# 1.1 Greater Mangaung Water Augmentation Project – Xhariep Pipeline Feasibility Study

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| **Project Description** |  | **Project Phase** | **Planning** |
| The Xhariep Pipeline project involves the construction of major water infrastructure (abstraction works, water treatment plants, a series of pump stations and a major pipeline) from the Gariep Dam to Bloemfontein at a cost of approximately R10 billion. | **Project Implementation Start** | 2025 | **Project Implementation Completion** | 2030 |
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| **Project Schedule for Feasibility Study** |
| **Key Milestones\***  | **Planned** | **Actual/ Revised** |
| Inception Phase for the Feasibility Study completed | October 2022  | N/A |
| Assessment of Water Resources and review of previous studies conducted | December 2022 | N/A |
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| **Percentage Progress** | 10 % |
| **Summary Progress** | Screening of Pipeline Options for aspect such as technical engineering, environmental, socio-economic impact and cost effectiveness. | June 2023 | N/A |
| Reconnaissance level studies on the project have been completed using internal DWS resources. Further work is required to confirm the pipeline option to be investigated and planned at pre-feasibility (stage 1) and feasibility (stage 2) levels of detail. Procurement of a PSP is in process. (NB: The Feasibility Study is dependent on the outcome of Stage 1) | Stage 1 of the Feasibility Study Completed – Confirmation of the Preferred Pipeline Option | December 2023 | N/A |
| Feasibility Investigations of Preferred Pipeline option and associated works completed | December 2024 | N/A |
| Record of Implementation Decisions (RID) Issued | July 2025 | N/A |
| Sourcing of funding & hand over for Implementation | July 2025 | N/A |
| Implementation of the project (Funding Agreement, Detail design & Construction) | July 2025 | N/A |
| **Project Expenditure** |
| **Estimated Total Cost at Completion** | R 28 million for feasibility study |
| **Total Expenditure to Date** | R 0 |
| **% Expenditure to Date** | 0 % |
| **Approved Budget** | R 28 million over 3 years, subject to outcome of prefeasibility study | **Revised Budget** |  |
| **Month Projected** |  | **Month Actual** |  |
| **Cum Projected** |  | **Cum Actual** |  |
| **% of Variation to baseline projection** |  |
| **Key Risks / Issues** |
| **No.** | **Risk Description** |
| Lack of adequate data and information is likely to delay the execution of the project |
| **Root Causes of the Risk** | **Mitigation Strategy or Management Actions for Resolution** |
| 1. | Availability of information on previous studies conducted | Letter was issued to request the Authorities (Bloem Water and Mangaung) to share information. A commitment was received from Bloem Water and follow-ups are being made with Mangaung.  |
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| **Concluding Remarks** |
| The Xhariep Pipeline will address the water deficit in Mangaung Municipality and surrounding areas. |

# Responsible Deputy Director-General: Deborah Mochotlhi

**1.2 Maluti-a-Phofung LM Interventions**

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| **Project Description** |  | **Project Phase** | **Construction** |
| **RBIG Interventions:*** Two projects are currently implemented through the Regional Bulk Infrastructure Grant (RBIG) in MAP LM.

**WSIG Interventions:*** Six projects are currently implemented through the Water Services Infrastructure Grant (WSIG) in MAP LM.

**Drought Relief Interventions:*** A series of multi-year droughts in South Africa has seen several small towns threatened by water supply failures and Free State is no exception.
* The drought intervention projects were identified to address immediate water supply issues in Maluti-a-Phofung LM.

**Ministerial Interventions:*** Minister of Water & Sanitation, Honourable Mchunu, visited Maluti-a-Phofung LM on 04 October 2021. During this visit water and sanitation challenges were brought to the attentions of Min Mchunu.
* A Project Steering Committee (PSC) which is chaired by the Regional Head of the Free State Province, Dr Ntili, was formed on 04/10/2021.
 | **Project Start** | January 2020 | **Project Completion** | November 2024 |
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| **Project Schedule** |
| **Key Milestones\***  | **Current****Construction****Progress** | **Planned Completion Date** | **Actual/ Revised** |
| **RBIG Interventions:** |
| The Upgrading of Sterkfontein Water Treatment Works (WTW) | 40% | 30 November 2022 |  |
| Refurbishment and Upgrading of the Fika Patso Water Purification Plant (WPP) | 0% | 31 July 2023 |  |
| **WSIG Interventions:** |
| Bulk water supply from Uniqwa to Kestell and Tlholong | 94% | 30 April 2022 |  |
| Bulk Interconnecting Pipework: Nuwejaarspruit – Wilge Pipeline | 90% | 30 April 2022 |  |
| Improving Water Revenue and reducing Non-revenue water | 0% | 30 November 2023 |  |
| Upgrading of the Intabazwe Rising Main | 0% | 31 May 2024 |  |
| Upgrading of the Supply to Phuthaditjhaba and CBD Area | 0% | 30 November 2024 |  |
| **Percentage Progress** | **Drought Relief Interventions:** |
| **RBIG Interventions:*** The Upgrading of Sterkfontein Water Treatment Works (WTW): 40%
* Refurbishment and Upgrading of the Fika Patso Water Purification Plant (WPP): 0%

**WSIG Interventions:*** Bulk water supply from Uniqwa to Kestell and Tlholong: 94%
* Bulk Interconnecting Pipework: Nuwejaarspruit – Wilge Pipeline: 90%
* Improving Water Revenue and Reducing Non-revenue water: 0%
* Bulk Water Supply to Tshiame & Makgolokweng: 0%
* Upgrading of the Intabazwe Rising Main: 0%
* Upgrading of the Supply to Phuthaditjhaba and CBD Area: 0%

**Drought Relief Interventions:*** Repair of valves, pipelines, and leakages: 100%
* Equipping and development of boreholes in MAP LM: 100%
* Construction of the reversal gravity pipeline in Qwaqwa: 64%
* Comet to Ha-rankopane pipeline: 90%
* Immediate Water Supply in Qwaqwa: Procurement and Leasing of Water Tankers and 2000 Jojo Tanks: 65%

**Ministerial Interventions:**Progress:1. Weekly report to DWS on water & sanitation challenges – burst pipes / leaks repaired, areas without water
2. Interventions required to address challenges identified by Task Teams were defined
3. Estimated cost for interventions in (i) were determined
4. Possible funding sources for unfunded interventions were identified
5. Correspondence forwarded to MaP LM urging them to procure material and parts for operation and maintenance of water and sanitation infrastructure – R3m worth of material already purchased by MaP LM
6. Procurement underway for appointment of private security company to safeguard MaP LM assets including water and sanitation infrastructure
7. Compiled high level plan to plug the no-water and intermittent water supply gaps in MaP LM – propose development of detailed Water Services Master Plan (R8m, 6 months)

Percentage Progress:* Task Team 1: Water & Sanitation Incidents Reported: 91% (1177/1293)
* Task Team 2: Power Failures: 0%
* Task Team 3: Vandalism & Theft (Security): 0%
* Task Team 4: Greater Harrismith & Kestell Water Challenges: 60%
* Task Team 5: Intermittent Water Supply in MaP LM: 2%
* Task Team 6: Sanitation Challenges (Sewerage spillages): 0%
 | Repair of valves, pipelines, and leakages | 100% | 20 September 2020 | 20 September 2020 |
| Equipping and development of boreholes in MAP LM | 100% | 31 July 2021 | 31 July 2021 |
| Construction of the reversal gravity pipeline in Qwaqwa | 64% | 31 March 2022 |  |
| Comet to Ha-rankopane pipeline | 90% | 31 March 2022 |  |
| Immediate Water Supply in Qwaqwa: Procurement and Leasing of Water Tankers and 2000 Jojo Tanks | 65% | 31 March 2022 |  |
| **Ministerial Interventions:** |
| Task Team 1: Water & Sanitation Incidents Resolved (Pipe bursts etc) | 91%Ongoing |  |  |
| Task Team 2: Power Failures | Ongoing |  |  |
| Task Team 3: Vandalism & Theft (Security) | 0%Procurement |  |  |
| Task Team 4: Greater Harrismith & Kestell Water Challenges Maintenance | 60% | 31 May 2024 |  |
| Task Team 5: Intermittent Water Supply in MaP LM | 2% | 30 November 2024 |  |
| Task Team 6: Sanitation Challenges (Sewerage spillages) | 0% | TBD |  |
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| **Project Expenditure** |
| **Estimated Total Cost at Completion** | R2,376,695,257.12 |
| **Total Expenditure to Date** | R456,462,455.65 |
| **% Expenditure to Date** | 19% |
| **Approved Budget** | R806,797,922.75 | **Revised Budget** | - |
| **Month Projected** | R3,000,000.00 | **Month Actual** | R3 395 311.00 |
| **Cum Projected** | R50,000,000.00 | **Cum Actual** | R27,099,489.05 |
| **% of variation to baseline projection** |  |
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| **Variance Reason** | **Recovery Plan** |
| **RBIG:** |
| The Upgrading of Sterkfontein Water Treatment Works (WTW): Slow progress, and the shut-down of the site due to continuous labour protests. Contractor’s cash-flow issues. | The court interdict has been approved; however, the labourers did not accept it and the police were not able to resolve the unrest and prevent delays with the construction. Therefore, the contractor will escalate the matter. The contractor has been sent a notice to correct followed by an intention to terminate based on the current progress. |
| Refurbishment and Upgrading of the Fika Patso Water Purification Plant (WPP): Delay in the appointment of the Implementing Agent and Professional Service Provider (PSP). | Sedibeng Water has been appointed as the Implementing Agent in August 2021. There were initial delays based on the appointment of the PSP and contractor, however, Sedibeng Water will appoint a contractor by 28 February 2022. |
| **WSIG:** |
| Bulk water supply from Uniqwa to Kestell and Tlholong: Delay in completion due to leaks found on the line. The construction was conducted by an Emerging Contractor whose services was terminated and another Emerging Contractor was appointed under the supervision of the Consulting Engineers to rectify the work of the first Contractor. | The contractor is in the process of repairing all leaks on the line, especially on the portions installed by the previous contractor. |
| Bulk Interconnecting Pipework: Nuwejaarspruit – Wilge Pipeline: Delays due to the broken backup pump system at the Wilge WTW, a broken transformer at the WIlge WTW, and severe vandalism at the Nuwejaarspruit Pumpstation. | The backup pump system and transformer have been replaced. However, the Municipality will have to address the vandalism and theft at the newly equipped Nuwejaarspruit pump station. |
| **Drought Intervention:** |
| Slow progress. The initial cost estimate was significantly underestimated. | Funds are being reprioritised to enable additional work. |
| **Ministerial Intervention:** |
| Equipment at waste water works not dismantled and sent for proper assessment | Mechanical engineer from DWS is currently finalising assessment |
| Over-committed funding programmes – will take years to complete projects with current quantum of annual allocation | Phased implementationIncreased annual allocation |

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| **Key Risks / Issues** |
| **No.** | **Risk Description** |
| **Root Causes of the Risk** | **Mitigation Strategy or Management Actions for Resolution** |
| **RBIG:** |
| 1. | Labour protests | The contractor has applied for and received a court interdict to remove the unruly workers from the construction site. The Project Steering Committee has also been resuscitated based on the new council, which were supposed to mitigate the labour issues but with no success yet. |
| 2. | Cash-flow challenges between the joint venture | Sedibeng Water as the implementing agent has submitted an intention to terminate the contractor based on the delays experienced due to the cash-flow challenges. |
| 3. | The disestablishment of Sedibeng Water delay implementation of projects | Closer monitoring and management of projects by DWS Project ManagersQuick and thorough induction of Sedibeng personnel with Bloemwater processes |
| **WSIG:** |
| 1. | Delay in completion due to leaks found on the line | Closer monitoring and supervision by Consultant and DWS Project Manager |
| 2. | Vandalism at the Nuwejaarspruit Pumpstation | A letter was sent to the Municipality indicating that the Department will not fund any components that were vandalised, and that the municipality must inform DWS how the vandalised and stolen equipment will be replaced. The Municipality will have to address the vandalism issue. |
| 3. | Over-committed funding programme – will take years to complete projects with current annual allocation | Projects are phased per priority; however, the annual allocation will need to be increased. |
| **Drought intervention:** |
| 1. | Project cost was significantly underestimated | Funds are being reprioritised to enable additional work. |
| 2. | Delay in delivery and installation of tanks | Sedibeng Water are constantly engaging with the Municipality on the delivery and installation of the remaining jojo tanks. |
| 3. | Procurement of materials | Sedibeng Water is conducting procurement on behalf of the contractor. |
| 3. | The disestablishment of Sedibeng Water may delay project implementation | Closer monitoring and management of projects by DWS Project ManagersQuick and thorough induction of Sedibeng personnel with Bloemwater processes |
| **Ministerial intervention:** |
| 1. | Equipment not dismantled and sent for proper assessment | Mechanical engineer from DWS is currently finalising assessment |
| 2. | Over-committed funding programmes – will take years to complete projects with current quantum of annual allocation | Phased implementationIncreased annual allocation |
| 3. | Loadshedding and load reduction by Eskom prevent MaP LM to pump water to reservoirs for distribution to residents | Resolve arrears account with Eskom to prevent load reduction by EskomInstall alternative power supply (generators) at key pump stations |
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| **Concluding Remarks** |
| * Maluti-a-Phofung must take ownership of projects and must be actively involved in projects working towards successfully implementing projects
* Top Management and Councillors are not supporting project implementation with regular liaison with the communities informing them of processes during construction
* Insufficient security at key infrastructure is resulting in theft and vandalism of newly constructed infrastructure like the borehole pumps and motors.
* The contractor to give a recovery plan and prioritize cash-flow issues experienced through the joint venture.
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| **Responsible Deputy Director General: Thoko Sigwaza** |