4. OPERATION & MAINTENANCE

4.1 O&M Management

Operation and Maintenance management is split up as follows:

- **Bulk Water and Wastewater Management:**
  The core function for Water Services Provision Bulk is to ensure that water and wastewater infrastructure is managed properly in order to produce a cost effective and SANS 241 acquiescent quality of water. It is also to Operate and Maintain the Bulk Infrastructure in order to minimize down time).
- **Rural and Urban Reticulation:**
  The main function of the "Urban and Rural Reticulation Section" division is to operate and maintain the water and sanitation networks in both urban and rural areas within the Local Municipalities.

The following figure depicts the organogram related to the above functions:

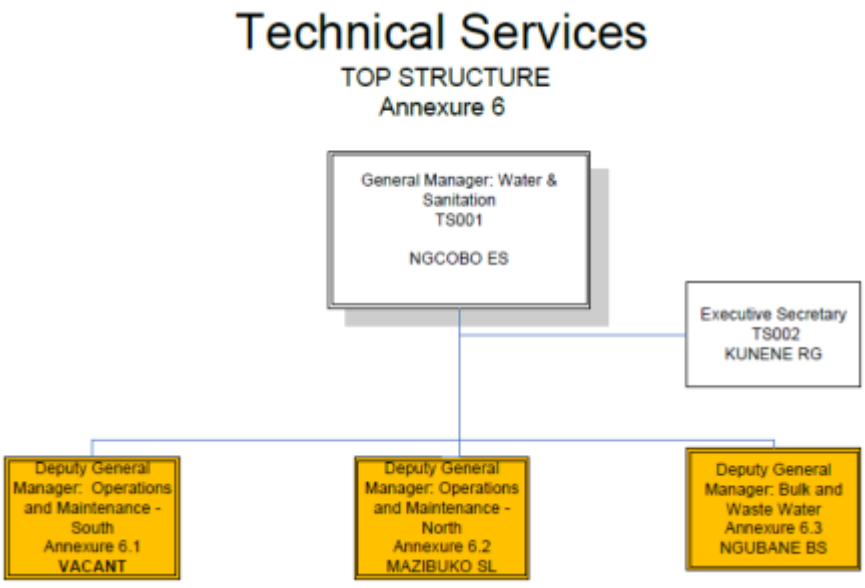

Figure 4.1: Organogram

An Asset Management Plan was compiled in 2016 for ZDM which outlines the following key aspects for O&M:

- Maintenance Strategy
- Compilation of Asset Register
- Budget Analysis
- Skills Assessment, Mentorship & Capacitating

The life cycle for O&M as depicted in the Asset Management Plan can be reviewed below:

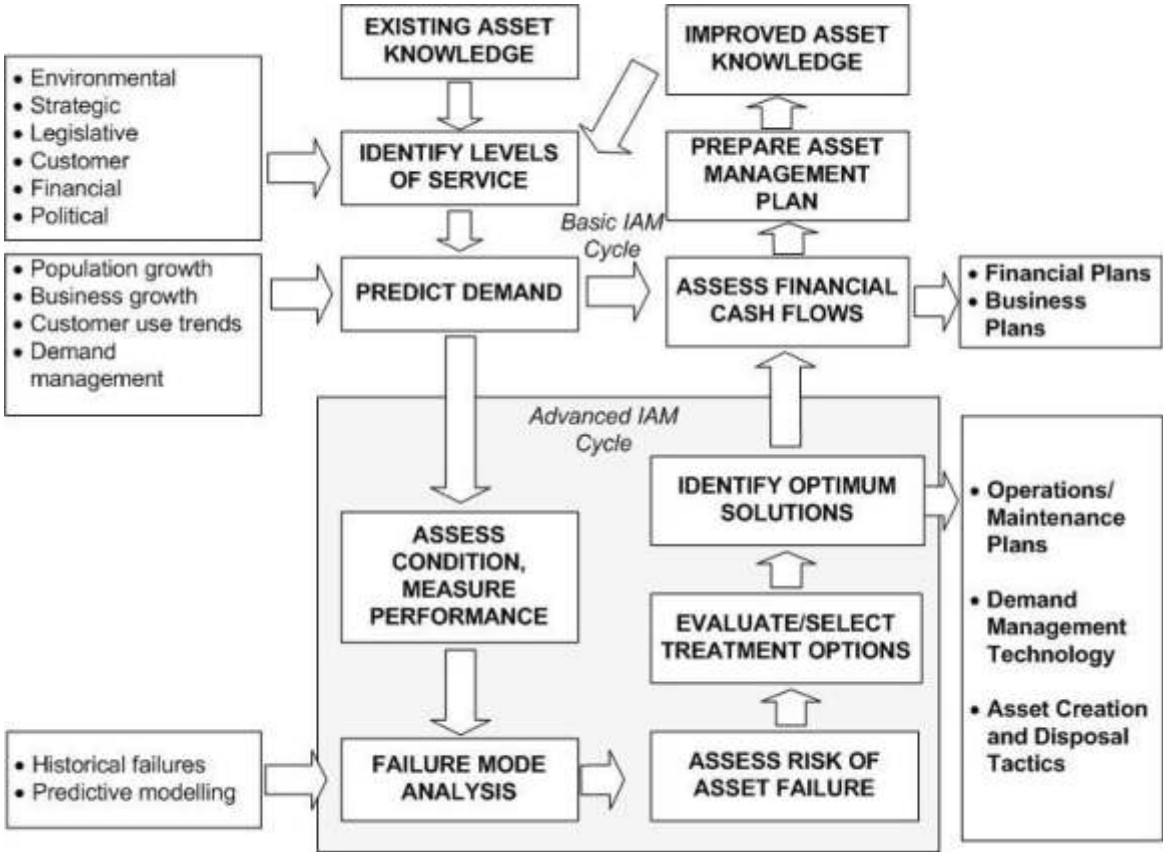

Figure 4.2: Asset Management Life Cycle

An Infrastructure Management Plan, Infrastructure Programme Management Plan, and Operations Management Plans are in place, and reporting is done on a monthly basis.

4.2 O&M Budget Requirements

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.

Table 4.1 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. The NRW programme will assist in aligning O&M interventions where most needed and thereby improve the efficiency of scarce resources.

Table 4.1: 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.