

	A	B	C	D	E	F	G	H	I	J
1										
2	<b>WATER CONSERVATION AND WATER DEMAND MANAGEMENT STRATEGIC BUSINESS PLAN FOR Setsoto LOCAL MUNICIPALITY</b>									
3	<b>TASK NO:</b>	<b>TASK DESCRIPTION</b>	<b>PRIORITY STATUS</b>	<b>BUDGET/COST</b>	<b>PERIOD</b>					
4					<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>	<b>TOTAL</b>
5	<b>CATEGORY</b>	<b>TECHNICAL INTERVENTIONS</b>			<b>R 8 855 000</b>	<b>R 10 182 500</b>	<b>R 7 132 500</b>	<b>R 5 160 000</b>	<b>R 4 665 000</b>	<b>R 35 770 000</b>
6	<b>1</b>	<b>EXISTING &amp; PROPOSED BULK METERING</b>								
7	1.1	install meters on all inlets of WTW to measure the bulk volume raw water supplied	Very High	<b>CAPEX</b>	R 150 000	R -	R -	R -	R -	<b>R 150 000</b>
8				<b>OPEX</b>	R -	R 25 000	R 10 000	R 10 000	R 10 000	<b>R 55 000</b>
9	1.2	Install meters on all reservoirs/tower outlets to measure quantities of water entering the systems and to measure the minimum nightflows	Very High	<b>CAPEX</b>	R 125 000	R -	R -	R -	R -	<b>R 125 000</b>
10				<b>OPEX</b>	R -	R 15 000	R 10 000	R 15 000	R 10 000	<b>R 50 000</b>
11	1.3	install meters on all inlets of WWTW to measure the sewage flows. The relationship between the potable and sewage flows provides an indication of the condition of the internal plumbing.	Very High	<b>CAPEX</b>	R 50 000	R -	R -	R -	R -	<b>R 50 000</b>
12				<b>OPEX</b>	R -	R 22 500	R 10 000	R 10 000	R 12 500	<b>R 55 000</b>
13	1.4	Implement a bulk meter repair programme whereby broken meters can be repaired within 7 days.	Very High	<b>CAPEX</b>	R 175 000	R -	R -	R -	R -	<b>R 175 000</b>
14				<b>OPEX</b>	R 25 000	R 20 000	R 15 000	R 10 000	R 12 500	<b>R 82 500</b>
15	<b>Sub-Total Task 1: EXISTING AND PROPOSED BULK METERING</b>			<b>Capex + Opex</b>	<b>R 525 000</b>	<b>R 82 500</b>	<b>R 45 000</b>	<b>R 45 000</b>	<b>R 45 000</b>	<b>R 742 500</b>
16	<b>Benefit: The benefits of Task 1 technical intervention include improved metering, billing and management of the system to ensure proper accounting and auditing of the non-revenue water in Setsoto.</b>									
17	<b>2</b>	<b>SECTORISATION</b>								
18	2.1	Perform zone discreteness test through pressure drop test and or logging. Identify, service and mark all zone valves. This should be undertaken for all zones.	Medium	<b>CAPEX</b>	R 35 000	R -	R -	R -	R -	<b>R 35 000</b>
19				<b>OPEX</b>	R -	R 25 000	R 25 000	R 25 000	R 25 000	<b>R 100 000</b>
20	2.2	Check zone valves on a monthly basis to ensure zone discreteness.	Medium	<b>CAPEX</b>	R -	R 45 000	R -	R -	R -	<b>R 45 000</b>
21				<b>OPEX</b>	R -	R -	R 25 000	R 25 000	R 25 000	<b>R 75 000</b>
22	2.3	Include the exact position of all zone valves in a GIS system for reference. This action should be undertaken by local municipal staff with support from specialist pipe and valve location contractors in problem areas.	Medium	<b>CAPEX</b>	R 35 000	R 25 000	R -	R -	R -	<b>R 60 000</b>
23				<b>OPEX</b>	R -	R 35 000	R 25 000	R -	R -	<b>R 60 000</b>
24	<b>Sub-Total Task 2: SECTORISATION</b>			<b>Capex + Opex</b>	<b>R 70 000</b>	<b>R 130 000</b>	<b>R 75 000</b>	<b>R 50 000</b>	<b>R 50 000</b>	<b>R 375 000</b>
25	<i>Sectorisation forms a key part of water demand management and it is imperative that the operation staff of the municipality has a thorough understanding of the system boundaries and operation and hence must be involved in the implementation. If consultants are used alone no transfer occurs.</i>									
26	<b>Benefit: The benefits of Task 2 technical intervention include improved management and knowledge of where the water is supplied in Setsoto.</b>									
27	<b>3</b>	<b>WATER LOSS MONITORING AND AUDITING/ WATER BALANCE</b>								

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2	<b>WATER CONSERVATION AND WATER DEMAND MANAGEMENT STRATEGIC BUSINESS PLAN FOR Setsoto LOCAL MUNICIPALITY</b>									
3	<b>TASK NO:</b>	<b>TASK DESCRIPTION</b>	<b>PRIORITY STATUS</b>	<b>BUDGET/COST</b>	<b>PERIOD</b>					
4					<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>	<b>TOTAL</b>
28	3.1	Obtain Minimum Night Flow measurements from telemetry system or continuous logging programme.	Very High	CAPEX	R 50 000	R 65 000	R -	R -	R -	R 115 000
29				OPEX	R -	R 50 000	R 20 000	R 20 000	R 20 000	R 110 000
30	3.2	Prepare SANFLOW analysis for each management zone on a monthly basis.	Very High	CAPEX	R -	R -	R -	R -	R -	R -
31				OPEX	R -	R 50 000	R 50 000	R 50 000	R 50 000	R 200 000
32	3.3	Prepare shortlist of problem zones for investigation and remedial action.	Very High	CAPEX	R -	R -	R -	R -	R -	R -
33				OPEX	R 100 000	R 100 000	R 85 000	R 50 000	R -	R 335 000
34	3.4	Prepare a water balance for each zone on a monthly basis.	Very High	CAPEX	R -	R -	R -	R -	R -	R -
35				OPEX	R 150 000	R 150 000	R 100 000	R 50 000	R 50 000	R 500 000
36	3.5	Identify components of water loss for each management zone.	Very High	CAPEX	R 150 000	R 150 000	R 150 000	R 150 000	R 125 000	R 725 000
37				OPEX	R -	R 50 000	R 50 000	R 50 000	R 50 000	R 200 000
38	<b>Sub-Total Task 3: WATER LOSS MONITORING AND AUDITING/WATER BALANCE</b>			<b>Capex + Opex</b>	<b>R 450 000</b>	<b>R 615 000</b>	<b>R 455 000</b>	<b>R 370 000</b>	<b>R 295 000</b>	<b>R 1 960 000</b>
39	<i>Benefit: The benefits of Task 3 technical intervention include improved management and monitoring of the system as well as identification of problem areas in Setsoto.</i>									
40	<b>4</b>	<b>ACTIVE LEAKAGE CONTROL</b>								
41	4.1	Inspect for repair all meters, control valves, isolating valves, hydrants, air valves and visible leaks. This exercise should be restricted to only visual inspection and sounding.	Very High	CAPEX	R 750 000	R 750 000	R 550 000	R 500 000	R 450 000	R 3 000 000
42				OPEX	R 150 000	R 185 000	R 2 500	R 100 000	R 100 000	R 537 500
43	4.2	Develop an ongoing and strategic programme for active leak location and repairs @ R1500/km of pipe length.	Very High	CAPEX	R 75 000	R 350 000	R 185 000	R 125 000	R 100 000	R 835 000
44				OPEX	R -	R 250 000	R 350 000	R 200 000	R 150 000	R 950 000
45	<b>Sub-Total Task 4: ACTIVE LEAKAGE CONTROL</b>			<b>Capex + Opex</b>	<b>R 975 000</b>	<b>R 1 535 000</b>	<b>R 1 087 500</b>	<b>R 925 000</b>	<b>R 800 000</b>	<b>R 5 322 500</b>
46	<i>Benefit: The benefits of Task 4 technical intervention include active identification and repair of leaks resulting in reduced leaks in Setsoto.</i>									
47	<b>5</b>	<b>PASSIVE LEAKAGE CONTROL</b>								
48	5.1	Identify effectiveness of existing "leak report desk" if any or establish one (* Opex includes desk operator, hardware, printing, software, coping, communications etc.)	Medium	CAPEX	R 25 000	R 25 000	R 25 000	R 25 000	R 50 000	R 150 000
49				OPEX*	R -	R -	R 25 000	R -	R -	R 25 000
50	5.2	Expand to areas that do not have these facilities	Medium	CAPEX	R 50 000	R 50 000	R 50 000	R 50 000	R 50 000	R 250 000
51				OPEX	R -	R -	R -	R -	R -	R -
52	5.2	Promote use of the customer service centre through community awareness	Medium	CAPEX	R 50 000	R 50 000	R 50 000	R 50 000	R 50 000	R 250 000

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3	<b>TASK NO:</b>	<b>TASK DESCRIPTION</b>	<b>PRIORITY STATUS</b>	<b>BUDGET/COST</b>	<b>PERIOD</b>					
4					<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>	<b>TOTAL</b>
53		campaigns and promotions.	Medium	OPEX	R -	R 10 000	R -	R -	R -	R 10 000
54	5.4	Monitor response times, control and customer satisfaction on an ongoing basis and identify corrective action and measures	Medium	CAPEX	R 45 000	R -	R 15 000	R 25 000	R -	R 85 000
55				OPEX	R -	R 45 000	R 45 000	R 50 000	R 25 000	R 165 000
56	<b>Sub-Total Task 5: PASSIVE LEAKAGE CONTROL</b>			<b>Capex + Opex</b>	<b>R 170 000</b>	<b>R 180 000</b>	<b>R 210 000</b>	<b>R 200 000</b>	<b>R 175 000</b>	<b>R 935 000</b>
57	<i>Benefit: The benefits of Task 5 technical intervention include improved communications between the WSP and the consumer, repair of leaks, and improved public image iof Setsoto Municipality.</i>									
58	<b>6</b>	<b>INSTALL AND UPGRADE GIS SYSTEM</b>								
59	6.1	Capture reticulation network drawings for all the areas	Very High	CAPEX	R 450 000	R 330 000	R -	R -	R -	R 780 000
60				OPEX	R -	R -	R -	R -	R -	R -
61	6.2	Include associated infrastructure such as valves, meters, control valves and storage structures	Very High	CAPEX	R -	R -	R -	R -	R -	R -
62				OPEX	R -	R -	R -	R -	R -	R -
63	6.3	Prepare plan books for operations staff	Very High	CAPEX	R -	R -	R -	R -	R -	R -
64				OPEX	R -	R -	R -	R -	R -	R -
65	6.4	Collect plan books on an annual basis and make necessary changes on the electronic system	Very High	CAPEX	R -	R -	R -	R -	R -	R -
66				OPEX	R 20 000	R 25 000	R -	R -	R -	R 45 000
67	6.5	Obtain regular updates of cadastral information and make necessary changes to GIS system	Very High	CAPEX	R -	R -	R -	R -	R -	R -
68				OPEX	R -	R -	R -	R -	R -	R -
69	6.6	Reprint plan books	Very High	CAPEX	R -	R -	R -	R -	R -	R -
70				OPEX	R 10 000	R 25 000	R -	R -	R -	R 35 000
71	<b>Sub-Total Task 6: INSTALL AND UPGRADE GIS SYSTEM</b>			<b>Capex + Opex</b>	<b>R 480 000</b>	<b>R 380 000</b>	<b>R -</b>	<b>R -</b>	<b>R -</b>	<b>R 860 000</b>
72	<i>Benefit: The benefits of Task 6 technical intervention include improved management information, reduced downtime due to lack of information, asset database and transfer of knowledge.</i>									
73	<b>7</b>	<b>WATER MANAGEMENT SYSTEM</b>								
74	7.1	Identify requirements of Management Information System	Very High	CAPEX	R -	R -	R -	R -	R -	R -
75				OPEX	R 50 000	R -	R -	R -	R -	R 50 000
76	7.2	Decide on implementation Approach	Very High	CAPEX	R -	R -	R -	R -	R -	R -

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2	<b>WATER CONSERVATION AND WATER DEMAND MANAGEMENT STRATEGIC BUSINESS PLAN FOR Setsofo LOCAL MUNICIPALITY</b>									
3	<b>TASK NO:</b>	<b>TASK DESCRIPTION</b>	<b>PRIORITY STATUS</b>	<b>BUDGET/COST</b>	<b>PERIOD</b>					
4					<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>	<b>TOTAL</b>
77	7.2	Decide on implementation approach	Very High	OPEX	R 10 000	R -	R -	R -	R -	R 10 000
78	7.3	Set-up complete management information system	Very High	CAPEX	R -	R -	R -	R -	R -	R -
79				OPEX	R -	R -	R -	R -	R -	R -
80	7.4	Start with a pilot project in one town and township reticulation network	Very High	CAPEX	R -	R -	R -	R -	R -	R -
81				OPEX	R 550 000	R 250 000	R 250 000	R 200 000	R 150 000	R 1 400 000
82	7.5	outsource service provider to install, manage and maintain as well as transfer skill to internal staff to manage over the long-term.	Very High	CAPEX	R -	R 1 800 000	R 500 000	R -	R -	R 2 300 000
83				OPEX	R -	R 250 000	R 250 000	R 300 000	R 300 000	R 1 100 000
84	<b>Sub-Total Task 7: WATER MANAGEMENT SYSTEM</b>			<b>Capex + Opex</b>	<b>R 610 000</b>	<b>R 2 300 000</b>	<b>R 1 000 000</b>	<b>R 500 000</b>	<b>R 450 000</b>	<b>R 4 860 000</b>
85	<b>Benefit: The benefits of Task 7 technical intervention include consolidated information, quicker access to information, decision support system.</b>									
86	<b>8</b>	<b>RETROFIT INTERNAL PLUMBING</b>								
87	8.1	Identify areas with a high sewage night flow. Unfortunately sewage flows are not available but potential problems are expected in the township areas of Namahadi, Qalabotjha, Ntswanatsatsi and Mafahlaneng.	Very High	CAPEX	R 250 000	R -	R -	R -	R -	R 250 000
88				OPEX	R 65 000	R 150 000	R 100 000	R 50 000	R 25 000	R 390 000
89	8.2	Develop a plan of implementing retrofitting programme. These include aspects such as payment by the consumer and municipality for materials and/or labour as well as targeting high user indigent households.	Very High	CAPEX	R 85 000	R 50 000	R 25 000	R -	R -	R 160 000
90				OPEX	R 25 000	R -	R -	R -	R -	R 25 000
91	8.3	Undertake retrofitting of internal plumbing @ R450/property	Very High	CAPEX	R 500 000	R 500 000	R 500 000	R 500 000	R 500 000	R 2 500 000
92				OPEX	R 150 000	R 300 000	R 150 000	R 150 000	R 150 000	R 900 000
93	8.4	Implement continuous retrofitting programme for all public buildings such as schools and hospitals etc.	Very High	CAPEX	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000	R 1 250 000
94				OPEX	R 225 000	R 225 000	R 225 000	R 225 000	R 225 000	R 1 125 000
95	<b>Sub-Total Task 8: RETROFIT INTERNAL PLUMBING</b>			<b>Capex + Opex</b>	<b>R 1 550 000</b>	<b>R 1 475 000</b>	<b>R 1 250 000</b>	<b>R 1 175 000</b>	<b>R 1 150 000</b>	<b>R 6 600 000</b>
96	<b>Benefit: The benefits of Task 8 technical intervention include reduced leakage from internal plumbing and improved revenue through reduction of non-revenue demand from indigent households.</b>									
97	<b>9</b>	<b>Metering and renewal programme</b>								
98	9.1	Evaluate installation of new metering and roll-out to unmetered properties.	Very High	CAPEX	R 250 000	R 250 000	R 250 000	R -	R -	R 750 000
99				OPEX	R 65 000	R -	R -	R 45 000	R -	R 110 000

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4					<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>	<b>TOTAL</b>
100	9.2	Develop & schedule a plan to test, calibrate, repair and replace meters as necessary.	High	CAPEX	R -	R -	R -	R -	R -	R -
101				OPEX	R 25 000	R 25 000	R 35 000	R -	R -	R 85 000
102	9.3	Replace ageing meters according to cost optimized programme	High	CAPEX	R 150 000	R 50 000	R 50 000	R 75 000	R 25 000	R 350 000
103				OPEX	R -	R -	R -	R -	R -	R -
104	<b>Sub-Total Task 9: METERING AND RENEWAL PROGRAMME</b>			<b>Capex + Opex</b>	<b>R 490 000</b>	<b>R 325 000</b>	<b>R 335 000</b>	<b>R 120 000</b>	<b>R 25 000</b>	<b>R 1 295 000</b>
105	<i>Benefit: The benefits of Task 9 technical intervention include water accounting and improved revenue through reduction of non-revenue demand through reduction of apparent losses.</i>									
106	<b>10</b>	<b>Asset Records</b>								
107	10.1	Up-date water mains drawings/GIS with extensions, check information from new connections, repairs, etc.	High	CAPEX	R -	R 100 000	R -	R -	R -	R 100 000
108				OPEX	R 75 000	R -	R 50 000	R 50 000	R 25 000	R 200 000
109	10.2	Ensure as built drawings of new works are produced and handed over.	High	CAPEX		R 250 000	R -	R -	R -	R 250 000
110				OPEX	R 25 000	R 50 000	R -	R -	R -	R 75 000
111	10.3	Up-date consumer registers and consumer meter databases	High	CAPEX	R -	R -	R -	R -	R -	R -
112				OPEX	R 150 000	R 100 000	R 100 000	R 50 000	R -	R 400 000
113	<b>Sub-Total Task 10: ASSET RECORDS</b>			<b>Capex + Opex</b>	<b>R 250 000</b>	<b>R 500 000</b>	<b>R 150 000</b>	<b>R 100 000</b>	<b>R 25 000</b>	<b>R 1 025 000</b>
114	<i>Benefit: The benefits of Task 10 technical intervention include improved efficiency of distribution and operation system resulting in overall efficiency of distribution and quality of water services provision.</i>									
115	<b>11</b>	<b>Pipeline Replacement and Refurbishments</b>								
116	11.1	Assess infrastructure condition for all bulk and reticulation pipe network	very high	CAPEX	R -	R -	R -	R -	R -	R -
117				OPEX	R 100 000	R 120 000	R -	R -	R -	R 220 000
118	11.2	Replace all asbestos pipes for bulk and reticulation network annually	Very high	CAPEX	R 1 500 000	R 1 500 000	R 1 500 000	R 1 500 000	R 1 500 000	R 7 500 000
119				OPEX	R 150 000	R 150 000	R 150 000	R 150 000	R 150 000	R 750 000
120	<b>Sub-Total Task 11: PIPELINE REPLACEMENT &amp; REFURBISHMENTS (O&amp;M)</b>			<b>Capex + Opex</b>	<b>R 1 750 000</b>	<b>R 1 770 000</b>	<b>R 1 650 000</b>	<b>R 1 650 000</b>	<b>R 1 650 000</b>	<b>R 8 470 000</b>
121	<i>Benefit: The benefits of Task 11 technical intervention include reduced leakage from bulk and reticulation pipe leakages and bursts , reduction on intermittent supply and improved revenue through reduction of non-revenue demand.</i>									
122	<b>12</b>	<b>Pressure Management</b>								

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3	<b>TASK NO:</b>	<b>TASK DESCRIPTION</b>	<b>PRIORITY STATUS</b>	<b>BUDGET/COST</b>	<b>PERIOD</b>					
4					<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>	<b>TOTAL</b>
123	12.1	Determine critical zone pressures.	high	CAPEX	R 150 000	R -	R -	R -	R -	R 150 000
124				OPEX	R 85 000	R 75 000	R -	R -	R -	R 160 000
125	12.2	Determine pressure management areas (PMAs).	high	CAPEX	R -	R -	R -	R -	R -	R -
126				OPEX	R 50 000	R -	R 25 000	R -	R -	R 75 000
127	12.3	Design and install PRV on controllers	high	CAPEX	R -	R -	R 450 000	R -	R -	R 450 000
128				OPEX	R -	R 65 000	R -	R -	R -	R 65 000
129	12.4	Determine night use and establish pressure settings	high	CAPEX	R 1 250 000	R 750 000	R 250 000	R 25 000	R -	R 2 275 000
130				OPEX	R -	R -	R 150 000	R -	R -	R 150 000
131	<b>Sub-Total Task 12: PRESSURE MANAGEMENT</b>			<b>Capex + Opex</b>	<b>R 1 535 000</b>	<b>R 890 000</b>	<b>R 875 000</b>	<b>R 25 000</b>	<b>R -</b>	<b>R 3 325 000</b>
132	<i>Benefit: The benefits of Task 12 technical intervention include reduced leakage from internal plumbing, bulk supply bursts and improved revenue through reduction of non-revenue demand.</i>									
133	<b>CATEGORY</b>	<b>FINANCIAL &amp; ECONOMIC INTERVENTIONS</b>			<b>R 710 000</b>	<b>R 610 000</b>	<b>R 725 000</b>	<b>R 530 000</b>	<b>R 525 000</b>	<b>R 3 100 000</b>
134	1	<b>METER READING AND CONSUMER BILLING</b>								
135	1.1	Set-up a task team between water and treasury (finance) departments to improve revenue collection	High	CAPEX	R -	R -	R -	R -	R -	R -
136				OPEX	R 25 000	R 25 000	R 15 000	R 15 000	R 20 000	R 100 000
137	1.2	Develop a strategy to address key issues such as discrepancies between meter readings and billing quantities, large number of flat rate consumers, error codes and connections	High	CAPEX	R 75 000	R -	R -	R -	R -	R 75 000
138				OPEX	R -	R 25 000	R 25 000	R 25 000	R 25 000	R 100 000
139	1.2	Implement a consumer meter replacement programme whereby approximately 10% of all the meters are replaced annually with an expected life time of 10 years	High	CAPEX	R 150 000	R 150 000	R 150 000	R 150 000	R 150 000	R 750 000
140				OPEX	R 50 000	R 50 000	R 50 000	R 50 000	R 50 000	R 250 000
141	1.4	Identify and install consumer meters on all unmetered properties	High	CAPEX	R 100 000	R 100 000	R 250 000	R 50 000	R 40 000	R 540 000
142				OPEX	R 45 000	R 45 000	R 45 000	R 45 000	R 45 000	R 225 000
143	1.5	Install bulk meters on all fire connections	High	CAPEX	R 125 000	R 125 000	R 125 000	R 125 000	R 125 000	R 625 000
144				OPEX	R 50 000	R 25 000	R 20 000	R 25 000	R 25 000	R 145 000
145	<b>Sub-Total Task 1: METER READING AND CONSUMER BILLING</b>			<b>Capex + Opex</b>	<b>R 620 000</b>	<b>R 545 000</b>	<b>R 680 000</b>	<b>R 485 000</b>	<b>R 480 000</b>	<b>R 2 810 000</b>
146	<i>Benefit: The benefits of Task 1 financial &amp; Economic intervention include reduced improved revenue collection.</i>									

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147	<b>2</b>	<b>TOP CONSUMER AUDITS</b>								
148	2.1	Identify all consumers using in excess of 50kl/month	Medium	CAPEX	R -	R -	R -	R -	R -	R -
149				OPEX	R 45 000	R 15 000	R -	R -	R -	R 60 000
150	2.2	Audit each consumer for meter accuracy, water theft, meter reading and billing	Medium	CAPEX	R -	R -	R -	R -	R -	R -
151				OPEX	R 45 000	R 50 000	R 45 000	R 45 000	R 45 000	R 230 000
152	2.3	Billing quantities should be audited on a monthly basis and scrutinised for changes in demand	Medium	CAPEX	R -	R -	R -	R -	R -	R -
153				OPEX	R -	R -	R -	R -	R -	R -
154	<b>Sub-Total Task 2: TOP CONSUMER AUDITS</b>			<b>Capex + Opex</b>	<b>R 90 000</b>	<b>R 65 000</b>	<b>R 45 000</b>	<b>R 45 000</b>	<b>R 45 000</b>	<b>R 290 000</b>
155	<b>Benefit: The benefits of Task 2 financial &amp; Economic intervention include identification, increased revenue and monitoring of top consumers</b>									
156	<b>CATEGORY</b>	<b>SOCIAL INTERVENTIONS</b>			<b>R 2 140 000</b>	<b>R 2 115 000</b>	<b>R 2 220 000</b>	<b>R 1 840 000</b>	<b>R 1 905 000</b>	<b>R 10 220 000</b>
157	<b>1</b>	<b>COMMUNITY AWARENESS PROGRAMME</b>								
158	1.1	Identify needs, concerns and possible solutions through KAP surveys, meetings, workshops, etc.	Very High	CAPEX	R 150 000	R 100 000	R 75 000	R 50 000	R 50 000	R 425 000
159				OPEX	R 45 000	R -	R 50 000	R -	R 25 000	R 120 000
160	1.2	Identify possible solutions for needs and concerns as part of other water demand management interventions as well as awareness raising	Very High	CAPEX	R 45 000	R 50 000	R 25 000	R 25 000	R 35 000	R 180 000
161				OPEX	R -	R 45 000	R 35 000	R 50 000	R 50 000	R 180 000
162	1.3	Conduct roadshows and community education and awareness programmes on water conservation and water demand management	Very High	CAPEX	R 450 000	R 450 000	R 540 000	R 350 000	R 300 000	R 2 090 000
163				OPEX	R 500 000	R 450 000	R 450 000	R 300 000	R 350 000	R 2 050 000
164	<b>Sub-Total Task 1: COMMUNITY AWARENESS</b>			<b>Capex + Opex</b>	<b>R 1 190 000</b>	<b>R 1 095 000</b>	<b>R 1 175 000</b>	<b>R 775 000</b>	<b>R 810 000</b>	<b>R 5 045 000</b>
165	<b>Benefit: The benefits of Task 1 Social intervention include consumers that are more water conservation and water demand management conscious, improved relations between WSA, WSP and consumers</b>									
166	<b>2</b>	<b>SCHOOLS AWARENESS PROGRAMME</b>								
167	2.1	Develop awareness raising materials and consultations with schools for participating in a Municipal WC/WDM Annual Competition	Very High	CAPEX	R 150 000	R 200 000	R 200 000	R 200 000	R 150 000	R 900 000
168				OPEX	R 100 000	R 65 000	R 85 000	R 110 000	R 135 000	R 495 000
169	2.2	Conduct Schools Theatre Awareness campaigns & organise competitions on water conservation and demand management projects	Very High	CAPEX	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000	R 1 250 000
170				OPEX	R 150 000	R 150 000	R 150 000	R 150 000	R 150 000	R 750 000
171	<b>Sub-Total Task 2: SCHOOL AWARENESS</b>			<b>Capex + Opex</b>	<b>R 650 000</b>	<b>R 665 000</b>	<b>R 685 000</b>	<b>R 710 000</b>	<b>R 685 000</b>	<b>R 3 395 000</b>
172	<b>Benefit: The benefits of Task 2 Social intervention include consumers that are more water conservation and water demand management conscious, improved general awareness and activism on water conservation among school learners</b>									

	A	B	C	D	E	F	G	H	I	J
2	<b>WATER CONSERVATION AND WATER DEMAND MANAGEMENT STRATEGIC BUSINESS PLAN FOR Setsofo LOCAL MUNICIPALITY</b>									
3	<b>TASK NO:</b>	<b>TASK DESCRIPTION</b>	<b>PRIORITY STATUS</b>	<b>BUDGET/COST</b>	<b>PERIOD</b>					
4					<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>	<b>TOTAL</b>
173	<b>3</b>	<b>PROMOTE EFFICIENT USE OF WATER</b>								
174	3.1	Design appropriate literature and displays for various levels of service and target groups	High	CAPEX	R 145 000	R 200 000	R 200 000	R 200 000	R 245 000	R 990 000
175				OPEX	R 35 000	R 35 000	R 40 000	R 35 000	R 45 000	R 190 000
176	3.2	Distribute literature through inclusion with water bill, schools programmes, Water Week, competitions, articles and advertisements, posters, pamphlets, stickers and sponsorships.	High	CAPEX	R -	R -	R -	R -	R -	R -
177				OPEX	R 120 000	R 120 000	R 120 000	R 120 000	R 120 000	R 600 000
178	<b>Sub-Total Task 3: PROMOTE EFFICIENT USE OF WATER</b>			<b>Capex + Opex</b>	<b>R 300 000</b>	<b>R 355 000</b>	<b>R 360 000</b>	<b>R 355 000</b>	<b>R 410 000</b>	<b>R 1 780 000</b>
179	<i>Benefit: The benefits of Task 3 Social intervention include consumers that are more water conservation and water demand management conscious, improved relations between WSA, WSP and consumers</i>									
180	<b>CATEGORY</b>	<b>INSTITUTIONAL AND LEGISLATIVE INTERVENTIONS</b>			<b>R 1 050 000</b>	<b>R 875 000</b>	<b>R 825 000</b>	<b>R 775 000</b>	<b>R 750 000</b>	<b>R 4 275 000</b>
181	<b>1</b>	<b>DEVELOP A WC/WDM CHAPTER OF WATER BYLAWS FOR ENFORCEMENT</b>								
182	1.1	Review existing water bylaws for WC/WDM Inclusion	High	CAPEX	R -	R -	R -	R -	R -	R -
183				OPEX	R 85 000	R -	R -	R -	R -	R 85 000
184	1.2	Develop a WC/WDM Chapter and update water bylaws for council approval	High	CAPEX	R 120 000	R -	R -	R -	R -	R 120 000
185				OPEX	R -	R 50 000	R 25 000	R -	R -	R 75 000
186	<b>Sub-Total Task 1: DEVELOP A WC/WDM CHAPTER OF WATER BYLAWS FOR ENFORCEMENT</b>			<b>Capex + Opex</b>	<b>R 205 000</b>	<b>R 50 000</b>	<b>R 25 000</b>	<b>R -</b>	<b>R -</b>	<b>R 280 000</b>
187	<i>Benefit: The benefits of Task 1 Institutional &amp; Legislative intervention include ability to control, regulate and prohibit the use of wasteful devices and water use practices within the municipal area of responsibility</i>									
188	<b>2</b>	<b>REQUIRED RESOURCES AND TRAINING</b>								
189	2.1	Identify and appoint suitable staff members for water conservation and water demand management	High	CAPEX	R 350 000	R 350 000	R 350 000	R 350 000	R 350 000	R 1 750 000
190				OPEX	R 140 000	R 140 000	R 140 000	R 140 000	R 140 000	R 700 000
191	2.2	Identify training needs to perform water conservation and water demand management operations	High	CAPEX	R -	R -	R -	R -	R -	R -
192				OPEX	R 120 000	R 100 000	R 75 000	R 50 000	R 25 000	R 370 000
193	2.3	Provide training in identified fields including training of ward committees, and councillors on water conservation and water demand management	High	CAPEX	R 150 000	R 150 000	R 150 000	R 150 000	R 150 000	R 750 000
194				OPEX	R 85 000	R 85 000	R 85 000	R 85 000	R 85 000	R 425 000
195	<b>Sub-Total Task 2: REQUIRED RESOURCES AND TRAINING</b>			<b>Capex + Opex</b>	<b>R 845 000</b>	<b>R 825 000</b>	<b>R 800 000</b>	<b>R 775 000</b>	<b>R 750 000</b>	<b>R 3 995 000</b>
196	<i>Benefit: The benefits of Task 2 Institutional &amp; Legislative intervention include internal capacity building and improved performance in terms of water conservation and service delivery</i>									

	A	B	C	D	E	F	G	H	I	J
2	<b>WATER CONSERVATION AND WATER DEMAND MANAGEMENT STRATEGIC BUSINESS PLAN FOR Setsoto LOCAL MUNICIPALITY</b>									
3	<b>TASK NO:</b>	<b>TASK DESCRIPTION</b>	<b>PRIORITY STATUS</b>	<b>BUDGET/COST</b>	<b>PERIOD</b>					<b>TOTAL</b>
4					<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>	
197	<b>TOTAL WC/WDM STRATEGIC BUSINESS PLAN IMPLEMENTATION COSTS FOR Setsoto LOCAL MUNICIPALITY</b>			<b>Capex + Opex</b>	<b>R 12 755 000</b>	<b>R 13 782 500</b>	<b>R 10 902 500</b>	<b>R 8 305 000</b>	<b>R 7 845 000</b>	<b>R 53 365 000</b>

Water Conservation and Water Demand Management Strategic Business Plan							
Intervention Tasks	Year 1	Year 2	Year 3	Year 4	Year 5	Budget/Cost estimate	Potential Savings
Sub-Total Task 1: EXISTING AND PROPOSED BULK METERING	R 525 000.00	R 82 500.00	R 45 000.00	R 45 000.00	R 45 000.00	R 742 500.00	3 408 400 m <sup>3</sup> /yr 46%
Sub-Total Task 2: SECTORISATION	R 70 000.00	R 130 000.00	R 75 000.00	R 50 000.00	R 50 000.00	R 375 000.00	
Sub-Total Task 3: WATER LOSS MONITORING AND AUDITING/WATER BALANCE	R 450 000.00	R 615 000.00	R 455 000.00	R 370 000.00	R 295 000.00	R 1 960 000.00	
Sub-Total Task 4: ACTIVE LEAKAGE CONTROL	R 975 000.00	R 1 535 000.00	R 1 087 500.00	R 925 000.00	R 800 000.00	R 5 322 500.00	
Sub-Total Task 5: PASSIVE LEAKAGE CONTROL	R 170 000.00	R 180 000.00	R 210 000.00	R 200 000.00	R 175 000.00	R 935 000.00	
Sub-Total Task 6: INSTALL AND UPGRADE GIS SYSTEM	R 480 000.00	R 380 000.00	R -	R -	R -	R 860 000.00	
Sub-Total Task 7: WATER MANAGEMENT SYSTEM	R 610 000.00	R 2 300 000.00	R 1 000 000.00	R 500 000.00	R 450 000.00	R 4 860 000.00	
Sub-Total Task 8: RETROFIT INTERNAL PLUMBING	R 1 550 000.00	R 1 475 000.00	R 1 250 000.00	R 1 175 000.00	R 1 150 000.00	R 6 600 000.00	
Sub-Total Task 9: METERING AND RENEWAL PROGRAMME	R 490 000.00	R 325 000.00	R 335 000.00	R 120 000.00	R 25 000.00	R 1 295 000.00	
Sub-Total Task 11: PIPELINE REPLACEMENT & REFURBISHMENTS (O&M)	R 1 750 000.00	R 1 770 000.00	R 1 650 000.00	R 1 650 000.00	R 1 650 000.00	R 8 470 000.00	
Sub-Total Task 10: ASSET RECORDS	R 250 000.00	R 500 000.00	R 150 000.00	R 100 000.00	R 25 000.00	R 1 025 000.00	
Sub-Total Task 12: PRESSURE MANAGEMENT	R 1 535 000.00	R 890 000.00	R 875 000.00	R 25 000.00	R -	R 3 325 000.00	
Sub-Total Task 1: METER READING AND CONSUMER BILLING	R 620 000.00	R 545 000.00	R 680 000.00	R 485 000.00	R 480 000.00	R 2 810 000.00	
Sub-Total Task 2: TOP CONSUMER AUDITS	R 90 000.00	R 65 000.00	R 45 000.00	R 45 000.00	R 45 000.00	R 290 000.00	
Sub-Total Task 1: COMMUNITY AWARENESS	R 1 190 000.00	R 1 095 000.00	R 1 175 000.00	R 775 000.00	R 810 000.00	R 5 045 000.00	
Sub-Total Task 2: SCHOOL AWARENESS	R 650 000.00	R 665 000.00	R 685 000.00	R 710 000.00	R 685 000.00	R 3 395 000.00	
Sub-Total Task 3: PROMOTE EFFICIENT USE OF WATER	R 300 000.00	R 355 000.00	R 360 000.00	R 355 000.00	R 410 000.00	R 1 780 000.00	
Sub-Total Task 1: DEVELOP A WC/WDM CHAPTER OF WATER BYLAWS FOR ENFORCEMENT	R 205 000.00	R 50 000.00	R 25 000.00	R -	R -	R 280 000.00	
Sub-Total Task 2: REQUIRED RESOURCES AND TRAINING	R 845 000.00	R 825 000.00	R 800 000.00	R 775 000.00	R 750 000.00	R 3 995 000.00	
<b>TOTAL WC/WDM STRATEGIC BUSINESS PLAN IMPLEMENTATION COSTS FOR Setsoto LOCAL MUNICIPALITY</b>	<b>R 12 755 000.00</b>	<b>R 13 782 500.00</b>	<b>R 10 902 500.00</b>	<b>R 8 305 000.00</b>	<b>R 7 845 000.00</b>	<b>R 53 365 000.00</b>	

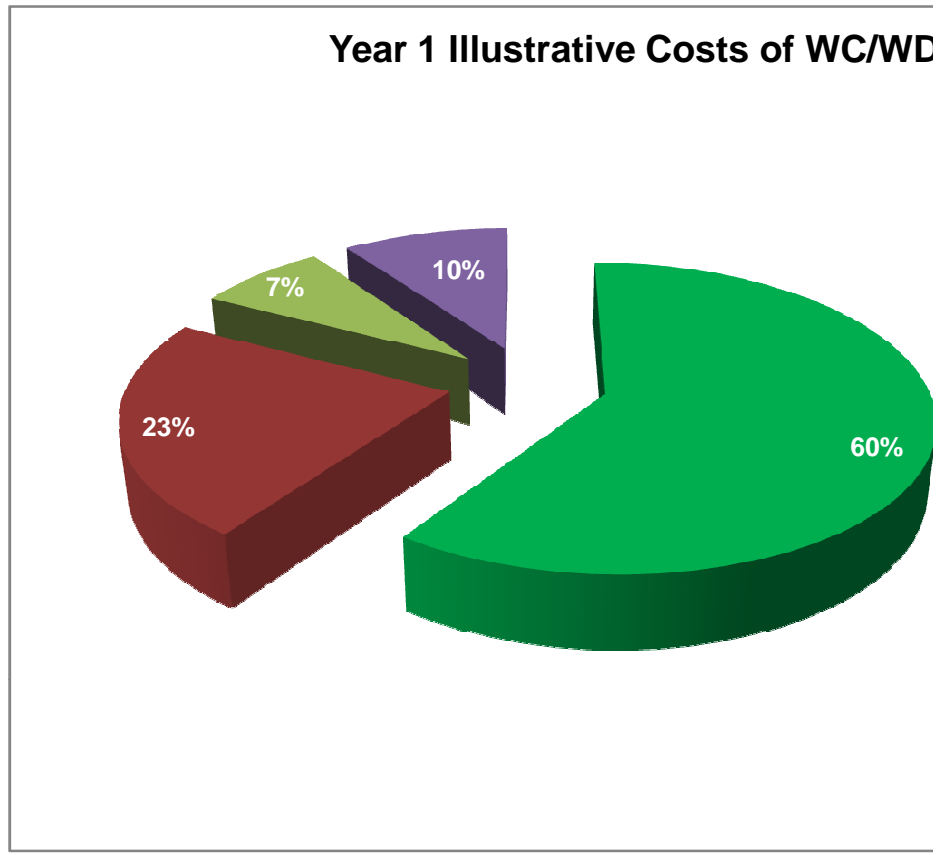
technical	costs		
1 existing & proposed bulk metering	R	475 000.00	1
2 sectorisation	R	70 000.00	2
3 Water loss Monitoring	R	155 000.00	3
4 Active Leakage Control	R	325 000.00	
5 Passive leakage control	R	45 000.00	
6 upgrade GIS	R	120 000.00	
7 Water Management System	R	610 000.00	
8 Retrofit internal plumbing leaks	R	665 000.00	
9 Metering of Bulk & consumer meters	R	140 000.00	
10 Asset Records	R	25 000.00	
11 Pressure Management	R	140 000.00	
<b>total</b>	<b>R</b>	<b>2 770 000.00</b>	

Social		costs	Financial
Community awareness	R	645 000.00	1 meter installation, Reading and Billing
Schools Awareness	R	245 000.00	2 Consumer auditing
Promote efficient use	R	110 000.00	
<b>total</b>	<b>R</b>	<b>1 000 000.00</b>	<b>total</b>

costs	institutional	costs	
R 310 000.00	1 WCWDM bylaw chapter development	R	90 000.00
R 25 000.00	2 Resources Required & train	R	340 000.00
<b>R 335 000.00</b>	<b>total</b>	<b>R</b>	<b>430 000.00</b>

YEAR 1 ESTIMATE COSTS FOR ROLLING OUT THE WC/WDM STRATEGIC BUSINESS PLA

	TECHNICAL INTERVENTIONS		SOCIAL INTERVENTIONS		FINANCIAL/ECONOMIC INTERVENTIONS
R	2 615 000.00	R	1 000 000.00	R	335 000.00



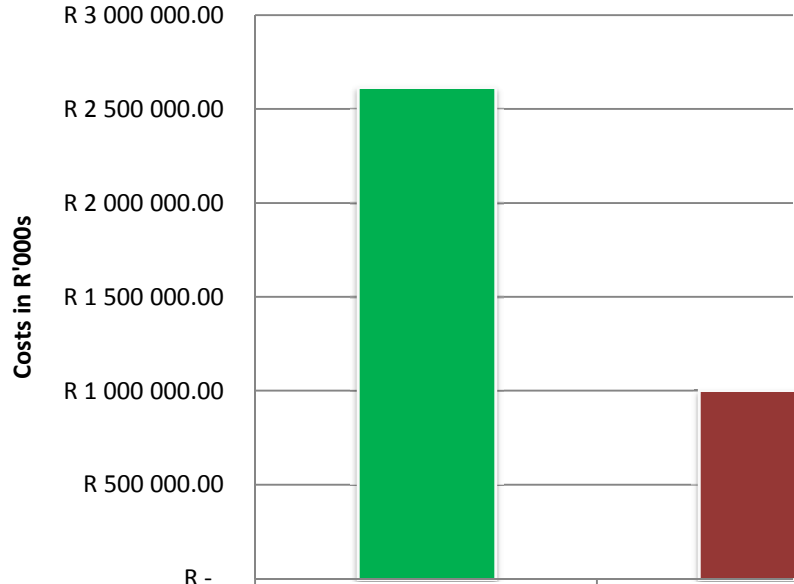
AN IN LETSEMEN  
 INSTITUTIONAL/LEGISLATIVE  
 INTERVENTIONS

R 430 000.00

**DM Implementator**

**Year 1 Illustration**

- TECHNICAL INTERVENTIONS
- SOCIAL INTERVENTIONS
- FINANCIAL/ECONOMIC INTERVENTIONS
- INSTITUTIONAL/LEGISLATIVE INTERVENTIONS



	TECHNICAL INTERVENTIONS	SOCIAL INTERVENTIONS
Series1	R 2 615 000.00	R 1 000 000.00

## Operative Costs

