

GROENLAND

WATER USER ASSOCIATION / WATERGEBRUIKERSVERENIGING

19TH Annual General Meeting 2025

CHAIRMANS REPORT / VOORSITTERVERSLAG

1. Water Usage

In the 2024 financial year, GWUA pumped a total of 14.9 million cubic meters (m³) of water, reflecting an increase from 13.6 million m³ in the previous year (2023) and 15.8 million m³ in 2022. The increase is attributed to higher seasonal demand and the implementation of mechanisms to mitigate the effects of loadshedding.

The Municipality's withdrawal from the Eikenhof Dam decreased to 2.5 million m³ in 2024 compared to 3 million m³ in 2023 and 2.3 million m³ in 2022. This trend underscores the importance of sustainable water management and efficient reticulation.

2. Reticulation system developments

a. Pipes

During the 2024 season, substantial focus was placed on infrastructure upgrades and preventative maintenance across the reticulation system. Key upgrades included:

- Pipeline upgrades from Mardale gate to Mardale/Heideland boundary.
 - Replaced with 315mm and 250mm Class 10 HDPE pipe.
 - Winter 2022
 - Distance = 580m
 - R436,323 works out to R752 per meter (excluding earth moving)
- Pipeline upgrades from Mardle/Heideland boundary to Heideland.
 - Replaced with 250mm and 110mm Class 10 HDPE pipe.
 - Plus, two take-off points
 - Winter 2023
 - Distance = 450m
 - R220,213 works out to R489 per meter (excluding earth moving)
- Gravity line at Eikendal replacement with 250mm class 16 HDPE pipe
 - River crossing from Eikendal to Boomerang was completed winter 2024.
 - A leak was discovered in 2023, in the kloof leading to Eikendal dam. The suspicion is that this leak has been affecting the system for several years.
 - 400m Section from Vergelegen through Eikendal orchards will be completed winter 2025.
 - Cost to date amount to R307,000 which works out to R767 per meter (excluding earth moving)
- Pipeline upgrades from Breevlei to Texel.

- 150mm Class 36 (18) CID Asbestos pipe replaced with 200mm Class 16 HDPE pipe.
- Winter 2024
- Distance = 989 meter
- R485,000 works out to R490 per meter (excluding earth moving)
- Pipeline upgrade from Boomerang to Barkai.
 - 100mm Class 25 (12.5) Asbestos Pipe replaced with 125mm Class 12 HDPE pipe.
 - Winter 2024
 - Distance = 526m
 - R82,824 works out to R157 per meter (excluding earth moving)
- Pipeline upgrade from Protea to Rockhaven
 - Replaced with 200mm Class 10 HDPE pipe.
 - Winter 2024
 - Distance = 332m
 - R95,239 works out to R287 per meter (excluding earth moving)

These upgrades have contributed to improved water delivery efficiency and reduced downtime during peak periods. Unfortunately, it was determined that the HDPE line installed at Protea in 2021 was done using substandard HDPE pipe. This resulted in multiple pipe-breaks during the summer of 2025.

Water hammer and the associated damage remains a problem. On the positive side the installation of generators and controlled shut down and startup during loadshedding has dramatically reduced the incidence of water hammer. Unfortunately, water hammer is still prevalent because of users changing flow rates by adjusting outlet valves in an untimely fashion or in cases where water is extracted out of the mainline using pumps without adequate protection measures in place. GWUA is happy to report that the number of incursions have reduced due to improved communication using WhatsApp and making use of two days instead of one day per week to adjust valves.

All the high-risk extraction points will have to be evaluated to ensure adequate protection measures have been installed and are being maintained.

b. Pump Stations

Major repair and maintenance work was completed on the pumps starting in the third quarter 2022 and completed by the end of 2023. Bearings were replaced and slip ring tolerances were brought back into specification. This overdue maintenance resulted in improved pumping efficiency. Notably Pump Station 2 had multiple broken bearings and Pump Station 4 impellers where excessively worn.

Despite all this, the main shaft of Bedford pump #1 in PS2 sheared off in December 2023. The consensus is this breakdown was caused by repeated water hammer resulting from load shedding during the preceding few years. The breakdown resulted in the loss of 1300 m³/h pumping capacity. This incident was challenging to manage.

- As a result of the holiday season Tricom only removed the damaged pump middle January 2024.
- It took another 2 weeks to manufacture the required flanges and install the standby Tsunami pump.
- During this breakdown, the 900mm inlet valve had to be closed to remove the Bedford pump. The gearbox sheared off during the attempt to open this valve. It took 4 days to open this valve thanks to a mammoth effort by Francois Groenewald and his team.

- High lying water users experienced reduced water flow end of December 2023 and January 2024. Especially Western Cape Fruit Juices and Appletiser.
- Upon consideration of various options, it was decided to get Tricom to repair the Bedford pump. The repaired pump was delivered to GWUA in January 2025. The pump will be installed during the winter of 2025.
- The outcome of this breakdown is that a standby Tsunami pump with all the associated flanges will be kept in reserve.
- Noteworthy is PS2 could not supply enough water to satisfy demand during summer 2025. Caledon dam was constantly running below 10%. Water users would have noticed that on multiple occasions GWUA staff had to adjust valves to designed flow rates to ensure that most users were receiving service. The configuration during summer 2025 was one Bedford and four multi-stage Tsunami pumps. Maximum delivery with this configuration is 4100 m³ per hour.
- The target is to pump 4500 m³ with a configuration of 2 Bedford and 3 multi-stage Tsunami pumps.
- To date the cost of this breakdown has amounted to R303,000.
- The frustrating part of this breakdown is that GWUA installed pump monitor and protection system in Jan 2023 on the advice from Tricom. System cost was R113,000. This system should have provided preventative warning but failed to give any warning.

Installation of surge/water hammer protection measures started at Pump Station 2 in February 2024. Two quick release valves have been installed 180m downstream of Pump Station 2 that is designed to dump water from the system in a water hammer event. This system will be operational by the end of 2025. Project cost to date amounts to R342,000.

Another major incident was the loss of the transformer at Pump Station 2. The supply cable developed a short and the high voltage side of the transformer was damaged. Failure occurred on 14 June 2024 and electricity was only restored 20 July 2024.

- The actual cause for the failure remains unconfirmed. Most likely the transformer sustained damage when the supply cable developed a short due to water damage. This damage was unfortunately not identified before costs were incurred on the old transformer. Other probable causes include:
 - oil replacement process was substandard; or
 - something went wrong while connecting the new supply cable.
 - Another explanation presented was that the transformer was damaged by harmonics because of using VSD's, or
 - simply at the end of its life, having been in service for 47 years.
- The old transformer passed the recommended tests. GWUA was told only the high-voltage side of the transformer was damaged and could be repaired. Based on this report and expert advice, a fair amount of maintenance work was done on the old transformer. Unfortunately, the transformer failed within a few hours after the power was restored. GWUA decided to change suppliers during this failure because of the service that was received.
- New suppliers were sourced and a multitude of options explored. The solutions ranged from R580k to R750k. Eventually, Two-a-Day very generously agreed to sell their standby 1200kVA transformer to GWUA at a reduced price.
- The total cost of this failure, including the supply cable replacement, as well as work on the old transformer, the new transformer and installation thereof, amounted to R 441,000.
- The final major breakdown during 2024 was the loss of two VSDs. One at Pump Station 2 and one at Pump Station 5. The cause for these failures is also unclear. Fortunately, insurance covered some of the cost of these failures. The cost to GWUA amounted to R226,000.

c. Load shedding resilience

Installation of loadshedding mitigation mechanisms was completed during the 2024 season.

This project started in November 2022 with design, orders placed in December 2022, generators delivered in July 2023 and installation was completed in December 2023 for Pump Stations 1 and 2 and January 2024 for Pump Stations 3,4, and 5. The current infrastructure consists of

- 60 kVA Generator at Pump Station 1.
- Three enclosed 400kVA generators and “make-before-you-break” switch gear at Pump Station 2. Two-a-Day has been instrumental in providing infrastructure support for running the generators. Especially allowing GWUA to install diesel supply lines from large storage tanks on the Two-a-Day property.
- 200 KVA generator and generator rooms at Pump Station 3 and Pump Station 4.
- The direct operational cost associated with running the generators is added onto the pumped water usage fee for the affected month. In other words, GWUA does not budget for generator operations.

This project was primarily funded using Subdistrict 1 reserves. The total cost amounted to R7,077,614. The main expense items were:

- 60 kVA Generator at PS1 = R230,000.
- Three 400kVA generators at PS2 = R2,900,000.
- Two 200kVA generators for Pump Stations 3 and 4 = R1,000,000.
- Changeover switchgear, Pumps station 2 = R485,000.
- Installation, cabling, and fuel line = R1,000,000.
- Buildings and slabs to house the infrastructure = R231,000.
- The 550kVA Cummings generator cost GWUA R835,000 (excluding lost interest), and it was only used for 25 hours. The decision to purchase the generator was made at an emergency members' meeting held at Glenbrae early February 2023. The order was placed a few days later and although delivery was set for 2nd March 2023, the generator was only delivered by the end of April 2023. The purchase price was R1,428,000. Sold in March 2025 for R593,000.

During this period, GWUA's cash position changed as follows:

- 31 Oct 2022 Cash = R 25,789,204
- 31 Oct 2024 Cash = R 21,219,139
- This amounts to reduction of = (R 4,570,065)

Dealing with and mitigating against loadshedding proved to be a difficult period for GWUA.

- Short history:
Loadshedding was experienced for short periods in 2008, then 1st Q 2015, then 1st Q 2019, and 1st Q 2020. From March 2021, loadshedding has been around intermittently. The number of loadshedding incidents increased dramatically in June 2022 due to strike action by NUMSA and NUM employees. Electricity supply improved again until mid-September 2022, when South Africa's energy grid experienced a collapse in generating capacity, which resulted in up to half of Eskom's generating capacity being lost. From this period, South Africa experienced constant loadshedding until 26 March 2024.
- 2023
Water users experienced major disruption to supply during the 2023 season. GWUA managed to mitigate some of the disruptions thanks to help in the form of loan generators

from Fruitways at Pump Station 2 and Kromco at Pump Station 4. Unfortunately, these businesses were also under extreme pressure and, the loan generator at Pump Station 2 could not be used for the entire season. This resulted in the disastrous transaction to procure a 550 kVA Cummings generator unit in which GWUA lost capital to the tune of R835,000 (Detail above).

- 2024
The new infrastructure and mitigation mechanisms helped to improve the supply of water dramatically during the 2024 season. Even so, supply was still not at an acceptable level. This can be attributed to the fact it took time to iron out installation problems and get the loadshedding system to an acceptable service level. Also, the Bedford pump breakdown at Pump Station 2 resulted in supply disruption from end of December 2023 to the beginning of February 2024 as explained above.
- GWUA's staff have been working long hours under extraordinary pressure since the beginning of loadshedding. Often driving out at night to reset pumps, fix generators that did not switch properly, keep generators supplied with diesel, handle theft incidents, etc. Consequently, GWUA employed temporary staff to assist with system operation from February 2024 to May 2024, especially staffing the night shift. This cost an additional R75,000.

d. Telemetry

A major milestone was the upgrade of the Adroit telemetry system, with implementation support provided by Spectrum. These enhancements enable:

- Remote resetting of tripped pumps to reduce on-site response delays.
- Automated pump speed control, ensuring consistent pressure across the distribution network.
- Improved system communications, particularly under loadshedding conditions.

This investment has increased resilience and reduced the operational impact of loadshedding interruptions.

3. Environmental and Catchment Management

GWUA continues to take an active role in the protection and management of rivers and catchment areas, partnering with key external stakeholders:

WWF-SA (in collaboration with the Coca-Cola Foundation and Tesco)

Department of Agriculture – Western Cape

The Nature Conservancy

In support of these efforts, GWUA has established an Environmental Resource Unit, and Timothy Jack was appointed as the Project Co-ordinator in a permanent capacity in the 2025 financial year. The unit will oversee all environmental projects, partnerships, and compliance activities related to catchment sustainability.

4. River Pollution

During this period, several complaints were submitted to various authorities regarding.

pollution levels in the Palmiet River, including the concerns regarding chemical runoff, waste discharge, and general water contamination affecting water quality and wildlife.

Complaints were promptly forwarded to the relevant local authorities, including the Department of Environmental Affairs, the Breede-Olifants Catchment Management Agency, and the Theewaterskloof Municipality, along with letters to the mayor requesting immediate investigation into the sources of pollution and remedial actions.

GWUA is committed to collaborating with the relevant authorities to safeguard the water quality of the Palmiet River and protect local wildlife from further degradation.

A major algae bloom developed in the Arieskraal dam beginning in December 2024. Following expert advice and communication with affected parties a decision was taken to do a controlled release of water to flush the algae bloom out of the Arieskraal dam. The release started on 30 December 2024. A total of 2.5 million m³ was released from Kogelberg dam. The released worked better than anyone predicted and Arieskraal remained in an acceptable state for the rest of the summer 2025.

Another algae bloom was identified in the Peninsula dam in mid-January 2025. The same action plan was implemented, and 1.5 million m³ was released from Eikenhof dam starting on 2nd February 2025.

At the beginning of April 2025, the condition of the water in the Peninsula dam had deteriorated to the point where a second release of 500 000 m³ from the Eikenhof dam was required to flush the Palmiet River. This release started on 15th April 2025.

5. Eikenhof and Related Dams

The Eikenhof Dam inspection is scheduled for June 2025. Spillway repairs are planned to follow the inspection results.

A new agreement with Theewaterskloof Municipality has been signed for three years (expiring in 2026). Extraction rates remain unchanged under the updated terms. Five million cubes annually at a rate of 630 cubic meters per hour.

6. Governance

The GWUA Management Committee continues to operate with dedication and professionalism. Their guidance has been instrumental in advancing operational and financial improvements.

The Executive Committee (Exco), responsible for daily operations and human resources management, consists of:

- The Chairperson of GWUA.
- Vice chairperson of GWUA
- The Chairperson of Sub-District 1.
- One additional board member from Sub-District 1.

The Exco oversees internal matters, staff management, and coordination of cross-functional activities.

We extend a warm welcome to all new committee members appointed during this period and look forward to their contributions.

7. Personnel

New Appointments:

- Jacques Prins was appointed as Chief Executive Officer (CEO), effective 1 October 2024. He now oversees:
 - GWUA operations.
 - Sub-District 1 activities.
 - The GWUA Environmental Resource Unit.
- Timothy Jack was officially appointed as the full-time Project Co-ordinator for the Environmental Resource Unit, a critical role in environmental governance and project delivery.
- Nico Koopman was appointed in November 2024 as a general worker.
- Bronwin Daniels was appointed in May 2025 as a general worker.
- Oswin Pontac was appointed in May 2025 as a Technician.

Resignations:

- Niel van Niekerk left GWUA employment in May 2024. GWUA members wish him well and would like to thank him for his service, keeping the system going through a difficult period.
- Gurdine Coert left GWUA in January 2025. We thank him for his service.

The members of GWUA also want to thank the current staff for their dedication, attitude, and work ethic displayed over the preceding two years.

- Albert Pontac – Technical manager
- Chadley Jephthah – Learner Technician
- Melinda Groenewald – Office Administrator

8. Financial Overview

The 2024–2025 budget was prepared with the intent to ensure full recovery of fixed and variable costs associated with both GWUA and Sub-District 1.

Financial highlights include:

- A 5% increase in the GWUA levy, aimed at covering fixed operational costs.
- A 5.5% increase in Subdistrict 1 levies (pumped summer and winter, non-pumped summer, and winter). This levy covers fixed costs for the reticulation system and builds cash reserves.
- A 15% increase in water pumping charges, reflecting inflation and energy-related cost escalations.
- WRM agriculture was increased, and industrial decreased. WRM charges are collected from water users of the Eikenhof dam on behalf of BGCMA.
- Any generator operational expenses are billed monthly to active water users via the water usage fee, ensuring fair cost distribution during periods of loadshedding.

These adjustments reflect prudent financial planning and aim to maintain the long-term viability of the association while balancing member affordability.

9. Noteworthy Key Deliverables for 2025

Progress has been slow with the wireless metering system supplied by ATOM. The system is currently non-operational due to reliability issues. Engagement with the supplier is ongoing, with technical meetings held, quotations received, and follow-up meetings scheduled to improve reliability and integration.

Jacques Prins completed the Maintenance Manual. The Standard Operating Procedure (SOP) for the reticulation system is in progress. These manuals are living documents that will regularly be updated to reflect evolving operational procedures and compliance needs.

Stock control procedures and the associated discipline have been updated and implemented in full. GWUA owns around R2 million worth of stock.

GWUA eventually managed to get Eskom to replace the electric meter at Pumpstation 2 by 5th February 2025. This meter was stolen 4 years ago in June 2021.

Kromrivier flood damage Project was completed successfully, awaiting feedback for further funding to stabilize the riverbanks. This was done with funds received from the Department of Agriculture.

Pumpstations

- Options will be investigated to have reserve pumping capacity at Pump Station 2.
- At Pump Station 4, actual delivery does not match design specifications. This is despite all the maintenance work completed during 2023 and 2024. This problem will be investigated.
- Agreement with Fruitways for receiving water from the Nuweberg dam in the GWUA system during the winter will be formalised.

GWUA maintains a log of pipe breaks. From this, a winter maintenance plan is drawn up and sections targeted for upgrades during 2025, which are:

- Wapadskloof.
- Croft.
- Line number 4 from Pump station 4.
 - The first 140 meters of the 500mm line will be replaced with class 12 pipe.
 - A new shut-off valve will be installed on the 400mm line.
 - 750 Meters of the old 300mm asbestos line will be replaced with 315mm class 9 pipe. This is a section of the old Palmiet scheme that existed before Eikenhof was built.
- Defective HPDE line at Protea.
- Inspection of the intake manifold at Pump Station 3 and 5.
- At Pump station 2.
 - Suction side – fix a leak on the 700mm line north of the train tracks.
 - Delivery side – fix a leak on the 700mm line at the surge protection valves.

The status of loadshedding resilience is:

- Generators are functioning optimally.
- Basic changeover automation was completed by Spectrum.
- Additional integration of generator control via telemetry (fuel levels, RPM, amperage) remains in progress.
- Full change over automation through telemetry will be designed and implemented in the future.
- Due to upgrades at Two-A-Day, the diesel line from to Pump Station 2 had to be disconnected. This resulted in a challenge to keep generators supplied with diesel, especially when loadshedding level 4 or higher is activated. The agreement with Two-A-Day is to reinstate this supply line as soon as upgrades are completed.

10. Closing Remarks

GWUA has made significant strides in infrastructure, governance, and environmental management during the 2023/2024 budget year. We thank the Management Committee, Exco, operational staff, and our members for their continued support and collaboration.

As we look ahead, GWUA remains committed to:

- Ensuring water security for all stakeholders.
- Advancing sustainable catchment management.
- Operating with transparency, accountability, and service excellence.

Albert Rust

Sub-District 1 CHAIRPERSON