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WATER AND SANITATION PORTFOLIO COMMITTEE
PORTEFEULJEKOMITEE OOR WATER EN SANITASIE
IKOMITI YESEBE LEZAMANZI NOCOCEKO

1. **ITEM NUMBER: WS 04/05/22**

2. **SUBJECT / ONDERWERP / ISIHLOKO:**

CONFIRMATION OF MINUTES: 7 APRIL 2022

BEKRAGTIGING VAN NOTULE: 7 APRIL 2022

UKUQINISEKISWA KWEMIZUZU: 7 EKATSHAZIIMPUZI 2022

3. **DISCUSSION**

The minutes of the Water & Sanitation Portfolio Committee is submitted for confirmation.

ANNEXURE 1: Minutes of the Water & Sanitation Portfolio Committee Meeting:
7 April 2022

MINUTES

OF THE WATER & SANITATION PORTFOLIO COMMITTEE OF THE CITY OF CAPE TOWN HELD IN THE COUNCIL CHAMBER, 6TH FLOOR, PODIUM BLOCK, CIVIC CENTRE, CAPE TOWN ON THURSDAY, 7 APRIL 2022 AT 10:00

PRESENT

Ald I Neilson (Chairperson)
Ald C Jordaan
Ald X Limberg
Cllr G Peck
Cllr A Benadie
Cllr R Davids
Cllr C Kobeni
Cllr D Nelson
Cllr C Punt
Cllr N Rheeder
Cllr C Visser
Cllr L Gungxe
Cllr T Mpengezi
Cllr S Nodliwa
Cllr L Mazwi
Cllr S Markgraff
Cllr G Marais
Cllr M Manuel
Cllr P Hendricks
Cllr M Mabungani
Cllr B Maqungwana
Cllr Z Badroodien (MAYCO Member)

LEAVE / APOLOGIES

Ald D Basson

ABSENT WITHOUT AN APOLOGY

NIL

OFFICIALS

M Webster
T Salie
S Bashe
D Paulse
C Johnstone
A Saayman
M Killick
J Cupido
S Surujlal-Naicker

P Gertenback
O Ndesi
M van Wyk
M Levendall

.....

WS 01/04/22 OPENING OF MEETING/MOMENT'S SILENCE

The Chairperson welcomed everyone present.

WS 02/04/22 APOLOGIES/LEAVE OF ABSENCE

An apology was submitted for Ald. Basson via the Chief Whip's Office.

RESOLVED that the above be noted.

ACTION: M LEVENDALL

WS 03/04/22 CHAIRPERSON'S ADDRESS

The Chairperson congratulated the Directorate for achieving 4 Green Drop awards. He indicated that 26 Wastewater Treatment Plants, within the City, were evaluated and 8 achieved 89% (i.e. just 1% away from achieving the green drop award).

Additionally, he indicated that the Wesfleur Wastewater Treatment Plant achieved the highest score in the country (i.e. 99.7%).

The Chairperson indicated that he had requested that a brief report on the Green Drop Report be submitted to the next Water and Sanitation Portfolio Committee meeting.

The Chairperson thanked those members who attended the site inspection.

In conclusion, the Chairperson proposed that:

- a) The workshop, originally scheduled for 14 April 2022 be shifted to Monday, 25 April 2022 to accommodate the members. Additionally, he requested that the workshop be held via Skype and that it commence at 08:00;
- b) The commencement time of the Water and Sanitation Portfolio Committee meetings be amended to 11:00 going forward.

The members were in agreement with both proposals, indicated above.

A moment of silence was observed for the Late Mpharu Hloyi's who tragically lost her life.

RESOLVED that:

- a) A brief report on the Green Drop Report be submitted to the next Water and Sanitation Portfolio Committee meeting;
- b) The workshop, originally scheduled for 14 April 2022 be shifted to Monday, 25 April 2022 at 08h00 via Skype;
- c) All future Water and Sanitation Portfolio Committee meetings commence at 11h00;
- d) The Chairperson's Address be **NOTED**.

ACTION: M LEVENDALL / M WEBSTER

WS 04/04/22 CONFIRMATION OF MINUTES: 3 MARCH 2022

RESOLVED that the minutes of the Water and Sanitation Portfolio Committee meeting held on 3 March 2022 be **CONFIRMED**.

ACTION: M LEVENDALL

WS 05/04/22 PRESENTATION: WATER SERVICES DEVELOPMENT PLAN

Mr de Bruyn gave a detailed presentation on the Water Services Development Plan for the Water and Sanitation Directorate.

RESOLVED that the content of the presentation on the Water Services Development Plan be **NOTED**.

ACTION: J DE BRUYN

WS 06/04/22 WATER SERVICES DEVELOPMENT PLAN: FINANCIAL YEAR 2022/23 – 2026/27

Cllr Peck noted the comment on page 59 of the report pertaining to private entities wanting to produce their own potable water supply and enquired what the City's policy was in this regard. Cllr Peck expressed concern in terms of who would manage the private water supply and who would be responsible should a group of people become ill due to a private water supply.

In response, the Executive Director, Mr Webster commented that the Water Services Act allows for intermediaries, which was mainly developed for farm areas. However, it should be noted that there are a number of private entities, for example Old Mutual, who has water services intermediary agreements in place with the City. Many of these agreements came about as a result of the drought in Cape Town.

Mr Webster stated that the Water Services Intermediaries was the policy of National Government. In the absence of policy, the City didn't have a formal position in terms of whether intermediary agreements should be encouraged and if so for how long. However, the new Water & Sanitation Policy essentially allows for, but do not encourage, these agreements. Mr Webster commented that it was quite important, from both a revenue and a public health perspective, for the City to keep the monopoly on the provision of water.

Mr Webster commented that a presentation can be done at a future Water and Sanitation Portfolio Committee meeting on the Water Services Intermediary Policy.

Cllr Jordaan enquired if the Water and Sanitation Directorate have a service level agreement (SLA) in place with Human Settlements.

In response, Mr Webster stated that there are various agreements in place and a standard operating procedure, but not a service level agreement.

Additionally, Mr Maritz commented that a memorandum of agreement was drawn up approximately 2 years ago clearly setting out the escalation protocol for extremely urgent work to be undertaken.

After a brief discussion regarding a major sewer spill at a Community Residential Unit (CRU), Cllr Jordaan requested that the department urgently look at drafting a SLA with Human Settlements.

Additionally, Cllr Jordaan referred to page 29 of the report, which dealt with informality and addressing service needs in the City, and requested that the department urgently look at implementing a program to alleviate the overflows and water leakages within the CRUs in the City.

Mr Webster acknowledged the comments and indicated that he would address these matters with his team and report back to the Portfolio Committee.

Cllr Maqungwana noted that this report presented a five year plan, however he enquired what the immediate short term plan was in terms of repairing those pumps that are not working.

Cllr Mpengezi concurred that service level agreements were necessary and important. He cited a particular informal settlement where the line department has not taken action due to structures being erected on top of the main sewer line.

Cllr Manual referred to page 43 of the report, which dealt with the Summary of CAPEX and OPEX Budgets and enquired what the

category entitled “Other Expenditure” meant and why was there such a huge expenditure amount against that category.

Additionally Cllr Manuel referred to page 40 of the report and enquired about those projects that would come online later than expected. She questioned why the targets were not met, given the rapid climate change, and whether the City can afford to push back these projects.

With regard to the pump stations, Mr Webster commented that the department has an aggressive plan, for short, medium and long term turnaround of the 487 sewer pump stations in particular. Mr Webster stated that this forms part of the 5 work streams in the Mayor’s priority program and progress is reported to the Mayor and the City Manager on a monthly basis in this regard. Additionally, Mr Webster indicated that a number of operational improvements were being addressed such as recruitment, increasing maintenance and repairs expenditure on pump stations, security upgrades etc. Large standalone upgrades, in addition to the transversal tender for smaller upgrades, were also being prepared.

Mr Webster stated that the challenge, in terms of informal structures being built on top of underground services, was an acute City-wide problem with no foreseeable simple solution. Mr Webster commented that this was an area where active political intervention would be required.

In terms of the delay in projects, Mr Webster indicated that a presentation on the Cape Town Water Outlook will be done later on the agenda which will address the areas of concern raised by Cllr Manuel.

Mr Saayman responded to the query regarding the term “Other Expenditure” and indicated that this was the term used by Council. Furthermore, Mr Saayman indicated that, essentially, the figure was so high because it reflected all the costs related to the inventory system (as per National Treasury requirements). However, Mr Saayman pointed out that the figure is reflected on both the expenditure and revenue side.

Cllr Marais noted the presentation and posed the following questions:

1. What is upgrading informal settlements going to achieve;
2. What is authorized informal settlements;
3. What is meant by administratively recognizing informal settlements;
4. Is there a timeline in mind to reduce current sewer spills?

Cllr Manuel enquired if additional security was budgeted for, given the fatal incident which occurred in Athlone.

Cllr Maqungwana further enquired if financial provision was made to escort staff members when entering volatile areas whilst performing their duties.

Mr Webster addressed the series of questions around informal settlements and indicated that upgrading informal settlements, in this instance meant providing better services (e.g. taps, toilets, etc.), and not housing provision.

With regard to the time lines to reduce sewer spills, Mr Webster commented that a lot of work is being done to reduce this, however, with time, there is a lot more density, making it more difficult to reduce the issue of sewer spills. However, the department has a target to reduce sewer spills by 20% over the next 5-year period. Additionally, Mr Webster indicated that the department is attempting to move away from a reactive approach to a more proactive approach, by targeting and cleaning hotspot areas that ordinarily gets blocked.

Mr Webster stated that there is an action plan in place to upgrade security at the Athlone Depot in particular, in terms of fencing, CCTV cameras, and private security protocols. However, Mr Webster commented that the department is in the process of reviewing the security of all facilities across the board.

In terms of security escorting staff members in volatile areas, Mr Webster stated that the department has a security capability within the Water & Sanitation Directorate that has a command line to Safety & Security. Provision has been made for additional budget in the new financial year to increase the security staff compliment. Additionally, the department also make use of private security to escort staff in volatile areas.

With regard to the concerns raised about the sewer spills at Site C, the Mayoral Committee Member, Cllr Badroodien commented that the matter was brought to his attention by a resident. He stated that whilst staff were ready to address the problem, there was a delay in moving those residents, whose structures were built on top of the sewer line. However, after some engagement with the community, about 8 structures will be vacated and residents will be relocated in order for the staff to access the necessary underground services. Cllr Badroodien commented that the more concerning issue, however, was that illegal development was taking place on top of Council's underground infrastructure which adversely impacts staff members in carrying out their duties. Cllr Badroodien concurred that political intervention is required and that Councillors should discourage residents from building illegal structures.

Cllr Badroodien commented that, whilst the Executive Mayor is serious about addressing the sewerage challenges and making the necessary resources available to address these challenges, 75% of

the problem relates to human activity and until that mindset has changed, the City will continue to struggle with overflows and blockages. Cllr Badroodien further commented that both the City and the residents have a vital role to play to ensure that the sewerage challenges are addressed holistically.

It is **RECOMMENDED** that:

- a) The Water and Sanitation Portfolio Committee note the contents of this report including inputs and comments received through the public participation process (refer to Annexures A and B);
- b) The departmental responses to inputs and comments received through the public participation process (refer to Annexure B), be noted;
- c) The Water and Sanitation Portfolio Committee recommend the Water Services Development Plan: Financial Year 2022/23 – 2026/27 (refer to Annexure C) to the Executive Mayor, together with Mayco, for consideration and support;
- d) The Executive Mayor, together with Mayco, consider the report and recommend the Water Services Development Plan: Financial Year 2022/23 – 2026/27 (refer to Annexure C) to Council for consideration and approval;
- e) Council consider the Water Services Development Plan: Financial Year 2022/23 – 2026/27 (refer to Annexure C) for approval.

ACTION: J DE BRUYN / M LEVENDALL

WS 07/04/22 WATER AND SANITATION DIRECTORATE: SERVICE DELIVERY AND BUDGET IMPLEMENTATION PLAN (SDBIP FOR 2022/2023)

Cllr Badroodien, commented that the Service Delivery and Budget Implementation Plan (SDBIP) is a very important document. He indicated that there were a number of concerns in terms of the alignment of this document to the Mayoral Priority Program. Additionally, he indicated that he was pushing the Directorate to be more ambitious in terms of their targets and in the identification of additional measures that are not only quantifiable but also outcomes based. Cllr Badroodien proposed that the Service Delivery and Budget Implementation Plan (SDBIP) for the Water and Sanitation Directorate be withdrawn in order for the necessary amendments to be made before resubmitting it to the Portfolio Committee for review and recommendation to the Executive Mayor together with the Mayoral Committee

RESOLVED that the Water and Sanitation Directorate: Service Delivery and Budget Implementation Plan (SDBIP) report be

WITHDRAWN in order for the Mayoral Committee member and team to make further amendments before resubmitting the report to the Portfolio Committee for review and recommendation to the Executive Mayor together with the Mayoral Committee.

ACTION: A EBRAHIM / D PAULSE / M WEBSTER

WS 08/04/22 WATER & SANITATION MONTHLY FINANCIAL PROGRESS REPORT (FEBRUARY 2022)

Mr Saayman introduced the report and briefly highlighted the amendments made to the report as per the request from the Portfolio Committee members at the previous meeting.

An updated schedule reflecting the CAPEX and OPEX for the Water & Sanitation Directorate was circulated in hard copy at the meeting and attached to the minutes as Annexure A.

Cllr Nelson referred to page 272 of the report and noted with concern the reconnections completed, particularly since an undertaking was given that households will not be completely disconnected.

Furthermore, Cllr Nelson enquired if the department could provide the Portfolio Committee with a breakdown, in the report, of where the financial struggles were in the City in order for the Portfolio Committee to petition those areas, via the Subcouncils, and to assist residents to pay their municipal accounts.

Cllr Rheeder enquired if it was possible that the water connection problem could be related to the disc that is placed inside the device to limit the water supply. She stated that, as a result of day zero, the pressure was not what it used to be and proposed that the officials investigate that possibility.

In response to where the financial struggles were in the City in terms of payment of municipal accounts, Ms Bashe indicated that the department had previously engaged Corporate Revenue in this regard and reported that the Revenue Department is investigating how to link GIS data with recovery/debt management actions. That capability is presently, not functional, however, the relevant information can be made available to the Portfolio Committee, once received.

Ms Bashe indicated that all meter functionality problems are investigated when reported, including pressure related issues.

Cllr Badroodien emphasized that the water supply to households may not be switched off completely, but should be set to a trickle system. He indicated that officials who do not adhere, should be disciplined.

The Chairperson indicated that it was good to note that only 12 tenders, out of a total of 46, were outstanding and that 25 tenders were already in the evaluation process for next year.

RESOLVED that the Water & Sanitation Monthly Financial Progress Report (February 2022) be **noted**.

ACTION: B SAAYMAN

WS 09/04/22 WATER AND SANITATION PERFORMANCE MONITORING REPORT: FEBRUARY 2022

Mr de Bruyn briefly addressed the item and apprised the members on the problematic indicators.

RESOLVED that the Water & Sanitation Performance Monitoring Report: February 2022 be **NOTED**.

ACTION: J DE BRUYN

WS 10/04/22 CAPE TOWN WATER OUTLOOK – MARCH 2022

Mr Killick presented a detailed overview of the Cape Town Water Outlook and addressed questions of clarity. A copy of the presentation is attached to the minutes as Annexure B.

Cllr Davids enquired if the cost between reclaiming water and desalination were vastly different.

In response, Mr Killick indicated that desalination is the most expensive scheme and approximately twice the cost of a direct reuse scheme.

RESOLVED that the contents of the presentation on the Cape Town Water Outlook be noted.

ACTION: M KILLICK

WS 11/04/22 NEW TERM OF OFFICE: DRAFT 2022-2027 INTEGRATED DEVELOPMENT PLAN (IDP)

The members of the Water and Sanitation Portfolio Committee considered the New Term of Office: Draft 2022-2027 Integrated Development Plan (IDP) and agreed to the content of the report. No comments were submitted.

RESOLVED that:

- a) The Water and Sanitation Portfolio Committee considered the New Term of Office: Draft 2022-2027 Integrated Development Plan (IDP);
- b) The content of the report was noted and no comments were submitted.

ACTION: J KOEN / L JANSSENS

~~~The meeting concluded at 12:15~~~

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**ALD. IAN NEILSON: CHAIRPERSON**

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**DATE**

## Water &amp; Sanitation Portfolio Committee:

Directorate: W&S CAPEX and OPEX – MARCH 2022

## W&amp;S Capital Budget Expenditure – MARCH 2022 – Before ME Completed

| Department/Directorate        | 2021/22 Current Budget | YTD Planned Spend  | YTD Actual Spend   | Commitments        | YTD Planned Spent of Current Budget | % YTD Actual Spend of Current Budget | % YTD Actual Spend of Current Budget Incl. Comm. |
|-------------------------------|------------------------|--------------------|--------------------|--------------------|-------------------------------------|--------------------------------------|--------------------------------------------------|
| Bulk Services                 | 1 206 758 204          | 607 112 781        | 608 974 735        | 260 912 277        | 50.3%                               | 50.5%                                | 72.1%                                            |
| Commercial Services           | 133 285 157            | 51 471 612         | 43 388 025         | 25 126 791         | 38.6%                               | 32.6%                                | 51.4%                                            |
| Distribution Services         | 476 955 857            | 227 830 961        | 230 924 643        | 188 822 688        | 47.8%                               | 48.4%                                | 88.0%                                            |
| Technical Services            | 208 759 803            | 91 664 122         | 78 360 398         | 114 269 711        | 43.9%                               | 37.5%                                | 92.3%                                            |
| Support Services              | 140 000                | 55 000             | 24 473             | 42 890             | 39.3%                               | 17.5%                                | 48.1%                                            |
| <b>Water &amp; Sanitation</b> | <b>2 025 899 021</b>   | <b>978 134 476</b> | <b>961 672 274</b> | <b>589 174 358</b> | <b>48.3%</b>                        | <b>47.5%</b>                         | <b>76.6%</b>                                     |

## W&amp;S Operating Budget Expenditure – MARCH 2022 – Before ME Completed

| Department/Directorate | 2021/22 Current Budget (A) | YTD Budget (B)        | YTD Actual (C)        | % YTD Actual = (C/B) |
|------------------------|----------------------------|-----------------------|-----------------------|----------------------|
| Bulk                   | R2 976 818 827             | R2 008 485 856        | R1 802 885 417        | <b>89.8%</b>         |
| Commercial             | R477 594 101               | R337 135 028          | R286 372 353          | <b>84.9%</b>         |
| Distribution           | R9 764 629 859             | R6 739 574 737        | R6 113 768 047        | <b>90.7%</b>         |
| Technical              | R522 086 322               | R351 004 916          | R325 555 498          | <b>92.7%</b>         |
| PMU + SS + MAN         | R2 043 434                 | R1 542 443            | R1 566 227            | <b>101.5%</b>        |
| <b>W&amp;S</b>         | <b>R13 743 172 543</b>     | <b>R9 437 742 980</b> | <b>R8 530 147 542</b> | <b>90.4%</b>         |



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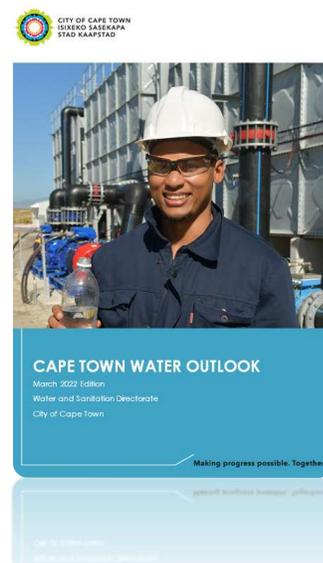
**Water Outlook – March 2022**

Water & Sanitation / Bulk Services | 05 April 2022

Making progress possible. **Together.**

## Introduction to the 'Water Outlook'

- Cape Town's Water Strategy was approved by Council in 2019 after the 2014 - 2018 drought
- The Strategy commits the City to a collaborative approach by building trust through transparency and mutual accountability.
- The Cape Town Water Outlook is published in this spirit.
- The purpose is to make information available in an accessible way to stakeholders on the current status of Cape Town's water supply, progress being made to build resilience, and to provide an outlook on future water security.
- Eight (8) previous Water Outlooks have been published

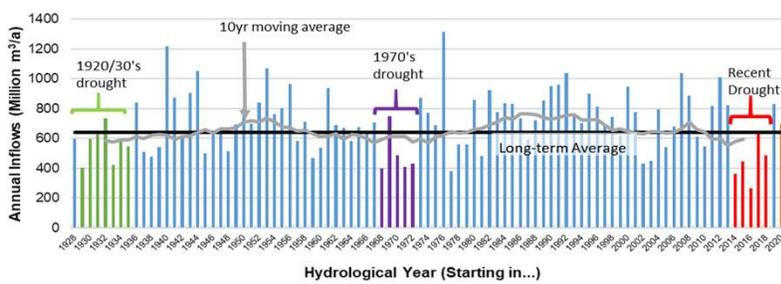


# The current status of Cape Town's water supply system



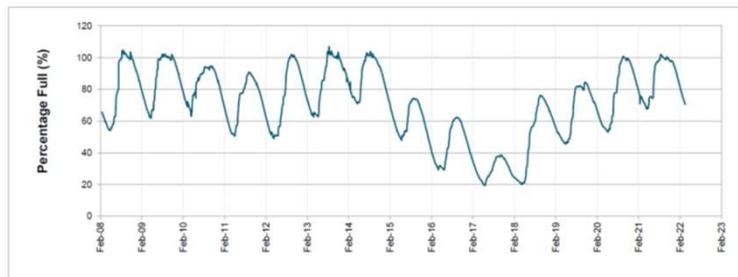
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## Water Availability



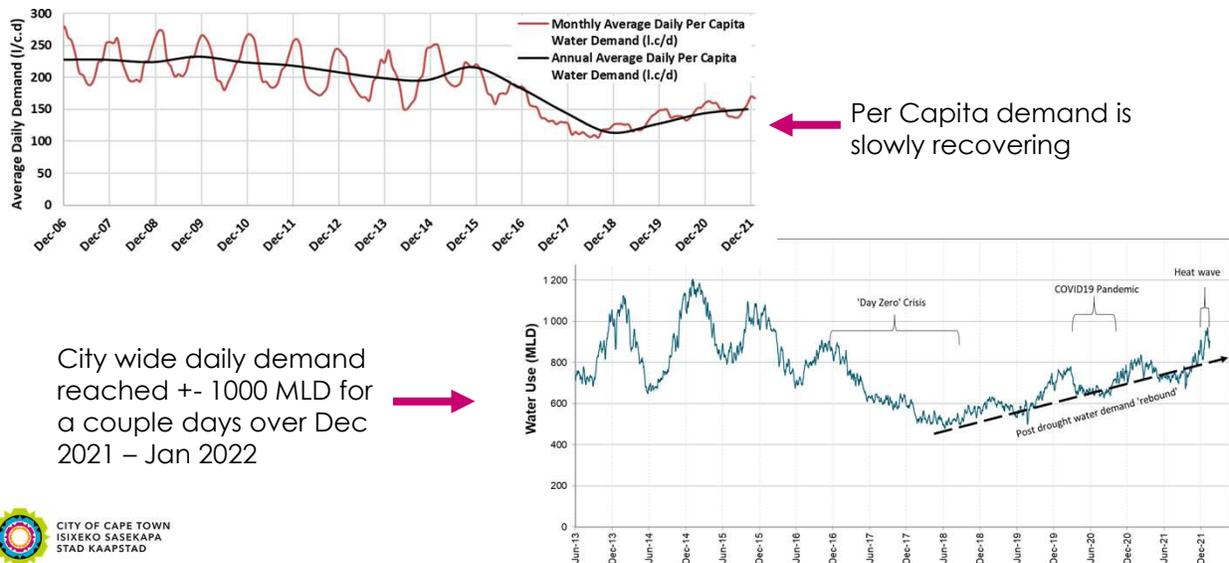
Runoff for the last two (2) years has been slightly above average

Dam storage remains high



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## Water Demand



## Assurance of Supply

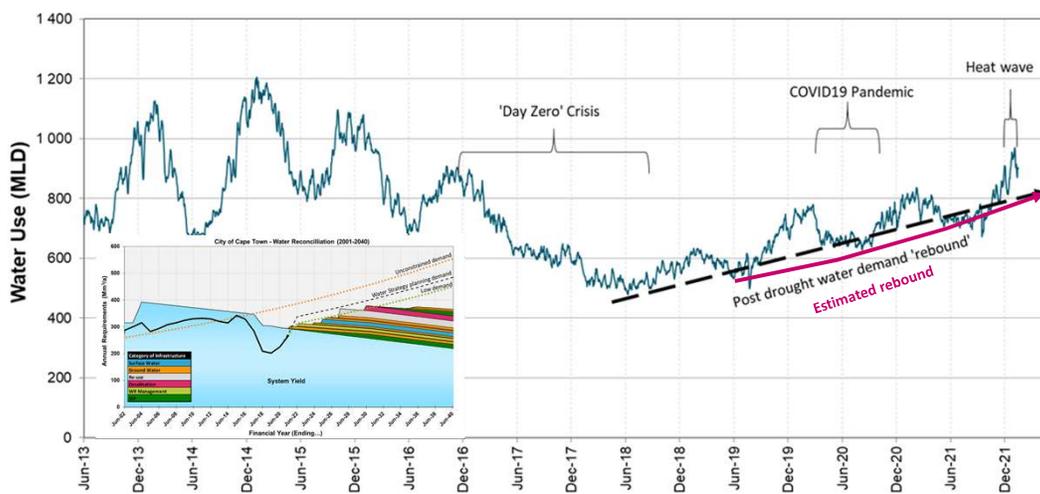
- In the Water Strategy (2018) the City committed to increasing the City's assurance of supply from 1:50 yr. to a 1:200 yr.
- As a result of the fact that water demand has been and remains well below pre-drought levels, the dams that supply Cape Town recovered quickly and have 'spilled' for the last two (2) years.
- In the short term, this means Cape Town is water secure.
- As the demand rebounds it becomes critical that the NWP is implemented on schedule to maintain Cape Town's water security.

# Cape Town's current and future water demand



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## A rebound in water demand after the drought

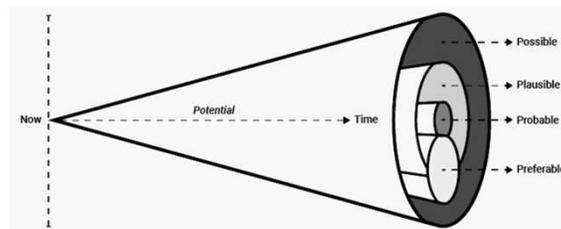


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## Future water demand study

The study will inform both operational planning as well as long-term water resource planning and will seek to address, among others, the following questions:

- To what extent can demand changes be attributed to permanent changes due to landscape changes, installation of boreholes, rainwater tanks, water-efficient fittings, etc?
- To what extent have tariffs have played a role in demand reduction?
- To what extent can demand changes be attributed to changes in behaviour (length of showers, use of baths, etc.) and to what extent have these behaviour changes reverted to previous patterns over time?
- How has pressure management affected total water use?
- How do the above factors differ between socio-economic groups?
- If the City had to implement restrictions in the future, how would demand respond to these restrictions?



The Futures Cone (Jisc, 2020)

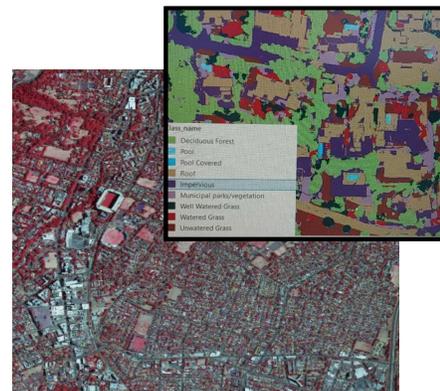


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## Future water demand study

The City will use and analyse the following data as part of the effort to answer the above questions:

- Household metering data
- Tariff data
- Water supply pressure data
- Spatial data
  - Cadastral, land use, zoning, property characteristics
  - Zone maps and metered discrete zones
- Remote sensing data (Figure 6)
  - Aerial photography before, during and after the drought
  - Analysis of near-Infrared aerial survey data.
- Census data
- Climatic data



↑  
Near-infrared remote-sensing for understanding water demand

**Project Outcome: A tool for predicting water demand**



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## The New Water Programme status update



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### Overview

- Cape Town's 2019 Water Strategy committed the City to developing 300 million litres per day of additional water supply capacity by 2030 to support its goal of becoming water resilient.
- Planned augmentation schemes will account for approximately 25% of the City's water demand when these projects are run at full capacity.
- Greater diversity in its water supply sources will increase the City's water security.

#### Cape Town's Future resource mix



##### **Surface water (rain-fed dams)**

Six (6) major storage dams serve the City. These rely on rainfall for replenishment and are connected in an integrated network to increase yield and resilience. Additional surface water supplies will be added to the system over time.



##### **Groundwater**

The City obtains water from shallow sandy aquifers as well as deep rock aquifers and is in the process of further developing these sources. These aquifers are being, and will be, managed in an environmentally sensitive and sustainable manner.



##### **Desalination**

The City will implement large-scale desalination projects building on its earlier experience of operating small-scale desalination plants. Desalination is likely to become an increasingly significant share of the mix in the medium and longer term because it is scalable and not dependent on rainfall.

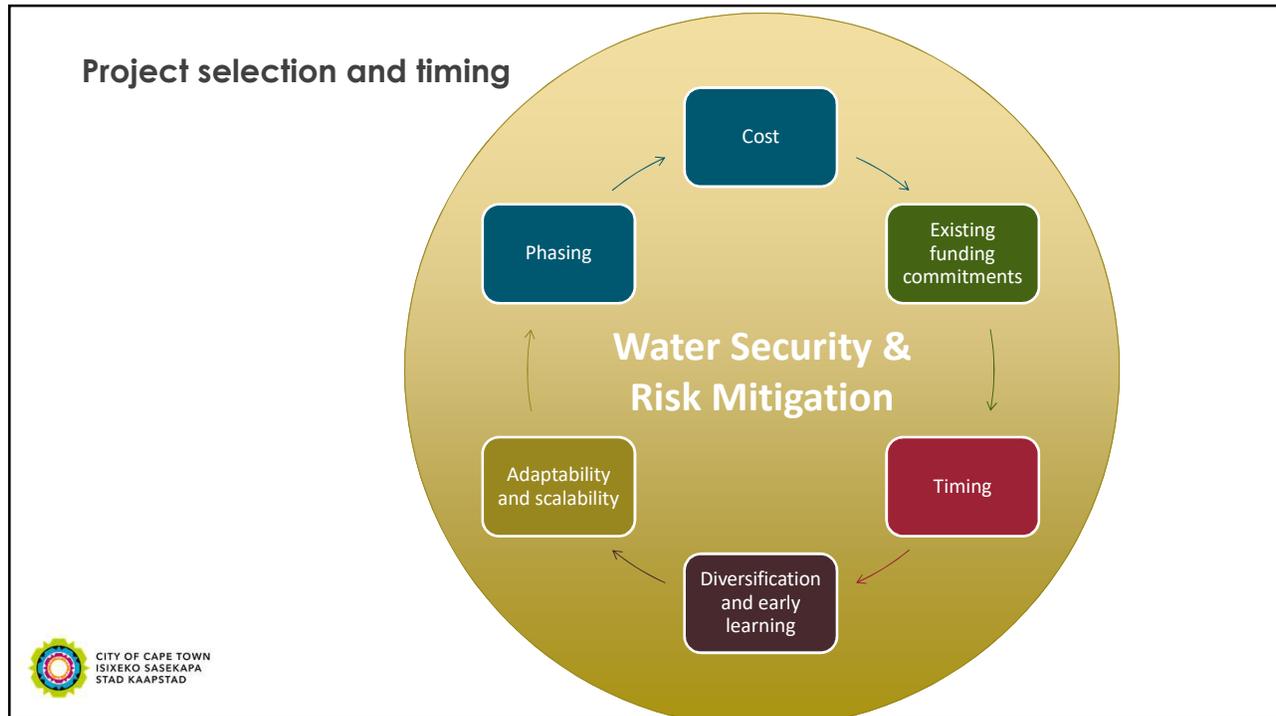


##### **Reuse**

Water reuse is a cost-effective, reliable, and environmentally responsible option. Adopting water reuse will position Cape Town as one of the leading cities in the world in terms of sustainable water management.



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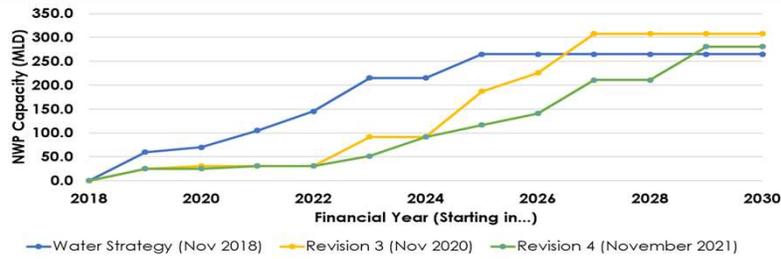


## Updated programme

The major changes to the planned programme are as follows:

- Phases 2 and 3 of the Table Mountain Aquifer Project have been deferred to 2035. This will allow the City to learn lessons from the operation of the Phase 1 wellfield (Steenbras wellfield) and to apply these lessons to phase 2 & 3. Phases 2 & 3 can be brought forward should the water resource situation necessitate it.
- Implementation of the Cape Flats Managed Aquifer Recharge Project has phased over a longer period.
- The Berg Voelvllei River Augmentation Scheme has been delayed by a year due to the ongoing consultations around water allocations. This scheme is managed by the National Department of Water and Sanitation and is outside of the City's control.
- The Faure New Water Scheme and the First-phase Desalination Project have been delayed by 17 months and 20 months, respectively. This is as part of the post-drought optimisation of the NWP, which has taken into account the impact on tariffs (affordability), rebound in water demand, etc.

### Updated programme



| Description                                    | Completion / First Water Date |                    |                    |
|------------------------------------------------|-------------------------------|--------------------|--------------------|
|                                                | Water Strategy                | Revision: Nov 2020 | Revision: Nov 2021 |
| Table Mountain Steenbras Phase 1               | 2020                          | Jul-20             | Jul-21             |
| Table Mountain Nuweberg Phase 2                | 2022                          | Dec-26             | Jun-35             |
| Table Mountain Groenlandberg Phase 3           | 2022                          | Jan-28             | Jul-35             |
| CFAStrandfontein West                          | 2020                          | Jul-21             | Mar-22             |
| Cape Flats Aquifer: Hanover Park               | 2021                          | Jun-24             | Jun-24             |
| Cape Flats Aquifer: Strandfontein North & East | 2021                          | Dec-25             | Dec-25             |
| Cape Flats Aquifer: Philippi                   | 2021                          | Jun-26             | Jun-26             |
| CFA Mitchells Plain WTP                        | 2021                          | Jun-27             | Jun-27             |
| Atlantis Aquifer                               | 2021                          | Jun-24             | Jun-24             |
| Berg Voelvllei River Augmentation Scheme       | 2023                          | Jun-24             | Jun-25             |
| Faure New Water Scheme Phase 1                 | 2024                          | Jun-26             | Nov-27             |
| Desalination Phase 1                           | 2026                          | Jun-28             | Feb 30             |

### Selected project updates



## The clearing and long-term control of alien invasive plants

- Investing in catchment management is a cost-effective and sustainable way of improving Cape Town's water resilience and is a priority.
  - It is estimated that the growth of alien invasive plants has resulted in a **reduction in the Western Cape Water Supply System (WCWSS) yield of 26,5 million m<sup>3</sup> per year.**
  - If future growth of these plants is left unmanaged, it is estimated that the system's yield will be reduced by approximately **85 million m<sup>3</sup> per year by 2045** (this is almost equivalent to the CCT's allocation from Theewaterskloof Dam)
- *The Greater Cape Town Water Fund*
  - The City Council approved a memorandum of agreement between the City of Cape Town and The Nature Conservancy in March 2021 which committed the City to investing R50 million over a period of two years (up to June 2023)
  - TNC and the City will engage with the National Department of Water and Sanitation to determine how the Water Resource Management Charge could be best used



## An independent advisory panel for reuse and desalination

- The City has signed a memorandum of agreement with Water Research Commission (WRC) to establish an independent advisory panel for water reuse and desalination
- The purpose of the independent advisory panel (IAP) will be to offer independent and expert advice to the City. The functions of the IAP will include the following:
  - To promote the transparent development of potable (drinking quality) water reuse and desalination by the City to enhance public health through the appropriate application of science, engineering, and related best practices.
  - To provide technical, engineering and project implementation advice at a level expected of leading experts in the reuse and desalination industries throughout the life-cycle of project implementation.
  - To provide advice and support in response to questions raised by the City, their engineering team, and ultimately the scheme's operators.
  - To provide support in interactions with the public, decision-makers, and regulators.



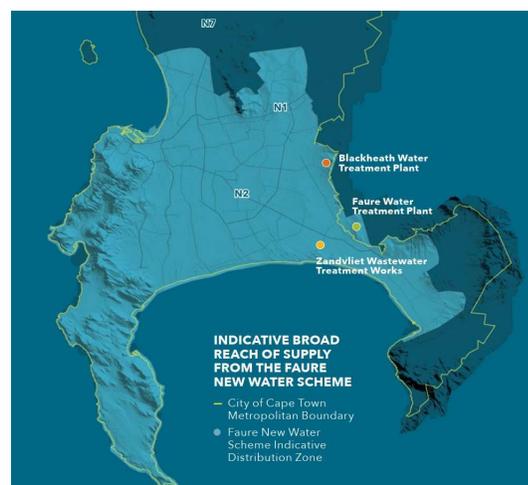
## Water Reuse a key part of the New Water Programme

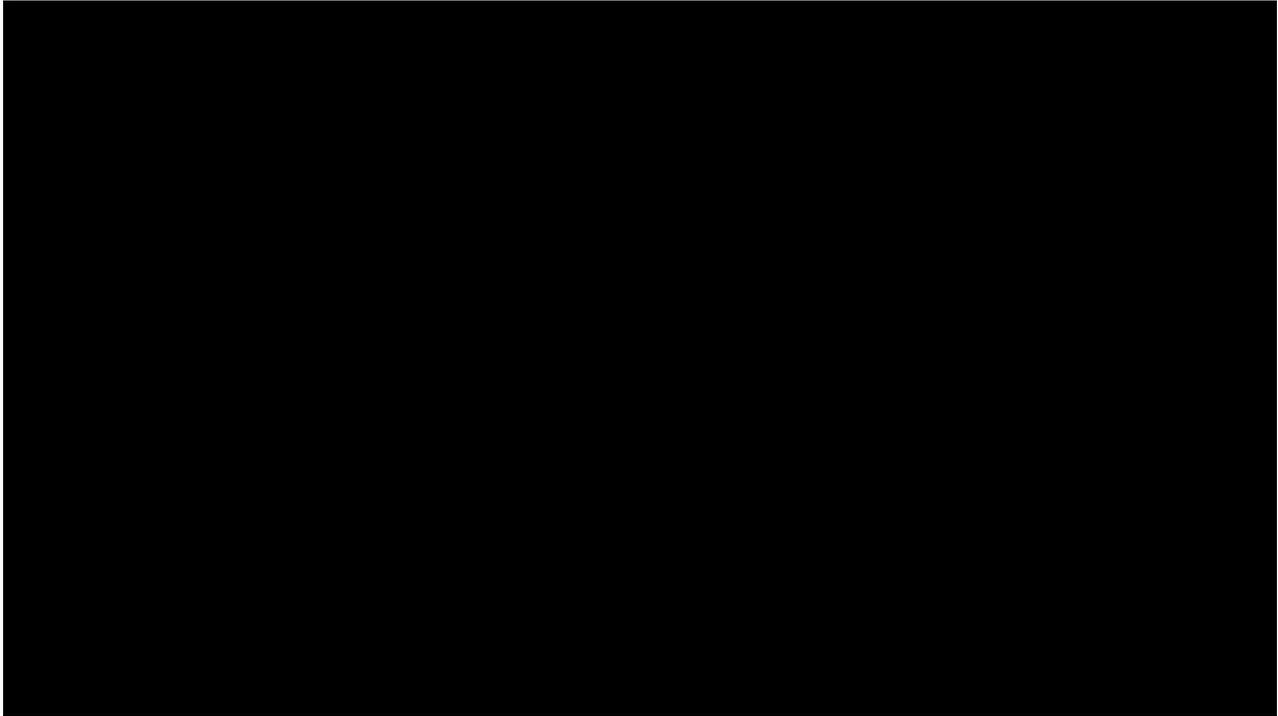
- 10 MLD demonstration plant successfully completed
- Extensive stakeholder engagement
- Trust of utility is key to trust of customers in water quality
- 70 MLD Faure New Water Plant – to be commissioned by 2026 – will be the biggest Direct Potable Reuse Scheme in the world



## The Faure New Water Scheme

The Faure New Water Scheme will receive source water from the upgraded Zandvliet wastewater treatment works. This facility will channel the effluent to a new advanced purification plant located at the Faure water treatment plant near Somerset West. Up to 100 million litres of clean drinking water will be produced per day. Initially, this supply will be blended with raw water from dams and treated once more using conventional treatment methods. From there, the distribution network will have the flexibility to supply the water widely across most of Cape Town.





Other initiatives to improve water resilience

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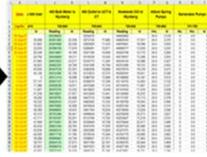
CITY OF CAPE TOWN  
ISIXEKO SASEKAPA  
STAD KAAPSTAD

A slide with a light green background. The title "Other initiatives to improve water resilience" is centered in white text. Below the title is a white horizontal line that ends in a small upward-pointing arrowhead on the right side. In the bottom left corner, there is the City of Cape Town logo, which consists of a circular emblem with a gear-like pattern, followed by the text "CITY OF CAPE TOWN", "ISIXEKO SASEKAPA", and "STAD KAAPSTAD" stacked vertically.

## A Decision Support System for water management



1900 – 1997  
Paper



1997-2020  
Paper & Excel



2021  
Web-based platform linked to SCADA



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## A Decision Support System for water management

- Learning lessons from the drought, the City is developing a Decision Support System that will allow the City to monitor water management within the WCWSS and actively engage in all aspects of this management.
- Implementation has been progressing steadily, including the following work streams:
  - Centralised data management that allows for machine learning and artificial Intelligence processes.
  - Creating a digital twin of the City's bulk water system and allowing the City to model ways to improve the system by applying improvements in the digital version, tracking the responses and then carrying the lessons learnt over to the real world infrastructure for more resilient and more responsive outcomes.
  - Turning data into information through the development of tools that translate data into graphic, spatially-defined information that directly impacts our business and is relevant for decision-makers.
  - Developing predictive tools to guide long-term planning.



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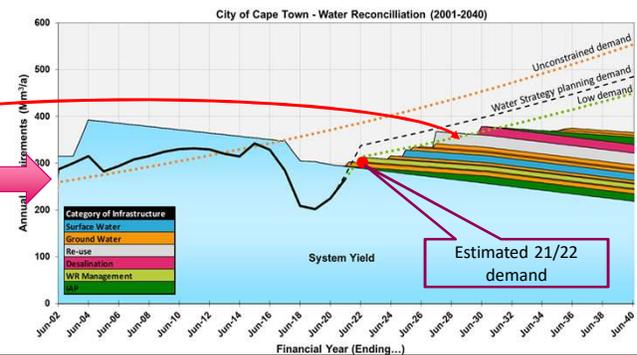
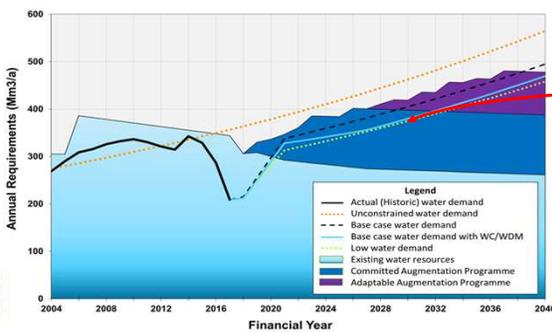
## 7 Cape Town Water Outlook



### Cape Town's future water security

In the short term, Cape Town remains water secure. However it is important to note:

- Project delays will expose the City to water security risk
- Risk analyses undertaken by Bulk Water indicate there is no more potential to optimise the NWP without compromising on the Water Strategy's commitments.
- There is no longer a five (5) year buffer



## Cape Town's future water security

**Five significant conclusions may be drawn from the 'Water Outlook – March 2022'. These are:**

- It is imperative that the revised New Water Programme's planned timeframes are met and that projects are not delayed any further.
- There is an urgent need to better understand Cape Town's demand trajectory
- If Cape Town is exposed to a scenario where there is a step-change in rainfall, the NWP would need to be adjusted and many schemes brought forward as the current planning assumes a gradual decline in rainfall.
- Water Reuse and desalination are critical resources for the future.
- Planning for the adaptable New Water Programme needs to proceed.
- The risk analyses undertaken by the City underscore these conclusions.



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**Thank You**

Making progress possible. Together.