WATER SERVICES DEVELOPMENT PLAN MASTER PLAN

INDEX

1. SETTLEMENT DEMOGRAPHICS AND PUBLIC AMENITIES

2. SERVICE LEVELS PROFILE

3. WATER SERVICE ASSET MANAGEMENT

4. WATER SERVICES OPERATION AND MAINTENANCE

5. CONSERVATION AND DEMAND MANAGEMENT

6. WATER RESOURCES

7. FINANCIAL PROFILE

8. WATER SERVICES INSTITUTIONAL ARRANGEMENTS AND CUSTOMER SERVICES

9. EXISTING NEEDS PERSPECTIVE, WATER MASTER PLAN PERSPECTIVE AND OVERALL TOPIC STRATEGIES

AADD	Average Annual Daily Demand
AIDS	Acquired Immune Deficiency Syndrome
AMP	Asset Management Plan
AMR	Automatic Meter Reading
BOD	Biochemical Oxygen Demand
CAFES	Conserving, Adequate, Fair, Enforceable and Simple
CBD	Central Business District
CMA	Catchment Management Agency
COD	Chemical Oxygen Demand
CRC	Current Replacement Cost
CRM	Customer Relationship Management
CRR	Cumulative Risk Ratio
DAF	Dissolved Air Flotation
DORA	Division of Revenue Act
DRC	Depreciated Replacement Cost
DSVI	Diluted sludge volume index
DWS	Department of Water and Sanitation
EIA	Environmental Impact Assessment
EPWP	Expanded Public Works Programme
FCV	Flow Control Valve
FDA	Future Development Area
FLISP	Finance Linked Individual Subsidy Programme
FPSU	Farmer Production Support Unit
GHG	Greenhouse gas
HDPE	High-density polyethylen
HIV	Human Immunodeficiency Virus
IAM	Infrastructure Asset Management
IBT	Inclining Block Tariff
ICM	Integrated Coastal Management
ICT	Information and Communications Technology
IDP	Integrated Development Plan
ILI	Infrastructure Leakage Index
IMP	Incident Management Protocol
IRDP	Integrated Rural Development Program
IRIS	Integrated Regulatory Information System
IWA	International Water Association
km^2	Square Kilometre
KPI	Key Performance Indicator
LED	Local Economic Development
LOFLOS	Low flow on site
m	Metre
MFMA	Municipal Finance Management Act
MIG	Municipal Infrastructure Grant
Mℓ	Mega Litre
Mℓ/a	Mega Litre per Annum
MLSS	Mixed Liquor Suspended Solids
MNF	Minimum Night Flow

MPCC	Multi-Purpose Community Center
MTEF	Medium-Term Expenditure Framework
MTREF	Medium Term Revenue Expenditure Framework
NERSA	National Energy Regulator of South Africa
NRW	Non-Revenue Water
NTU	Nephelometric Turbidity Unit
NWA	National Water Act
NWRS	National Water Resource Strategy
OSCA	Outeniqua Sensitive Coastal Area
PDD	Peak Daily Demand
PHP	People's Housing Process
PPE	Personnel Protective Equipment
PRV	Pressure Reducing Valve
RAS	Return Activated Sludge
RDP	Reconstruction and Development Programme
RUL	Remaining Useful Life
SABS	South African Bureau Standard
SANBI	South African National Biodiversity Institute
SANS	South African National Standard
SCADA	Supervisory Control and Data Acquisition
SCFPA	Southern Cape Fire Protection Association
SDBIP	Service Delivery and Budget Implementation Plan
SDF	Spatial Development Framework
SFWS	Strategic Framework for Water Services
STED	Septic tank effluent drainage
SVI	Sludge Volume Index
TKN	Total Kjeldahl Nitrogen
TMG	Table Mountain Group
TSS	Total Suspended Solids
TWL	Top Water Level
UISP	Upgrading of Informal Settlements Programme
UPS	Uninterrupted Power Supply
URV	Unit Reference Value
VAT	Value Added Tax
VIP	Ventilated Improved Pit
VMLSS	Volatile fraction of MLSS
WARMS	Water Authorisation Registration and Management System
WCP	Water Conservation Products
WDM	Water Demand Management
WHO	World Health Organisation
WRM	Water Resource Management
WSA	Water Services Authority
WSDP	Water Services Development Plan
WSIG	Water Services Infrastructure Grant
WSMP	Water Services Master Plan
WSP	Water Services Provider
WTP	Water Treatment Plant

WTW	Water Treatment Works
WWTW	Waste Water Treatment Works

ANNEXURE A (Water and Sewer Master Plans)

ANNEXURE B (Future Water Requirement Projections)

Plettenberg Bay Water Projection

Kurland Water Projection

Natures Valley Water Projection

References

- 2001 and 2011 SA Census Data. 2016 Community Survey data of STATSSA.
- DWS's All Towns Reconciliation Strategy Documents for each of the towns in Bitou Municipality's Management Area, Version 2, April 2014.
- Bitou Municipality Revised IDP 2017-2022 (2020/2021).
- Final Annual Report 2018/19, Bitou Municipality.
- Medium Term Revenue and Expenditure Framework Budget Tables, Bitou Municipality.
- Operational and Capital Budgets and Tariffs of Bitou Municipality.
- Bitou Municipality's Asset Register, June 2019.
- Socio-Economic Profile for Bitou Municipality, 2019, Western Cape Government Provincial Treasury.
- DWS's 2014 Blue Drop Report
- DWS's 2013 Green Drop Report
- DWS's 2014 Green Drop Progress Report.
- Growth Potential Study, 2014, Western Cape Government, Environmental Affairs & Development Planning.
- Municipal Services Strategic Assessment (MuSSA) for Bitou Municipality, 2019
- Spatial Development Framework, Bitou Local Municipality, November 2019.
- Bitou Municipality Disaster Risk Assessment 2019, Document prepared for Western Cape Disaster Management Centre and Bitou Local Municipality.
- Bitou Municipality Emergency Groundwater Supplies: Borehole Rehabilitation and Drilling, Groundwater Africa, March 2011.
- Bitou Municipality Groundwater Exploration of the George Fault in the Uplands Area, Groundwater Africa, October 2017.
- Bitou Municipality Plettenberg Bay 2018 Drilling Report, Groundwater Africa, November 2018.
- Water and Sewer Master Plans for Bitou Municipality, GLS Consulting, 2020.
- Kurland Boreholes, 2nd Monitoring Report, 6 July 2018, Groundwater Africa.
- Water Safety Plans for Plettenberg Bay, Kurland and Natures Valley, Bitou Municipality.
- Bitou Municipality: Wastewater Risk Abatement Plan (W_2RAP), Final Document: 2017-2019, Prepared by Bitou Municipality.
- Bitou Municipality's Drought Management Policy, October 2017.
- 2018/2019 WSDP Performance- and Water Services Audit Report, iX engineers, 13 December 2019.
- Technical Report: Plettenberg Bay: Upgrading of Roodefontein Dam Raw Water Supply Pipeline, Neil Lyners & Associates, July 2015.
- Technical Report: Plettenberg Bay: Kranshoek Bulk Water Supply, Neil Lyners & Associates, October 2015.
- Technical Report: Bitou: Upgrading of Kwanokuthula main outfall sewer and pumping main, Tuiniqua Consulting Engineers, October 2015.
- Technical Report: New Horizons Extension (Ebenezer) Bulk Sewer Outfall, Nadeson Consulting Engineers, July 2016.
- Technical Report: Green Valley: Upgrading of Sewerage Services: Phase 1, Aurecon, Octoboer 2016.
- Technical Report: Natures Valley: Upgrading of bulk water supply scheme, Neil Lyners & Associates, February 2016.

REFERENCES

- Technical Report: Wittedrift / Green Valley Bulk Water Services, Aurecon, March 2017.
- Technical Report: Kwanokuthula Bulk Water Rising Main, Aurecon, July 2017.
- Technical Report: Upgrading of Kwanokkuthula Sewer Infrastructure, Neil Lyners & Associates, February 2020.
- Catchment Management Strategy for the Breede-Gouritz Water Management Area, July 2017, Breede-Gouritz Catchment Management Agency.