



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Central Operations (Usutu River - Komati WMA)

Raw Water Tariff Setting for National Water Resource Infrastructure Charges (2023/2024)

Annual Tariff Consultation
01 August 2022

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Purpose

- To consult users on the proposed raw water use charges for National Water Resource Infrastructure (WRI) schemes for the 2023/24 financial year.
- To consider the comments/inputs of users before tariff proposals are tabled at the sector specific and national consultations and the Ministerial approval.

Background Of The Cluster

- The strategic purpose of the Central Operations unit of the National Water Resource Infrastructure (NWRI) Branch is to operate and maintain bulk water resource infrastructure in a sustainable manner to ensure an effective and efficient supply of Bulk Raw Water for economic growth, social development and poverty eradication.

Functions of the Cluster

- **Legislative mandate:** National Water Act, Pricing Strategy, Public Finance Management Act (PFMA) and Government Immovable Asset Management Act (GIAMA).

Two major functions arise:

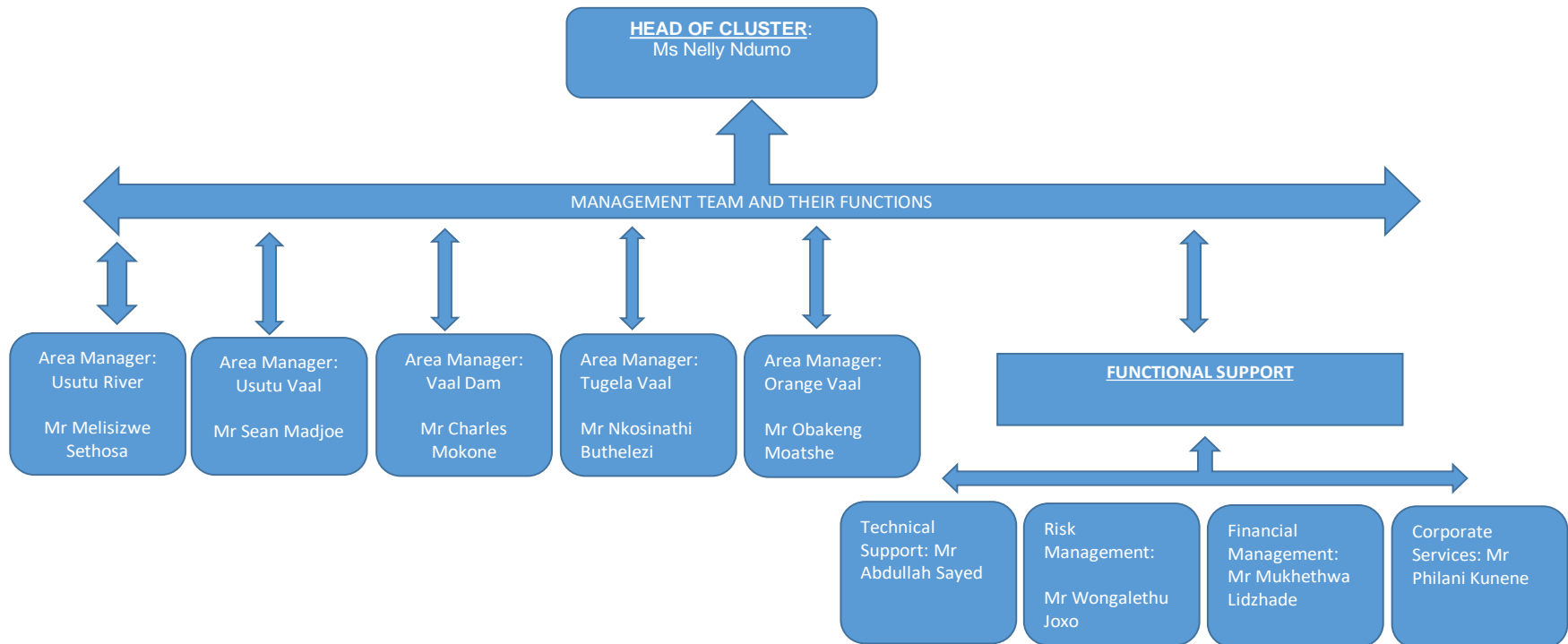
- 1) **Operations** - includes all activities associated with the sustainable supply of bulk raw water to customers within government water schemes, utilizing:
 - a) Civil Engineering infrastructure: Dams, Canals, Tunnels, Pipe-lines, Measuring Facilities, etc.
 - b) Mechanical Engineering Infrastructure: Pump Stations, Discharge equipment, etc.
 - c) Electrical Engineering Infrastructure: Motors, Electrical connections, etc.
- 2) **Maintenance** - includes all activities to ensure the adherence to routine, planned and unplanned maintenance as per the maintenance plan which is informed by the Asset Management Plan.

Areas of Service for the Cluster

- The Central Cluster covers parts of the following provinces: Free State, Gauteng, KwaZulu Natal, Mpumalanga, Northern Cape and North West.
- It is constituted of five area offices, viz. Orange-Vaal (for Free State & NC), Jericho Dam (Mpumalanga; for the Usutu GWS), Standerton Dam (Usutu-Vaal GWS), Vaal Dam (Mooi River GWS), and Tugela-Vaal and has 36 government water schemes.
- Augmentation for EC is also a focus for the Cluster through the Teebus tunnels)
- The primary service offered by the Cluster is the delivery of bulk raw water to its domestic and industrial (D&I), and irrigation water users (customers).
- Another critical function for the Cluster is the efficient management of the existing Water Resources Infrastructure in the aforementioned WMAs for Economic growth, social development and poverty eradication.

Cluster's Operational Capacity

Organogram/ Operational Structure



- The Cluster has a total staff complement of **1 158 employees** (filled & vacant posts).
- The area office, Usutu River, is headed by an area manager who is a Chief Engineer. He is supported by various managers on each engineering discipline including a regulatory appointment of a GCC engineer.
- Recruitment processes are underway to fill some of the critical posts that became vacant due to natural attrition in the current financial year and this is anticipated to be completed at the start of the 2022/23 FY. In these processes, priority is given to the core engineering functions, i.e. Civil, Mechanical & Electrical Engineering required for the optimal operation of infrastructure and implementation of the Departmental maintenance plan.

Areas of Service for The Usutu River Area Office

- The area office is made up of the two major schemes; Komati River and Usutu River transfer Schemes.
- The Komati Water system falls under the IUCMA WMA.
- The Usutu River scheme forms part of the Integrated Vaal River System (IVRS) and through the Heyshope and Geelhoutboom Pump Stations augments that system whenever required.

Other major stations include:

- 1) Vygeboom dam
- 2) Nooitgedacht dam
- 3) Heyshope dam (Usutu Vaal River GWS ph2)
- 4) Morgenstond dam
- 5) Westoe dam
- 6) Kliphoek pump station onverwacht
- 7) Jericho pump station
- 8) Khuthala pump station
- 9) Camden pump station

Strategic Partnerships of the Area Office

- The area office has a strategic partnership with Eskom – Generation Division, and thus plays a critical role in ensuring electricity supply to the national grid.
- Eskom on the other hand plays a critical role in the operation and maintenance of the Komati system (KWS) and the Usutu River scheme.
- Through a collaborative effort which is governed by the Vaal River Eastern Sub-System (VRESS) water supply agreement (WSA), the DWS and Eskom ensure the scheme retains a high assurance of supply of water for its customers and where and when breakdowns occur, these are identified and rectified with the involvement of Eskom. (This relationship creates a benefit for all other users serviced by the scheme).
- The need to have a high assurance of water supply affects the funding of the scheme and related infrastructure and must be borne in mind when assessing the proposed tariffs.
- The operational costs of the scheme required for the upkeep of the high assurance of supply are funded on a cost recovery basis and these costs are carried by Eskom through the VRESS WSA and the tariffs levied on other users must be sufficient to reimburse Eskom for the costs which should be carried by such 3rd parties.
- Approval and capping of tariffs must reflect this.

Other Major Customers

Major customers include inter alia:

- 1) Msukaligwa Local Municipality;
- 2) Dr Pixley Ka Isaka Seme Local Municipality;
- 3) Lekwa LM;
- 4) Dipaleseng LM;
- 4) Mkhondo LM;
- 4) Anglo American Coal: Goedehoop Colliery; and
- 5) Other private businesses.

REPORT ON OPEX AND CAPEX PROJECTS

PROJECTS COMPLETED IN 2021/22

- A total number of **26 projects** were completed by the Usutu River area office during the 2021/22 financial year.

The breakdown of the projects is as follows:

- 1) 12 CAPEX projects; and
 - 2) 14 OPEX projects.
- The larger parts of the OPEX projects were mostly on civil maintenance.
 - The CAPEX projects were largely on refurbishment and upgrade of infrastructure. This is important for the area office as it has aging infrastructure.
 - The appointment of a maintenance term contractor for a period of three years is expected to improve maintenance work.

N.B. A complete list of future projects to be undertaken in the 2023/24 financial year is yet to be determined – shall be reported on in future consultations after finalisation by the Accounting Authority.

CAPEX PROJECTS COMPLETED IN 2021/22

TYPE OF PROJECT (CAPEX/OPEX)	GOVERNMENT WATER SCHEME	PROJECT DESCRIPTION
CAPEX	Usutu River: Nooitgedacht	Upgrade Nooitgedacht Water Plant Storage Tower – Upgrade Nooitgedacht Water Plant Storage Tower and Foundations (Capex; Civil – 8, P/3878)
CAPEX	Usutu River: Westoe Dam	Upgrade Westoe Water Plant Storage Tower – Upgrade Westoe Water Plant Storage Tower and Foundations (Capex; Civil – 10, P/3880)
CAPEX	Usutu River: Khutala	Upgrade Khutala Water Plant Storage Tower – Upgrade Khutala Water Plant Storage Tower and Foundations (Capex; Civil – 11, P/3881)
CAPEX	Usutu River: Jericho Pump Station	Repair of concrete plinth for pump no.4 delivery and pump no.2
CAPEX	Usutu River: Camden Onverwacht Pipeline	Backfilling of the pipe section with G5 material
CAPEX	Usutu River: Jericho Dam	Refurbishment of Control Valve (P/3629)
CAPEX	Usutu River: Jericho Pump Station	Refurbishment of Control (Ring Needle) Valve (P/3630)
CAPEX	Usutu River: Morgenstond Pump Station	Refurbishment of Pump Station 1 Pump no.3 (P/3635)
CAPEX	Usutu River: Morgenstond Pump Station	Refurbishment of Pump station 1 Pump no.2 (P/3636)
CAPEX	Usutu River: Camden Pump Station	Refurbishment of DN600 Plunger Valve (P/3641)
CAPEX	Usutu River: Kriel Pipeline	Refurbishment of DN1000 Butterfly valve (P/3838)
CAPEX	Usutu River: Kliphoek Pump Station	Refurbishment of Pump No.4 (P/3897)

OPEX PROJECTS COMPLETED IN 2021/22


TYPE OF PROJECT (CAPEX/OPEX)	GOVERNMENT WATER SCHEME	PROJECT DESCRIPTION
OPEX	Usutu River: Westoe Dam	Residential Area & Purification Plant – Replace burst copper pipes – 22mmx5.5mx4 copper pipes – 15mmx5.5mx3 copper pipes
OPEX	Usutu River: Vygeboom Dam	Residential area, Office, Reservoirs, Purification plant & Bulk water pipes chamber – Replaced 2x150lt geysers, Install copper pipes – 22mmx5.5mx6 copper pipes
OPEX	Usutu River: Khutala Pump Station	Residential area, Office, Reservoirs, Purification plant, Pump Station & Sewer plant – Replaced 4x150lt geysers, Install copper pipes – 22mmx5.5x16 copper pipes – 15mmx5.5m
OPEX	Usutu River: Kliphoek Pump Station	Onverwacht Residential area and Purification Plant – Replaced 2x150lt geysers, Install copper pipes – 22mmx5.5mx6 copper pipes
OPEX	Usutu River: Jericho Dam	Residential area, Office, Reservoir, Purification plant, sewer plant and Pump Station – Replaced 6x150lt geysers, Install copper pipes – 22mmx5.5mx20 copper pipes
OPEX	Usutu River	Camden Pump station, Rietspruit residential area, Davel Reservoir, Office & Purification Plant – Replaced 1x150lt geysers, Install copper pipes – 22mmx5.5mx1 copper pipes
OPEX	Usutu River: Westoe Dam	Residential Area and Purification Plant – Replaced burst copper pipes – 22mmx5.5mx4 copper pipes, 15mmx5.5mx3 copper pipes
OPEX	Usutu River: Morgenstond Dam	Residential area, Single quarters and Pump Station – Replaced burst copper pipes – 22mmx5.5mx2 copper pipes – 15mmx5.5m copper pipes
OPEX	Usutu River: Morgenstond Dam	Repair roof of MV Switchgear room at Morgenstond PS 2 (Opex; Civil – 101)
OPEX	Usutu River: Morgenstond Dam	Repair Abstraction Tower Roof: Repair Morgenstond Dam Abstraction Tower Roof (Opex; Civil – 105)
OPEX	Usutu River: Morgenstond Dam	Morgenstond Fire Break Roads: Morgenstond Dam Fire Break Roads (Opex; Civil – 108)
OPEX	Usutu River: Westoe Dam	Westoe Fire Break Roads – Westoe Dam Fire Break Roads (Opex; Civil – 109)
OPEX	Usutu River: Onverwacht Reservoirs	Onverwacht Fire Break Roads: Onverwacht Fire Break Roads (Opex; Civil – 116)
OPEX	Usutu River: Khutala Pump Station	Repair Khutala PS Roof – Repair Khutala PS Roof (Opex; Civil – 121)



FEEDBACK FROM THE 2022/23 TARIFF PROCESS

Approval of Proposed Tariffs and Implication of capping

- After consultation at various levels as prescribed, the Minister approved the WRI charges in terms of section 56 of the National Water Act, 1998.
- This approval included a capping of the tariff increases as follows:
 - **10%** for D&I; and
 - **10%** for Irrigation.
- The gazetted charges for the Orange for 2022/23 reflect this.
- The major implication of the cap was the reduction of budget for revenue-funded projects and operational requirements.
- Due to the cost recovery principle under this scheme in accordance with the VRESS WSA, the capping resulted in cross-subsidisation. The 2023/24 proposals correct this.
- Raw Water Users are therefore urged to consider this when reviewing some of the proposed increases for 2023/24.



2023/24 TARIFF PROPOSALS

Legislative Framework

- Legislative mandate: Sections 56 – 60 of the National Water Act (NWA) read together with the Pricing Strategy.
- **Water Resources Infrastructure Charges:-**
 - Section 56 (2)(b) of National Water Act
 - Applicable to Government Water Schemes

Two charges applicable:

- 1) Capital Cost, comprising:
 - *Depreciation* component for the purposes of funding refurbishment cost
 - *Return on assets (RoA)* component for the purposes of funding development and betterment waterworks
- 2) Operations and Maintenance (O & M) for the running of schemes.

Summary of Increases & Capping on Raw Water Charges for 2023/24

Water Resource Infrastructure Charges:

Domestic & Industrial:

- Annual increase is limited to PPI (April 13.1%) plus 10% up until the target for development charge (**full cost recovery**) is achieved on state GWS
- Tariffs increase range from: **0% to 16,71%**

Irrigation charges:-

- Operation and maintenance cost increases limited to 50% p.a. (capping)
- Tariffs increase range from: **0% to 29,43%**

2023/24 Proposed D&I Tariffs

Regional Office	Scheme ID	Scheme Description	SMP ID	SMP Description	APPROVED 2022/23 Charges (c/m ³)	Full Cost 2023/24 Charges (c/m ³)	PROPOSED 2023/2024 Charges (c/m ³)	% INCREASE	ROA c/m ³	DEP c/m ³	O&M c/m ³	TOTAL c/m ³
Gauteng	51	KOMATI RIVER (VYGEBOOM AND NOOITGEDACHT DAMS)	162	UPPER KOMATI (I.E. ESKOM]	79,38	92,69	92,64	16,71%	45,29	47,39	-	92,68
Gauteng	51	KOMATI RIVER (VYGEBOOM AND NOOITGEDACHT DAMS)	656	DUVHA TO HENDRINA PIPELINE	786,05	2 561,16	838,72	6,70%	-	-	838,72	838,72
Gauteng	51	KOMATI RIVER (VYGEBOOM AND NOOITGEDACHT DAMS)	775	FROM VYGEBOOM AND NOOITGEDACHT DAMS	183,41	205,84	205,84	12,23%	134,97	47,34	23,52	205,84
Gauteng	129	USUTU RIVER GWS (JERICO, MORGENSTOND AND WESTOE DAMS)	224	FROM THE DAMS: (JERICO, MORGENSTOND AND WESTOE DAMS)	922,33	1 015,93	1015,93	10,15%	239,88	86,52	689,53	1 015,93
Gauteng	129	USUTU RIVER GWS (JERICO, MORGENSTOND AND WESTOE DAMS)	225	FROM THE JERICO/CAMDEN PIPELINE	922,33	1 015,93	1015,93	10,15%	239,88	86,52	689,53	1 015,93
Gauteng	129	USUTU RIVER GWS (JERICO, MORGENSTOND AND WESTOE DAMS)	447	CAMDEN/KRIEL PIPELINE	1 061,71	1 150,37	1131,19	6,54%	199,76	109,89	821,54	1 131,19
Gauteng	129	USUTU RIVER GWS (JERICO, MORGENSTOND AND WESTOE DAMS)	448	KRIEL (ESKOM)	259,09	293,03	293,03	13,10%	183,14	109,89	-	293,03
Gauteng	129	USUTU RIVER GWS (JERICO, MORGENSTOND AND WESTOE DAMS)	449	KHUTALA/KENDAL PIPELINE	2 539,07	2 798,91	2798,91	10,23%	654,71	374,59	1 769,61	2 798,91
Gauteng	129	USUTU RIVER GWS (JERICO, MORGENSTOND AND WESTOE DAMS)	450	KENDAL (ESKOM)	861,74	974,63	974,63	13,10%	-	374,59	600,04	974,63
Gauteng	129	USUTU RIVER GWS (JERICO, MORGENSTOND AND WESTOE DAMS)	451	CAMDEN LILLIEPUT	1 029,59	1 133,02	1133,02	10,05%	153,35	86,52	893,14	1 133,02
Gauteng	129	USUTU RIVER GWS (JERICO, MORGENSTOND AND WESTOE DAMS)	636	CAMDEN [ESKOM]	288,60	326,40	326,40	13,10%	-	86,52	239,88	326,40
Gauteng	129	Usutu River GWS (Westoe dam basin)	777	Releases from Westoe dam - SMP 777	126,00	126,00	142,51	13,10%	55,98	86,52	-	142,51

2023/24 Proposed IRR Tariffs

Regional Office	Scheme ID	Scheme Description	SMP ID	SMP Description	APPROVED 2022/23 Charges (c/m ³)	PROPOSED 2023/2024 Charges (c/m ³)	% INCREASE	ROA c/m ³	DEP c/m ³	O&M c/m ³	TOTAL c/m ³
Gauteng	51	KOMATI RIVER (VYGEBOOM AND NOOITGEDACHT DAMS)	11	FROM GLADDESPRUIT CANAL	24,53	31,75	29,43%	-	7,14	24,61	31,75
Gauteng	51	KOMATI RIVER (VYGEBOOM AND NOOITGEDACHT DAMS)	79	DAM	3,68	3,89	5,71%	-	-	3,89	3,89

THANK YOU

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