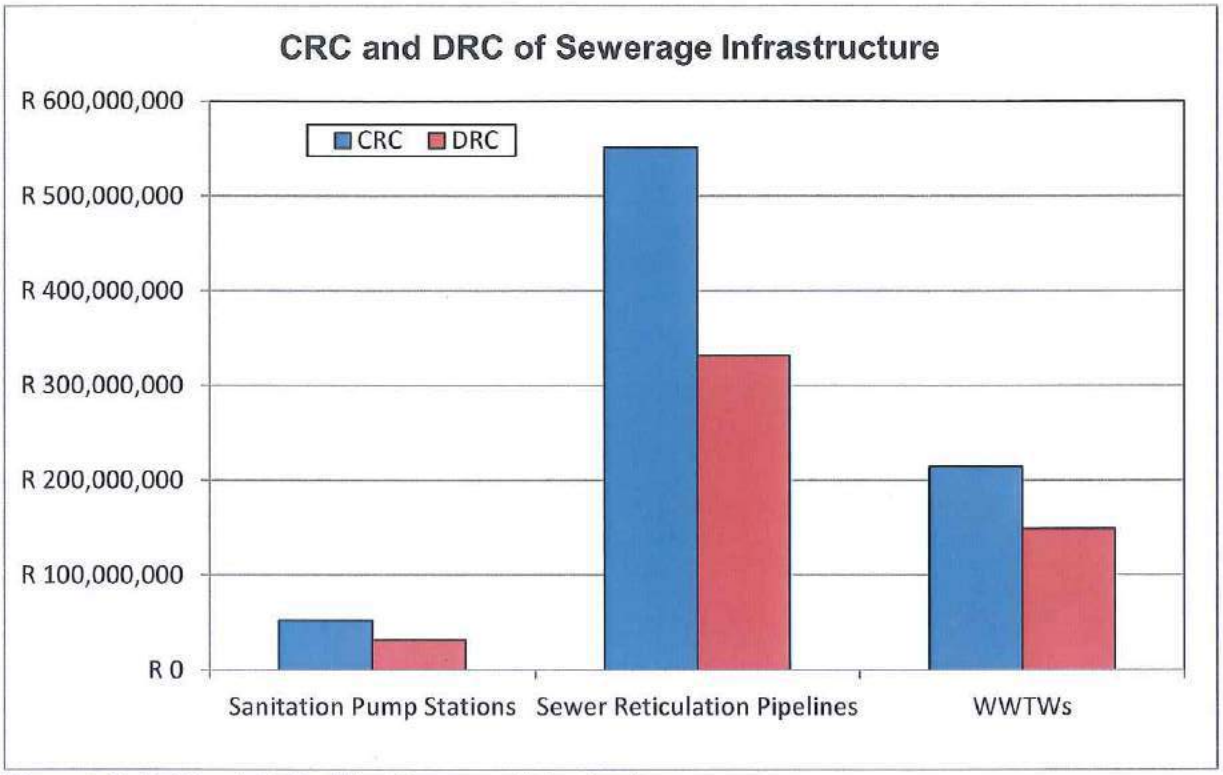

Figure A.6: CRC and DRC of the Sewerage Infrastructure

The information in the previous table means that 37.2% of the value of the sewerage infrastructure has been consumed.

The following table gives an overview of the remaining useful life by facility type for the sewerage infrastructure (CRC):

Table A.20: Overview of the remaining useful life by facility type for the sewerage infrastructure – June 2016 (CRC)

Asset Type	0 – 5 yrs	6 – 10 yrs	11 – 15 yrs	16 – 20 yrs	> 20 yrs
			RUL		
Sanitation Pump Stations	R0	R21 122 437	R9 765 181	R142 890	R21 311 005
Sewer Reticulation Pipelines	R0	R6 004 602	R12 917 851	R60 819 956	R471 127 210
Stanford WWTW	R0	R5 698 154	R11 246 896	R3 298	R9 431 097
Hermanus WWTW	R6 662	R12 186 370	R53 088 957	R1 259 458	R31 164 962
Hawston WWTW	R0	R4 221 185	R2 696 415	R1 189 327	R6 716 908
Kleinmond WWTW	R33 363	R6 613 593	R3 911 819	R11 941	R6 745 135
Gansbaai WWTW	R4 633 310	R18 649 844	R7 664 154	R88 559	R12 939 110
Pearly Beach WWTW	R0	R109 910	R526 685	R376 756	R13 227 265
Totals	**R4 673 335**	**R74 606 095**	**R101 817 957**	**R63 892 185**	**R572 662 693**

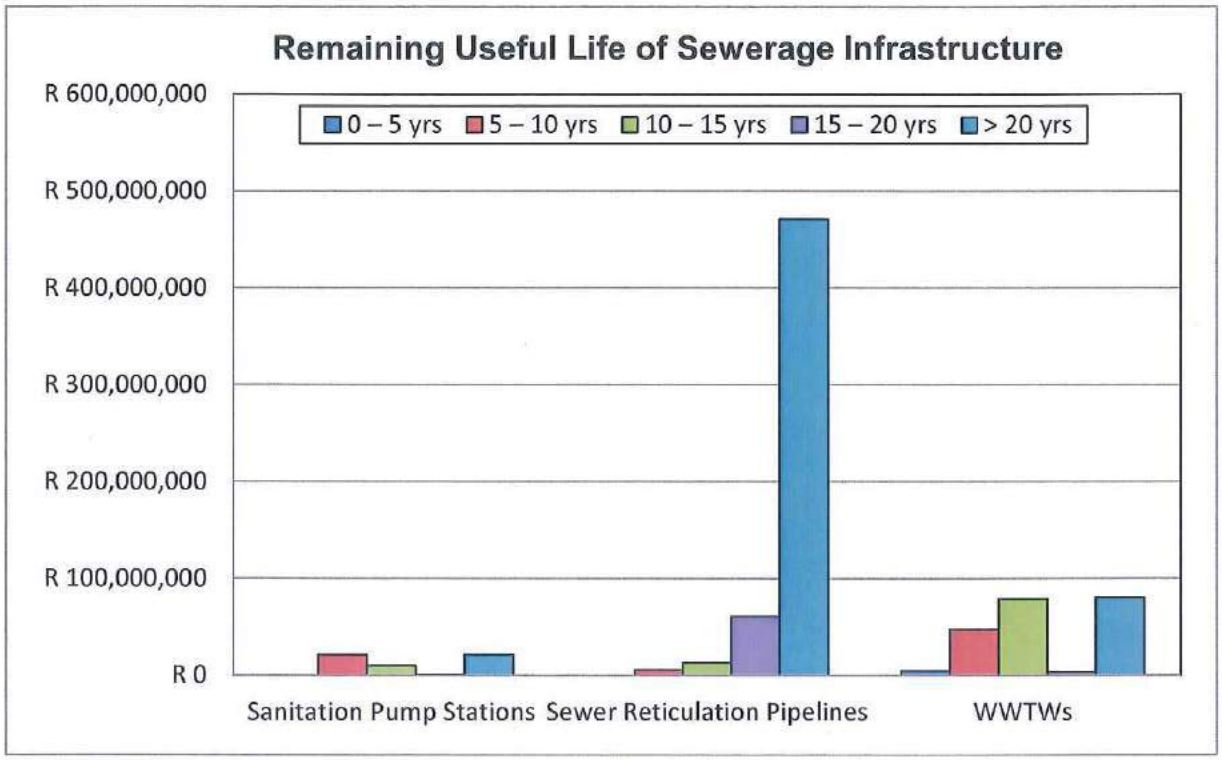

Figure A.7: Remaining Useful Life of the Sewerage Infrastructure

The following table gives an overview of the age distribution by facility type for the sewerage infrastructure (CRC):

Table A.21: Overview of the age distribution by facility type for the sewerage infrastructure – June 2016 (CRC)

Asset Type	0 – 5 yrs	6 – 10 yrs	11 – 15 yrs	16 – 20 yrs	> 20 yrs
Age distribution by Facility Type					
Sanitation Pump Stations	R13 437 478	R21 193 092	R1 058 858	R180 058	R16 472 027
Sewer Reticulation Pipelines	R101 417 804	R3 283 157	R21 624 836	R133 812 542	R290 731 282
Stanford WWTW	R10 620 482	R5 607 558	R1 149 720	R136 002	R8 865 683
Hermanus WWTW	R68 275 907	R2 915 442	R2 323 534	R1 131 772	R23 059 753
Hawston WWTW	R5 020 421	R3 692 506	R2 601 470	R262 343	R3 247 095
Kleinmond WWTW	R3 765 784	R6 672 914	R3 772 717	R212 022	R2 892 414
Gansbaai WWTW	R8 708 680	R17 634 398	R10 312 015	R53 528	R7 266 355
Pearly Beach WWTW	R14 240 616	R0	R0	R0	R0
Totals	**R225 487 172**	**R60 999 067**	**R42 843 151**	**R135 788 266**	**R352 534 609**

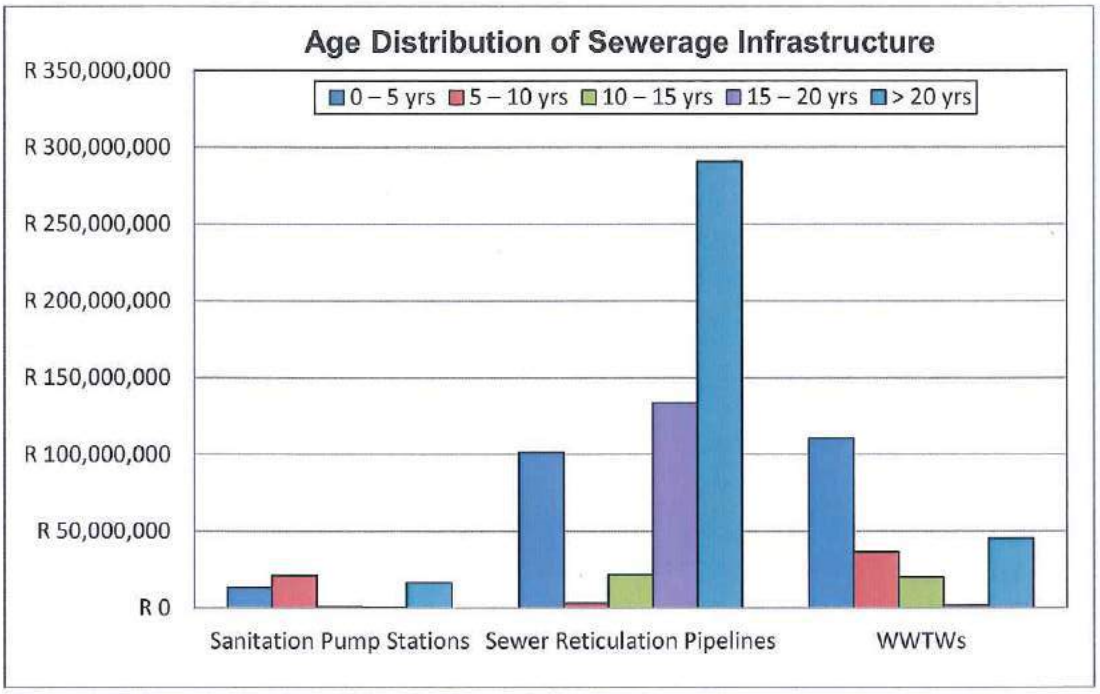

Figure A.8: Age distribution of the Sewerage Infrastructure

Business Element 6: Water Services Infrastructure Management (O&M)

Water Safety Plans are in place for all the water distribution systems and treatment facilities. A detailed risk assessment was executed as part of the process and the existing control measures implemented by Overstrand Municipality were evaluated. An Improvement / Upgrade Plan is also in place with relevant Water and Safety Management Procedures for any type of incident.

A W_2RAP for the various WWTWs is also in place. The W_2RAP is an all-inclusive risk analysis tool by which risks associated with the management of collection, treatment and disposal of wastewater, are identified and rated (quantified). The identified risks can then be managed according to its potential impacts on the receiving environment / community / resource.

The Water Safety Plan and W_2RAP Teams of Overstrand Municipality are committed to meet regularly to review the implementation of all the aspects of the Water Safety Plan and W_2RAP to ensure that they are still accurate and to determine whether the field assessments need updates or modifications and whether the Incident Response Management Protocol is still adequate. In addition to the regular three year review, the Water Safety Plan and W_2RAP will also be reviewed when, for example, a new water source is developed, major treatment improvements are planned and brought into use, or after a major incident.

An Incident Response Management Protocol is in place and forms part of Overstrand Municipality's Water Safety Plan and W_2RAP. The Incident Response Management Protocol entails that certain reactive procedures are followed when an incident occurs, such as when a malfunction of the treatment processes occurs due to power failures, faulty equipment, adverse weather conditions or human error.

Operational Alert Levels are also in place for the various WTWs and WWTWs in order to ensure that the various unit processes in the plant performs optimally. If these pre-determined Alert Levels are exceeded at any of the control points where samples are taken for operational purposes, specific actions are taken to bring the operational parameters back to within the target ranges.

The Maintenance Team mainly performs their own repair and preventative maintenance work to the equipment and infrastructure of the Municipality, except when specialised repair work is required, in which case the work is sub-contracted to approved sub-contractors on the municipal database.

An Operational and Compliance Water Quality and Final Effluent Monitoring Programme, which meets the requirements of the DWS as stipulated in their Blue and Green Drop criteria, were drawn up by Overstrand Municipality and are implemented by the Municipality.

DWS's Blue Drop Process

The DWS launched the blue and green drop certification, with regard to drinking water quality and wastewater quality management, at the Municipal Indaba during September 2008. Blue drop status is awarded to those towns that comply with 95% criteria on drinking water quality management. The Blue Drop Certification programme is in its seventh year of existence and promises to be the catalyst for sustainable improvement of South African drinking water quality management in its entirety. The blue drop performance of Overstrand Municipality is summarised as follows in the DWS's 2014 Blue Drop Report:

Table A.22: Blue Drop Performance of the Municipality (DWS's 2014 Blue Drop Report)

Municipal Blue Drop Score	2011 – 90.56%, 2012 – 96.82% and 2014 - 90.79%

Regulatory Impression: The Overstrand Local Municipality team was well prepared and demonstrated their commitment to the Blue Drop assessment and water quality excellence. The Municipality is to be congratulated for obtaining Blue Drop status for the Greater Hermanus system. A decreased municipal score was however achieved during this assessment. The reason for the observed decrease in compliance includes:

- Full compliance with the requirements of SANS 241 with regard to monitoring and analysis could not be demonstrated. No chemical determinants have been analysed in the reticulation network to monitor the chemical quality of water provided to the consumer and identify any potential health impacts. In addition, the frequency of analysis does not comply with the requirements for the final water produced at treatment facilities receiving surface water or within the reticulation network. The Municipality however confirmed that subsequent to the assessment that a service provider has been appointed to implement a risk based monitoring programme that fully complies with the requirements of SANS 241, sampler training and uploading of analytical data to the BDS.
- Detailed annual process audits could not be demonstrated that assessed the performance of the treatment systems and each process unit with the design capacity of the plant. Recommendations should be incorporated into the review process of water safety plan.
- Poor microbiological compliance was observed in the Baardskeerdersbos system. This should be mitigated when the new plant to treat borehole water is commissioned in August 2014.

Significant progress has been made by the municipality with regard to WC/WDM and projects have been ongoing for the last three years. Good baseline information and a formal strategy are available that enables the municipality to make informed decisions regarding ongoing planning to minimise non-revenue water.

It is anticipated that the identified gaps will be addressed by the Overstrand Local Municipality and that an upward trend towards Blue Drop compliance will once again be achieved in the next assessment.

Based on the Audit results, the DWS has serious concerns on the poor microbiological drinking water quality and the resultant risk to consumers of the Baardskeerdersbos water supply system. These concerns have to be addressed as a matter of urgency and drinking water quality results and appropriate actions must be communicated to consumers should the water be found to be unfit for human consumption.

Site Inspection (Preekstoel WTW (88%) and Buffels River WTW (90%)): The site inspection impression at the **Preekstoel WTW** was considered to be good. A number of drinking water quality management practices still require attention, including:

1. A flow chart was displayed of the incident management protocol that indicates roles and responsibilities but alert levels were not included.
2. Records of the results of the jar tests that are routinely undertaken could not be provided.
3. Emergency shower and eye wash facilities were not located at the chemical dosing room.
4. Manual post dosing of lime was being undertaken at the time of the assessment due to equipment failure. This was to be repaired as part of the maintenance contract with an external service provider. Standby equipment was not installed.
5. Standby chlorine dosing equipment is not installed.

The site inspection impression at the **Buffels River WTW** was considered to be good. A number of drinking water quality management practices still require attention, including:

1. A flow chart was displayed of the incident management protocol that indicates roles and responsibilities but alert levels were not included.
2. The original O&M manual for the WTW is not available. Standard operating procedures have been compiled.
3. Records of jar tests undertaken by the service provider could not be provided.
4. Chemical tanks are not contained within a bounded area.
5. Standby chlorine dosing equipment is not installed.
6. Standby air compressor is not installed.

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Performance Area	Baardskeerdersbos	Buffeljags Bay	Buffels River	Greater Gansbaai	Greater Hermanus	Kleinmond	Pearly Beach	Stanford
Water Services Provider(s)	Overstrand LM	Overstrand LM	Overstrand LM	Overstrand LM	Overstrand LM	Overstrand LM	Overstrand LM	Overstrand LM
Water Safety Planning	29.75	23.54	33.43	31.50	33.43	31.15	24.59	29.75
Treatment Process Management	4.28	5.60	4.00	6.80	8.00	6.40	6.80	4.70
DWQ Compliance	0.00	15.75	23.25	23.25	29.60	23.25	29.60	30.00
Management Accountability	8.95	8.20	9.25	9.25	9.25	9.25	9.25	9.25
Asset Management	8.72	9.24	11.03	10.50	11.90	10.29	10.29	11.38
Use Efficiency, Loss Management	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Bonus Scores	9.17	6.50	3.25	4.00	1.27	3.25	3.83	2.86
Penalties	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blue Drop Score (2014)	**63.87%**	**71.83%**	**87.20%**	**88.30%**	**96.44%**	**86.59%**	**87.35%**	**90.94%**
Blue Drop Score (2012)	91.6%	93.8%	95.0%	97.1%	97.9%	95.0%	95.2%	92.7%
Blue Drop Score (2011)	93.7%	75.4%	95.1%	95.1%	87.2%	93.1%	94.3%	95.2%
Blue Drop Score (2010)	Not Assessed	Not Assessed	63.83%	63.81%	75.31%	60.06%	Not Assessed	Not Assessed
System Design Capacity (Ml/d)	0.150	0.100	5.500	7.100	28.000	5.800	1.400	1.500
Operational Capacity (% i.t.o. Design)	100%	105%	44%	100%	29%	39%	100%	57%
Average daily consumption (l/p/d)	655.0	310.3	803.4	445.9	192.4	230.1	1605.4	159.9
Microbiological Compliance (%)	**90.0%**	**95.5%**	**99.9%**	**99.9%**	**98.9%**	**99.9%**	**99.9%**	**99.9%**
Chemical Compliance (%)	**92.0%**	**99.9%**	**96.4%**	**96.1%**	**96.4%**	**96.4%**	**99.9%**	**96.4%**

Overstrand Municipality achieved overall 3rd position from the twenty five (25) municipalities in the Western Cape in the 2014 Blue Drop Report and the Greater Hermanus system obtained the highest Blue Drop score (96.44%) of all 122 water systems in the Western Cape.

Table A.23: DWS's 2014 Blue Drop Risk Ratings for the various towns

Municipal Blue Drop Risk Rating	41%

The overall 2014 Risk Rating for Overstrand LM is **41%** which translates into the 10th best performance in the Western Cape. Note that this value is based on the 3 specific areas indicated below and shows concerns (medium to critical risks) for Process Control (which risks reflect compliance in terms of draft Regulation 813) in 6 of the 8 systems; Drinking Water Quality in 2 out of the 8 systems; and Risk Management in none of 8 systems.

Assessment Area	Baardskeerdersbos	Buffeljags Bay	Buffels River	Greater Gansbaai	Greater Hermanus	Kleinmond	Pearly Beach	Stanford
2014								
Blue Drop Risk Rating (2014)	47.2%	60.1%	57.3%	57.6%	17.2%	57.3%	56.1%	27.1%
Process Control RR	55.6%	71.1%	64.1%	74.4%	34.1%	64.1%	71.1%	40.5%
Drinking Water Quality RR	70.4%	55.6%	40.7%	40.7%	25.9%	40.7%	11.1%	11.1%
Risk Management RR	17.4%	26.1%	13.0%	26.1%	17.4%	13.0%	26.1%	13.0%
2013								
Blue Drop Risk Rating (2013)	20.6%	12.2%	12.5%	12.7%	13.5%	12.5%	12.7%	15.6%

Table A.23: DWS's 2014 Blue Drop Risk Ratings for the various towns								
Municipal Blue Drop Risk Rating								41%
Process Control RR	22.2%	17.6%	28.2%	34.9%	31.7%	28.2%	26.3%	29.7%
Drinking Water Quality RR	55.6%	11.1%	11.1%	11.1%	14.8%	11.1%	11.1%	11.1%
Risk Management RR	13.0%	13.0%	13.0%	13.0%	17.4%	13.0%	13.0%	13.0%
2012								
Blue Drop Risk Rating (2012)	75.5%	52.7%	72.1%	76.7%	78.1%	72.1%	83.5%	64.9%
Process Control RR	77.8%	76.5%	79.5%	79.5%	80.5%	79.5%	78.9%	83.8%
Drinking Water Quality RR	11.1%	11.1%	11.1%	40.7%	11.1%	11.1%	11.1%	11.1%
Risk Management RR	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%

The average daily consumption (l/p/d) for the last four financial years are summarised in the table below:

Table A.24: Average residential daily consumption (l/p/d) for the last four financial years.												
Distribution System	2012/2013			2013/2014			2014/2015			2015/2016		
	Estimated Permanent Population	Aver. Daily Billed Metered Res. Consump-tion (kl)	Aver. Daily consumption (l/p/d)	Estimated Permanent Population	Aver. Daily Billed Metered Res. Consump-tion (kl)	Aver. Daily consumption (l/p/d)	Estimated Permanent Population	Aver. Daily Billed Metered Res. Consump-tion (kl)	Aver. Daily consumption (l/p/d)	Estimated Permanent Population	Aver. Daily Billed Metered Res. Consump-tion (kl)	Aver. Daily consump-tion (l/p/d)
Buffels River	2 392	760	**318**	2 492	756	**303**	2 595	834	**321**	2 703	864	**320**
Kleinmond	6 795	1 034	**152**	6 965	1 009	**145**	7 139	1 050	**147**	7 317	1 072	**147**
Greater Hermanus	49 438	5 946	**120**	51 638	6 155	**119**	53 936	6 754	**125**	56 336	6 848	**122**
Stanford	4 908	388	**79**	5 038	403	**80**	5 171	420	**81**	5 308	447	**84**
Greater Gansbaai	13 978	1 508	**108**	14 661	1 503	**103**	15 378	1 533	**100**	16 130	1 558	**97**
Pearly Beach	1 069	193	**181**	1 092	197	**180**	1 115	211	**189**	1 138	243	**214**
Baardskeerdersbos	123	16	**130**	123	15	**122**	124	16	**129**	124	18	**145**
Buffeljags Bay	148	7	**47**	148	8	**54**	149	7	**47**	150	8	**53**

Note: The average residential billed metered consumption in the above table is for the period July to June each financial year, excluding the period November to February.

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DWS's Green Drop Process

The DWS also completed their Third Order Assessment of Municipal Waste Water Treatment Plants, DWS's Green Drop Report for 2013, which provides a scientific and verifiable status of municipal waste water treatment. Green drop status is awarded to those WSAs that comply with 90% criteria on key selected indicators on waste water quality management. The green drop performance of Overstrand Municipality is summarised as follows in the DWS's 2013 Green Drop Report.

Table A.25: Green Drop Performance of the Municipality (DWS's 2013 Green Drop Report)

Average Green Drop Score	2009 – 63.00%, 2011 – 88.80%, 2013 - 89.14%

Regulatory Impression: The Overstrand Local Municipality is to be congratulated with an outstanding performance and able presentation of their Portfolio of Evidence. The Inspection team were impressed with "*... the team's enthusiasm, expertise and knowledge of the wastewater business.*" As result, Overstrand is awarded with four Green Drop Certificates. The overall management of all five systems is consistent and indicative of the personnel's dedication and discipline to wastewater management. Regrettable, the Kleinmond system did not perform on par with the other four systems, which weakened the municipal Green Drop score to 89.14%, just short of overall Green Drop award.

The points of strength include the high overall compliance of effluent quality, prominent risk abatement, and technical skilled staff with strong management support and involvement. The presence of the Finance department contributed to the positive score received for asset management and ring-fenced costing. The Hermanus WWTW is currently in the process of upgrading the works to 12Ml/d. Monitoring programs should be revised to include sludge monitoring at all systems and to ensure sufficient sampling frequency where process upgrades have occurred.

Overall, Overstrand has managed to produce a polished Green Drop Performance. Overstrand is also one of very few municipalities that were using the opportunity to score against all the bonus criteria. Well done. The absolute consistency displayed in keeping all systems in low risk zones using the W_2RAP process, is commendable. Overstrand is an accomplished service provider in wastewater management, and deserves to be mentioned amongst the top performers in the Province.

Green Drop Findings:

1. Regulation 17 compliance need to receive attention.
2. Sea outfall monitoring frequency need to be revised for Hermanus.
3. Sludge monitoring and handling could improve going forward.
4. Some shortcomings are evident on process assessment which might possibly resolve some of the lower compliance to ammonia, EC, O-PO4, SS/COD at some plants, given that ample capacity exist at all plants.

GREEN DROP REPORT CARD					
Key Performance Area	**Hermanus**	**Hawston**	**Stanford**	**Gansbaai**	**Kleinmond**
Process Control, Maintenance & Management Skill	**84**	**100**	**100**	**100**	**80**
Monitoring Programme	**93**	**95**	**95**	**100**	**95**
Submission of Results	**100**	**100**	**100**	**100**	**100**
Effluent Quality Compliance	**68**	**69**	**85**	**77**	**29**
Risk Management	**96**	**73**	**73**	**73**	**73**
Local Regulation	**100**	**100**	**100**	**100**	**100**
Treatment Capacity	**100**	**100**	**100**	**96**	**56**
Asset Management	**96**	**93**	**96**	**93**	**100**
Bonus Scores	4.86	5.48	3.55	4.43	8.84
Penalties	0.20	0.23	0.30	0.37	0.91
Green Drop Score (2013)	91.17%	90.03%	93.39%	91.76%	77.61%
Green Drop Score (2011)	92.10%	87.90%	83.00%	75.80%	82.50%
Green Drop Score (2009)	66.00%	57.00%	61.00%	66.00%	66.00%
System Design Capacity (Ml/d)	7.300	1.000	0.500	2.000	2.000
Capacity Utilisation (% ADWF i.t.o. Design Capacity)	56.89%	30.00%	79.20%	55.00%	44.90%
Resource Discharged into	Sea outfall (shallow)	Natural Wetland to Dunes	Kleinrivier	Lined wetlands, sports field irrigate	Wetland that drains to sea
Microbiological Compliance	91.67%	91.67%	91.67%	100.00%	83.33%
Chemical Compliance	87.50%	81.25%	90.00%	93.75%	77.08%
Physical Compliance	66.67%	91.67%	94.44%	80.56%	100.00%
Overall Compliance	80.21%	86.46%	91.67%	89.58%	86.46%
Wastewater Risk Rating (2012)	34.70%	33.30%	44.40%	38.90%	44.40%
Wastewater Risk Rating (2013)	45.45%	29.41%	29.41%	35.29%	47.06%
Site Inspection Score	-	-	-	-	**75%**

The 2014 Green Drop Progress Report of the DWS is further the product of a "gap" year, whereby progress is reported in terms of the improvement or decline in the risk position of the particular WWTW, as compared to the previous year's risks profile. This tool to collect, assess and report the risk profile is called the Green Drop Progress Assessment Tool (PAT). The PAT progress assessment period was done on compliance data and actions during 1 July 2012 – 30 June 2013, which represents the year immediately following the Green Drop 2013 assessment period. The results for Overstrand Municipality were summarised as follow in DWS's 2014 Green Drop Risk Profile Progress Report.

Table A.26: DWS's 2014 Green Drop Risk Profile Progress Report results for Overstrand Municipality

Technology Description	Hermanus	Hawston	Stanford	Gansbaai	Kleinmond
Technology (Liquid)	Activated sludge	Activated sludge	Activated sludge	Nereda plant	Activated sludge
Technology (Sludge)	Belt press dewatering and Solar drying beds	Screw press dewatering and Solar drying beds	Screw press dewatering and Sludge pond	Belt press dewatering and Solar drying beds	Belt press dewatering and Sludge pond
Key Risk Areas					
ADWF Design Capacity (Ml/d)	12.000	1.000	0.500	2.000	2.000
Operational % i.t.o. Design Capacity	38%	33%	70%	67%	53%
Annual Average Effluent Quality Compliance (2012-2013)	79.2%	71.9%	90.6%	83.3%	87.5%
Microbiological Compliance	83.3%	83.3%	91.7%	91.7%	58.3%
Physical Compliance	69.4%	77.8%	100.0%	77.8%	100.0%
Chemical Compliance	85.4%	64.6%	83.3%	85.4%	85.4%
Technical skills (Reg 813)	Yes	Yes	Yes	Yes	Yes
2014 Wastewater Risk Rating (%CRR/CRR$_{max}$)	40.9%	**52.9%**	29.4%	41.2%	41.2%
2013 Wastewater Risk Rating (%CRR/CRR$_{max}$)	45.5%	29.4%	29.4%	35.3%	47.1%
Risk Abatement Planning					
Highest Risk Areas based on the CRR	Wastewater quality	Wastewater quality	Chemical compliance	Wastewater quality	Wastewater quality
WW Risk Abatement Status	Final document plus implementation	Final document plus implementation	Final document plus implementation	Final document plus implementation	Final document plus implementation
Capital & Refurbishment expenditure for Fin Year 2012-2013 (Rand)	R10,5m	R0,12m	R0,05m	R1,9m	R1,9m
Description of Projects' Expenditure 2012-2013	Refurbished & upgraded from 7.3 to 12 Ml/d started in 2010/11 and completed in Dec 2012	Aerators refurbished and new outlet meter installed	Constructed new outlet pipe from sludge screw press to skip	Belt press installed	Belt press installed and a new chlorination system for disinfection
W_2RAP Abatement Document and Status Commentary	Hermanus: Date of document could not be established. Action plan refers to 12/13. Quite a few references to Gansbaai in Hermanus W_2RAP, e.g. Gansbaai operational and compliance monitoring alert levels. Only 1 high risk identified. Non-compliance to Reg. 813 re PCs not identified as risk. Hawston: Date of document could not be established. Action points refer to 13/14. Quite a few references to Gansbaai in Hawston W_2RAP - to be rectified. No high risk identified. Non-compliance of effluent not identified as high risk. Stanford: Date of document couldn't be found. Action points refer to 12/13/ 14/15. 1 high risk identified - inadequate fencing around reed bed system. Non-compliance of effluent not identified as high risk. Gansbaai: Date of document couldn't be found. Action points refer to 12/13/ 14/15. 1 high risk identified - inadequate fencing around reed bed system. Non-compliance of effluent not identified as high risk. Kleinmond: Date of document couldn't be found. Action points refer to 13/14/15. 1 high risk identified: security fencing around plant. Non-compliance of effluent not identified as high risk.				

Regulatory Impression

Overstrand Municipality achieved Green Drop status for 4 of their 5 wastewater systems in the 2013 Green Drop audits. The municipal Green Drop score was 89.14% - a fraction away from achieving municipal Green Drop status. This is excellent and is part of a steady and significant improvement since 2009. The Municipality is sincerely congratulated with this accomplishment.

During the present 2013-14 Green Drop Progress Reporting the situation deteriorated marginally, with 2 systems showing an increased Risk Rating – more significantly in the case of the Hawston system. The Municipality should make a concerted effort to prevent further deterioration and should continue to improve their Green Drop status in 2015. The Municipality has the necessary supervisory excellence at all systems. There is however a concern with the non-compliant effluent quality at all works except at the Stanford works. The Municipality is encouraged to continue with implementation of the GDIP and thus to ensure that progress at the systems is achieved and maintained. The overall risk profile is still very good, with 4 of 5 plants residing in low risk space. Well done.

Business Element 7: Associated Services

All schools and medical facilities in Overstrand Municipality's Management Area are supplied with a higher level of water and sanitation services.

Business Element 8: Conservation and Demand Management

Overstrand Municipality is committed to reduce the current percentage of NRW for the various distribution systems to 17% by June 2017 (SDBIP). The Municipality's WDM Strategy and Action Plan include the following key activities (June 2016 progress in brackets):

- Sourcing of funding for implementation of water reclamation for potable purposes in the longer term (applications for RBIG and ORIO grant funding have been submitted to the Department of Water and Sanitation (DWS));
- Continue with pipe replacement in priority areas with old reticulation networks and history of frequent pipe failures (Contract completed in Pearly Beach, Gansbaai, De Kelders and Rooi-Els to Hermanus);
- Implementation of intelligent pressure management in specific areas. (Stanford and Kleinmond completed and contract was awarded for Betty's Bay, which was implemented with the 2014/2015 pipeline replacement project);
- Phased pro-active replacement of older water meters (Previous contract was completed and new contract was awarded in June 2016);
- Review and improve efficiency of remote monitoring of minimum night flows in all zones (On-going maintenance of SCADA and telemetry systems).
- Link properties with distribution zones in financial data base to enable water balance in smaller areas (Completed for Hermanus, ongoing for other areas);
- Perform focused leak detection and repair programs in areas with highest minimum night flows (Second two year leak detection contract awarded in 2015 – work in progress);
- Continue with leak repairs at indigent households and installation of water management devices (Previous contract was completed and new contract was awarded in June 2016);
- Enhance public awareness on water demand management issues, e.g. the watering of gardens as determined by the bylaws, rain water harvesting, dam levels, and general water saving tips (Regular publication of water and waste water quality in local media and on Overstrand Municipality's web-site);
- Identify users on financial data base with regular abnormal high or abnormal low water use, and physically inspect the causes (on-going);

- Sourcing of external funds, e.g. from the DWS RBIG and ACIP programs, ORIO, Green Fund and Disaster Reduction Program (ACIP funding was received for the upgrading of the Stanford WWTW);
- Tariffs structured to discourage excessive use of water, including volumetric sewerage tariffs, and specific water restriction tariffs implemented for specific dam levels (implemented and on-going);
- Continue with removal of alien vegetation in catchment areas (Work for Water program – ongoing);
- Maximum use of treated effluent for irrigation (Implemented in Hermanus, Gansbaai and Pearly Beach).

The table below gives a summary of the NRW for the various distribution systems in Overstrand Municipality's Management Area.

Table A.27: Non revenue water for the various distribution systems

Description	Unit	15/16	Record : Prior (Ml/a)				
			14/15	13/14	12/13	11/12	10/11
Buffels River	Volume	163.864	286.578	350.035	438.541	533.140	526.339
	Percentage	30.07%	42.51%	50.46%	57.03%	58.47%	56.66%
	ILI	1.68	3.10	3.82	5.45	5.07	5.06
Kleinmond	Volume	209.194	236.018	248.504	285.680	239.492	246.783
	Percentage	28.75%	31.68%	34.23%	34.38%	30.08%	29.41%
	ILI	2.57	2.25	2.26	2.49	2.58	2.17
Greater Hermanus	Volume	474.020	359.729	380.399	324.189	317.241	594.352
	Percentage	11.66%	9.13%	10.91%	9.04%	9.69%	15.62%
	ILI	1.19	0.88	0.96	0.85	0.98	1.50
Stanford	Volume	73.438	80.356	76.516	91.388	142.029	128.297
	Percentage	24.19%	26.97%	25.87%	30.83%	37.46%	35.46%
	ILI	3.69	2.81	2.69	2.90	5.90	5.67
Greater Gansbaai	Volume	384.841	363.302	413.621	405.799	435.335	457.525
	Percentage	28.49%	27.96%	31.30%	31.19%	31.96%	32.83%
	ILI	3.35	2.93	3.34	3.15	3.46	3.71
Pearly Beach	Volume	36.951	52.640	87.708	67.435	45.689	36.511
	Percentage	25.41%	33.68%	48.42%	41.93%	32.28%	26.27%
	ILI	1.0	2.86	4.79	4.79	3.02	2.41
Baardskeerdersbos	Volume	6.654	6.251	5.665	4.000	2.778	4.085
	Percentage	45.44%	46.26%	48.62%	36.30%	29.26%	37.29%
	ILI	1.3	1.28	1.16	0.75		
Buffeljags Bay	Volume	0.705	0.612	0.004	0.090	0.019	0
	Percentage	15.85%	15.45%	0.12%	2.63%	0.49%	0%
	ILI	3.83	3.80	0.42	0.46		
TOTAL	**Volume**	**1 349.667**	**1 385.486**	**1 562.452**	**1 617.122**	**1 715.723**	**1 993.892**
	Percentage	**18.86%**	**19.43%**	**23.25%**	**23.23%**	**24.94%**	**26.65%**
	ILI	1.74	1.78	2.02	2.26	2.02	2.33

Notes: ILI for 2015/2016 in the above table was calculated by GLS for the various distribution systems.
Infrastructure Leakage Index (ILI) for Developed Countries = **1 – 2 Excellent (Category A), 2 – 4 Good (Category B), 4 – 8 Poor (Category C)** and > **8 – Very Bad (Category D)**

Category A = No specific intervention required.

Category B = No urgent action required although should be monitored carefully.

Category C = Requires attention

Category D = Requires immediate water loss reduction interventions

The Infrastructure Leakage Index (ILI) in the above table is the most recent and preferred performance indicator for comparing leakage from one system to another. It is a non-dimensional index representing the ratio of the current real leakage and the "Unavoidable Annual Real Losses". A high ILI value indicates a poor performance with large potential for improvement while a small ILI value indicates a well-managed system with less scope for improvement. Attaining an ILI = 1 is a theoretical limit, which is the minimum water loss in an operational water reticulation system. A value of less than 1 should not occur since this implies that the actual leakage is less than the theoretical minimum level of leakage.

Business Element 9: Water Resources

The graph below gives an overview of the total bulk system input volume and NRW for the various distribution systems in Overstrand Municipality's Management Area.

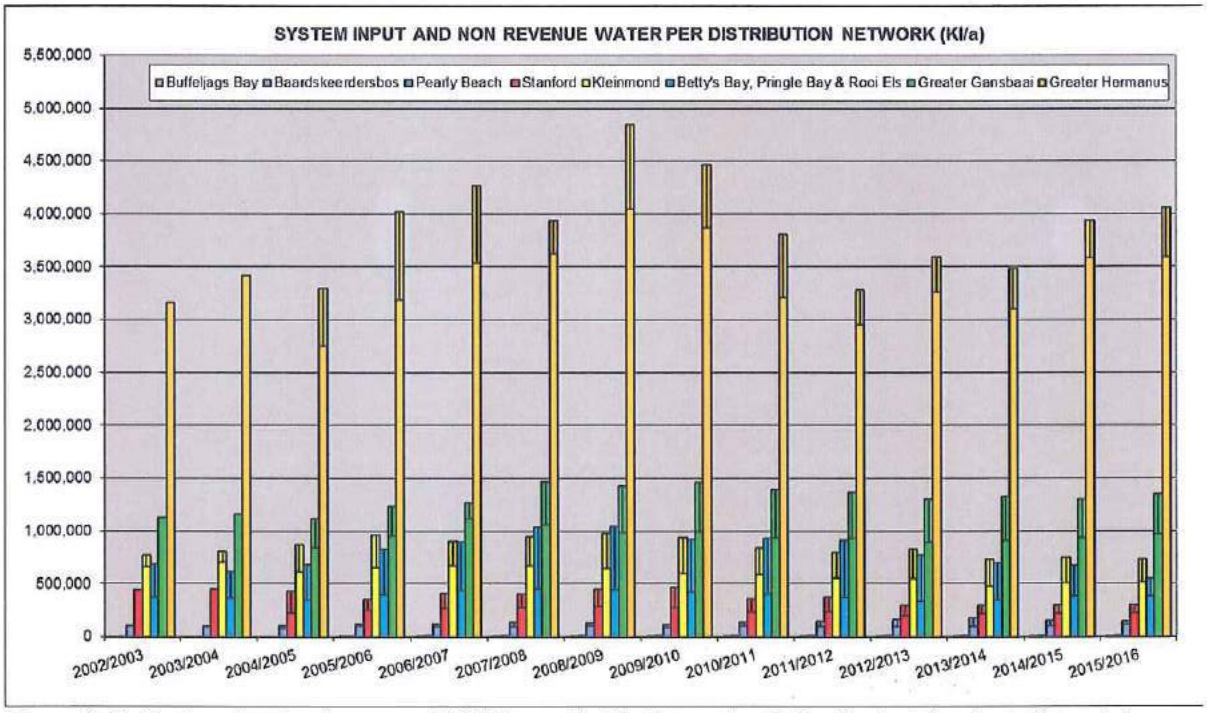

Figure A.9: System input volume and NRW per distribution network for the last fourteen financial years.

The table below summarise the bulk raw water supplied to the various towns in Overstrand Municipality's Management Area.

Table A.28: Volume of bulk raw water supplied to the various towns

Distribution System	Source Name	Current 15/16	Record : Prior (Ml/a)				
			14/15	13/14	12/13	11/12	10/11
Buffels River	Buffels River Dam	762.669	832.082	884.443	959.091	890.129	1 060.903
Kleinmond	Palmiet River, Kleinmond borehole & Dorpsfontein spring	772.220	770.268	757.170	937.438	908.556	865.079
Greater Hermanus	De Bos Dam & Groundwater	4 636.164	4 611.987	4 012.029	3 698 894	3 375.238	3 921.834
Stanford	Stanford spring and two boreholes	387.777	310.787	295.818	296.392	379.130	361.810
Greater Gansbaai	Kraaibosch and Franskraal Dam, Klilpgat, De Kelders Grotte	1 511.060	1 501.361	1 535.945	1 486.216	1 320.178	1 358.985
Pearly Beach	Pearly Beach Springs and Koekemoer Dam	150.919	162.746	190.304	160.831	141.542	138.969
Baardskeersdersbos	Two boreholes	18.380	17.466	11.652	11.019	9.495	10.954
Buffeljags Bay	Borehole	5.427	3.962	3.258	3.418	3.895	3.560
Total supply to all towns		**8 244.616**	**8 210.659**	**7 690.619**	**7 553.299**	**7 028.163**	**7 722.094**

Water Quality: Overstrand Municipality makes use of an accredited external laboratory to conduct the drinking water compliance sampling and analysis. Samples are taken at various locations in each system and analysed to evaluate the compliance. The water quality results are loaded onto DWS's BDS via the internet. Once entered the data is automatically compared to SANS241. This real-time system allows for immediate intervention to rectify any problems.

The overall percentage of compliance of the water quality samples taken over the period July 2015 to June 2016 is summarised in the table below per distribution system (SANS241:2015 Limits).

Table A.29: Percentage compliance of the water quality samples for the period July 2015 to June 2016

Performance Indicator	Performance Indicator categorised as unacceptable Yes / No (Table 4 of SANS 241-2:2015)	% Sample Compliance according to SANS 241-2015 Limits
Buffels River		
Acute Health Microbiological	No (Excellent)	100.0%
Acute Health Chemical	No (Excellent)	100.0%
Chronic Health	No (Excellent)	100.0%
Aesthetic	No (Excellent)	100.0%
Operational Efficiency	No (Excellent)	98.2%
Kleinmond		
Acute Health Microbiological	No (Excellent)	100.0%
Acute Health Chemical	No (Excellent)	100.0%
Chronic Health	No (Excellent)	100.0%
Aesthetic	No (Excellent)	99.4%
Operational Efficiency	No (Excellent)	97.7%
Greater Hermanus		
Acute Health Microbiological	No (Excellent)	100.0%
Acute Health Chemical	No (Excellent)	100.0%
Chronic Health	No (Excellent)	100.0%
Aesthetic	No (Excellent)	99.0%
Operational Efficiency	No (Excellent)	97.7%
Stanford		
Acute Health Microbiological	No (Excellent)	100.0%
Acute Health Chemical	No (Excellent)	100.0%
Chronic Health	No (Excellent)	100.0%
Aesthetic	No (Excellent)	100.0%
Operational Efficiency	No (Excellent)	100.0%
Greater Gansbaai		
Acute Health Microbiological	No (Excellent)	97.5%
Acute Health Chemical	No (Excellent)	100.0%
Chronic Health	No (Excellent)	99.7%
Aesthetic	No (Excellent)	98.5%
Operational Efficiency	No (Excellent)	98.6%
Pearly Beach		
Acute Health Microbiological	No (Excellent)	100.0%
Acute Health Chemical	No (Excellent)	100.0%
Chronic Health	No (Excellent)	100.0%
Aesthetic	No (Excellent)	99.5%
Operational Efficiency	No (Excellent)	99.0%
Baardskeerdersbos		
Acute Health Microbiological	No (Excellent)	97.4%
Acute Health Chemical	No (Excellent)	100.0%
Chronic Health	No (Excellent)	98.7%
Aesthetic	No (Excellent)	98.4%
Operational Efficiency	No (Excellent)	97.5%
Buffeljags Bay		
Acute Health Microbiological	Yes (Unacceptable)	93.8%
Acute Health Chemical	No (Excellent)	100.0%

Table A.29: Percentage compliance of the water quality samples for the period July 2015 to June 2016		
Performance Indicator	**Performance Indicator categorised as unacceptable Yes / No (Table 4 of SANS 241-2:2015)**	**% Sample Compliance according to SANS 241-2015 Limits**
Chronic Health	No (Excellent)	100.0%
Aesthetic	No (Good)	90.0%
Operational Efficiency	No (Excellent)	97.2%

The table below gives an overview of the four categories under which the risks posed by micro-organism, physical or aesthetic property or chemical substance of potable water is normally classified:

Table A.30: Four categories under which the risks posed by micro-organism, physical or aesthetic property or chemical substance of potable water is normally classified	
Category	**Risk**
Acute Health	Determinand that poses an immediate unacceptable health risk if present at concentration values exceeding the numerical limits specified in this part of SANS 241.
Aesthetic	Determinand that taints water with respect to taste, odour and colour and that does not pose an unacceptable health risk if present at concentration values exceeding the numerical limits specified in SANS 241.
Chronic Health	Determinand that poses an unacceptable health risk if ingested over an extended period if present at concentration values exceeding the numerical limits specified in SANS 241.
Operational	Determinand that is essential for assessing the efficient operation of treatment systems and risks from infrastructure

The operational water quality sampling programmes of Overstrand Municipality complies with the minimum monitoring frequency for process risk indicators (SANS241-2:2015: Table 1) for the various WTWs and distribution systems.

The table below indicates the compliance of the E.Coli monitoring frequency in the water distributions systems of Overstrand Municipality, in terms of the minimum requirements of SANS: 241-2:2015. The period assessed was for samples taken from July 2015 to June 2016.

Table A.31: Overstrand Municipality's compliance of the monthly E.Coli monitoring frequency in the water distribution systems in terms of the minimum requirements of SANS 241-2:2015 (Table 2).			
Distribution System	**Population served**	**Required number of monthly samples (SANS 241-2:2015: Table 2)**	**Number of monthly E.Coli samples taken by Municipality during 2015/2016**
Buffels River	2 703	2	5.4
Kleinmond	7 317	2	3.4
Greater Hermanus	56 336	11.3	11.3
Stanford	5 308	2	2.4
Greater Gansbaai	16 130	3.2	9.8
Pearly Beach	1 138	2	3.4
Baardskeerdersbos	124	2	3.3
Buffeljags Bay	150	2	2.7

Effluent quality: The overall Microbiological, Chemical and Physical compliance percentages of the final effluent samples taken over the last three financial years at the Kleinmond, Hawston, Hermanus, Stanford and Gansbaai WWTW is summarised in the table below (General Standards).

Table A.32: Percentage Microbiological (Faecal Coliforms) compliance of the compliance samples taken at the various WWTWs for the last three financial years			
WWTW	**2015/2016**	**2014/2015**	**2013/2014**
Kleinmond	100.0%	91.7%	66.7%
Hawston	91.7%	100.0%	91.7%
Hermanus	100.0%	75.0%	91.7%
Stanford	91.7%	91.7%	91.7%
Gansbaai	83.3%	91.7%	91.7%
Total	**93.3%**	**90.0%**	**86.7%**

Table A.33: Percentage chemical compliance of the compliance samples taken at the various WWTWs for the last three financial years.

WWTW	2015/2016					2014/2015					2013/2014				
	Ammonia	Nitrites & Nitrates	COD	Ortho Phosphate	Overall	Ammonia	Nitrites & Nitrates	COD	Ortho Phosphate	Overall	Ammonia	Nitrites & Nitrates	COD	Ortho Phosphate	Overall
Kleinmond	41.7%	91.7%	66.7%	100.0%	75.0%	41.7%	83.3%	91.7%	100.0%	81.7%	50.0%	75.0%	91.7%	100.0%	83.3%
Hawston	25.0%	100.0%	50.0%	100.0%	73.3%	50.0%	100.0%	41.7%	91.7%	68.3%	25.0%	100.0%	25.0%	50.0%	53.3%
Hermanus	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	91.7%	100.0%	100.0%	91.7%	96.7%
Stanford	100.0%	75.0%	100.0%	100.0%	95.0%	100.0%	83.3%	100.0%	100.0%	96.7%	91.7%	58.3%	75.0%	100.0%	83.3%
Gansbaai	83.3%	91.7%	83.3%	91.7%	88.3%	91.7%	100.0%	91.7%	91.7%	95.0%	100.0%	75.0%	91.7%	100.0%	93.3%
Total	**70.0%**	**91.7%**	**80.0%**	**98.3%**	**86.3%**	**76.7%**	**93.3%**	**85.0%**	**96.7%**	**88.3%**	**71.7%**	**81.7%**	**76.7%**	**88.3%**	**82.0%**

Table A.34: Percentage physical compliance of the compliance samples taken at the various WWTWs for the last three financial years.

WWTW	2015/2016				2014/2015				2013/2014			
	pH	Electrical Conductivity	Total Suspended Solids	Overall	pH	Electrical Conductivity	Total Suspended Solids	Overall	pH	Electrical Conductivity	Total Suspended Solids	Overall
Kleinmond	100.0%	91.7%	75.0%	88.9%	100%	91.7%	83.3%	91.7%	100.0%	100.0%	91.7%	97.2%
Hawston	100.0%	50.0%	83.3%	77.8%	100%	91.7%	83.3%	91.7%	100.0%	33.3%	91.7%	75.0%
Hermanus	100.0%	0.0%	91.7%	63.9%	100%	8.3%	75.0%	61.1%	100.0%	0.0%	91.7%	63.9%
Stanford	100.0%	91.7%	100.0%	97.2%	100%	91.7%	100.0%	97.2%	100.0%	100.0%	100.0%	100.0%
Gansbaai	83.3%	66.7%	83.3%	77.8%	100%	75.0%	91.7%	88.9%	100.0%	58.3%	91.7%	83.3%
Total	**96.7%**	**60.0%**	**86.7%**	**81.1%**	**100%**	**71.7%**	**86.7%**	**86.1%**	**100.0%**	**58.3%**	**93.3%**	**83.9%**

The EMS Section of Overstrand Municipality continues with the extensive monitoring of the recreational waters to determine the severity of faecal pollution in the Klein River Estuary, on behalf of Overberg District Municipality. Data collected and assimilated from the monthly samples form the basis of a monthly Water Quality Report, which is used to recommend actions to address health hazards in the Estuarine and marine recreational environment. The long term goal is to extend the monitoring programme to embrace estuarine and marine environments throughout the municipal region. This will enable the department to establish accurate data and to recommend best practice in the management of these systems to ensure appropriate water quality.

Industrial Consumers: The volumes and nutrient loads of effluent discharged by industries in Overstrand Municipality's Management Area into the Municipality's sewer system are not yet monitored by Overstrand Municipality. The Municipality's tariff structure for the discharge of effluent by industrial consumers does not make provision for nutrient loads and volume to be taken into account. There is no limit on the permitted volume of effluent that can be discharged into the sewer system, but the concentration limits for the various parameters are included in the Municipality's Water Services by-laws (Acceptance of industrial effluent for discharge into the sewage disposal system).

Business Element 10: Financial

Capital Budget: The table below gives an overview of Overstrand Municipality's historical water and sewerage capital expenditure over the last five financial years.

Table A.35: Historical expenditure of the water and sewerage infrastructure budgets

Financial Year	Water Infrastructure			Sewerage Infrastructure		
	Budget	Expenditure	% Spend	Budget	Expenditure	% Spend
2011/2012	R71 859 060	R57 332 947	79.79%	R29 101 193	R26 040 258	89.48%
2012/2013	R56 878 743	R48 633 690	85.50%	R17 877 374	R16 342 067	91.41%
2013/2014	R23 831 730	R23 630 683	99.16%	R12 153 413	R10 159 365	83.59%
2014/2015	R16 384 323	R16 275 016	99.33%	R12 070 996	R11 969 551	99.16%
2015/2016	R16 390 184	R14 232 323	86.83%	R8 360 500	R6 418 821	76.78%

Overstrand Municipality's approved revised Capital Budget for the 2016/2017 financial year is R15.589 million for water infrastructure and R14.849 million for sewerage infrastructure.

Operational Budget: The table below gives a summary of the total operational costs and income for water and sanitation services for the last five financial years.

Table A.36: Summary of Operational Expenditure and Income Budgets for water and sanitation services

Service	Expenditure / Income	Actual 15/16	Actual 14/15	Actual 13/14	Actual 12/13	Actual 11/12
Water	Expenditure	R105 388 386-73	R87 684 218-72	R95 829 984-21	R85 498 520-43	R83 115 288-69
	Income	R117 279 277-35	R109 580 993-32	R96 057 574-71	R96 578 920-13	R104 938 998-48
	Surplus / (Deficit)	(R11 890 890-62)	(R21 896 774-60)	(R227 590-50)	(R11 080 399-70	(R21 823 709-79)
Sanitation	Expenditure	R64 371 024-75	R59 653 861-52	R57 539 215-06	R51 607 042-31	R45 790 334-40
	Income	R77 211 013-42	R75 482 947-03	R65 032 183-93	R64 291 003-56	R74 623 658-62
	Surplus / (Deficit)	(R12 839 988-67)	(R15 829 085-51)	(R7 492 968-87)	(R12 683 961-25)	(R28 833 324-22)

Tariff and Charges: The first six (6) kl of water is provided free to all indigent consumers. Overstrand Municipality's tariffs support the viability and sustainability of water supply services to the poor through cross-subsidies (where feasible). Free basic water and sanitation services are linked to Overstrand Municipality's Indigent Policy and all indigent households therefore receive free basic water and sanitation services. This implies that either the equitable share is used to cover this cost, or higher consumption blocks are charged at a rate greater than the cost in order to generate a surplus to cross-subsidise consumers who use up to six (6) kilolitres per month.

Overstrand Municipality's current six (6) block step tariff system discourages the wasteful or inefficient use of water. It is expected that this tariff structure will continue to be applied in the future. The sustainable supply of potable water is becoming an ever increasing challenge. This scarce commodity has to be optimally managed. The continued increase in the price of electricity and chemicals for purification has contributed to the cost of delivering the service. The water usage block tariff has been structured for a basic affordable tariff for up to 18 kl per household per month. Punitive tariffs are in place for excessive water consumption.

The domestic sewerage tariff is based on 70% of water consumption, to a maximum of 50kl water consumption per month, i.e. maximum 35kl/month sewerage charged.

Business Element 11: Water Services Institutional Arrangements

Overstrand Municipality acts as both WSA and WSP to the consumers in their Municipal Management Area and therefore does not manage other WSPs. A 15 year contract with Veolia Water Solutions & Technologies South Africa (Pty) Ltd however commenced on the 1st of November 2015 to effectively and efficiently operate and maintain the Municipality's bulk water and sewerage infrastructure on behalf of Overstrand Municipality, as previously mentioned. The Municipality also has the right to extend the contract for a further five (5) years. Overstrand Municipality remains accountable to the community and the contractor is accountable to the Municipality.

The benefits of the bulk water services operation and maintenance contract are as follows:

- Extensive training and development of staff.
- Regulatory compliance to be achieved within three years (Regulation 2834).
- The operational risk is transferred to the Operator.
- Improved operational efficiencies (e.g. SCM processes and Treatment Process Optimization)
- Substantial saving compared to the Municipality performing the full function (R9M per year).

A comprehensive set of Water Services By-laws are in place for Overstrand Municipality's Management Area. The By-laws cover the provision of services for water supply, sanitation and industrial effluent.

The IDP is the Municipality's single most strategic document that drives and directs all implementation and related processes. The Municipality's budget is developed based on the priorities, programmes and projects of the IDP, after which a Service Delivery Budget Implementation Plan (SDBIP) is developed, to ensure that the organisation actually delivers on the IDP targets.

The SDBIP is the process plan and performance indicator / evaluation for the execution of the budget. The SDBIP is being used as a management, implementation and monitoring tool that assists and guide the Executive Mayor, Councillors, Municipal Manager, Senior Managers and the community. The plan serves as an input to the performance agreements of the Municipal Manager and Directors. It also forms the basis for the monthly, quarterly, mid-year and the annual assessment report and performance assessments of the Municipal Manager and Directors.

The vacancy rate of Overstrand Municipality was 7.19% for the 1 113 approved posts on the organogram in 2015/2016. The vacancy rate for the 114 approved Infrastructure and Planning Services posts was 14.0% in 2015/2016.

At a technical, operations and management level, municipal staff is continuously exposed to training opportunities, skills development and capacity building in an effort to create a more efficient overall service to the users. Veolia Water Solutions & Technologies South Africa (Pty) Ltd are responsible to ensure that submissions are made to the DWS for the classification and registration of the Process Controllers and Supervisors at the various plants. A skills audit is conducted during each year, which leads to various training programmes in order to wipe out skills shortages and to provide employees with the necessary capacity. A Workplace Skills Plan for 2016/2017 is in place.

Municipal Strategic Self-Assessment (MuSSA): Overseen by the DWS the MuSSA conveys an overall business health of municipal water business and serves as a key source of information around municipal performance. The MuSSA also identifies key municipal vulnerabilities that are strategically important to DWS, the Department of Cooperative Government (DCoG), National Treasury, the planning Commission/Office of the Presidency, the South African Local Government Association (SALGA) and the municipalities themselves. The MuSSA team continues to engage (1) DWS directorates and their associated programmes (e.g. Water Services Development Plan, Water Services Regulation), and (2) other sector departments and their associated programmes (e.g. LGTAS, MISA) to minimize duplication and ensure alignment. Through the tracking of current and likely future performance, the key areas of vulnerability identified, allow municipalities to effectively plan and direct appropriate resources that will also enable DWS and the sector to provide more effective support.

The Spider Diagram below effectively indicates the vulnerability levels of Overstrand Municipality across the key service areas, as identified through the Municipal Strategic Self-Assessment of Water Services process.

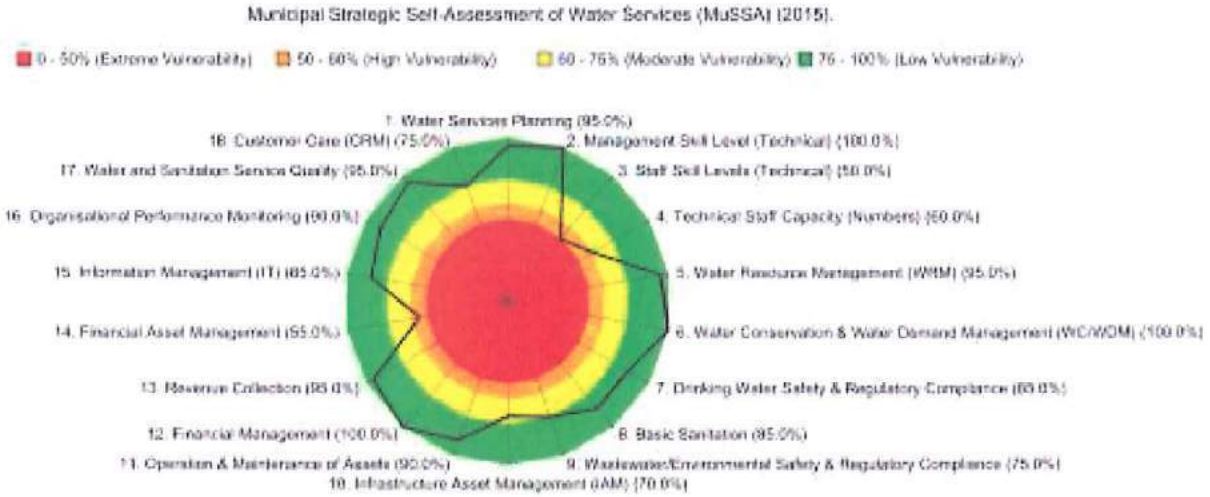

Figure A.10: Spider Diagram of the vulnerability levels of Overstrand Municipality for 2015

Overstrand Municipality's Vulnerability Index for 2015 was indicated as **0.26 "Low Vulnerability"** in the "2015 Municipal Services Strategic Assessment (MuSSA) for Western Cape Province" Report.

Business Element 12: Social and Customer Service Requirements

In line with Overstrand Municipality's Vision – **to be a centre of excellence to the community** – the Municipality has developed a comprehensive customer care strategy. The strategy has now rolled out into consumer services charters for the following departments: electricity, water and sanitation, solid waste management and roads and storm water.

The consumer services charter for water and sanitation include the following commitments with regard to water services quality and service standards.

Our Purpose: To provide consumers with potable water and appropriate sanitation services.

Water Services Quality:

- We commit ourselves to supply – where the infrastructure allows – water that meets the standards set out for drinking water (SANS 0241) and treat effluent to a standard prescribed by law before disposal thereof into our water resources.
- We have a water quality management programme in terms of which potable water is frequently sampled at various places and tested by an independent accredited laboratory. The results of our treated water and effluent analyses are reported monthly to the Department of Water and Sanitation and thus monitored nationally.
- We strive to obtain Blue Drop status for all our water purification works and Green Drop status for all our wastewater treatment plants.