

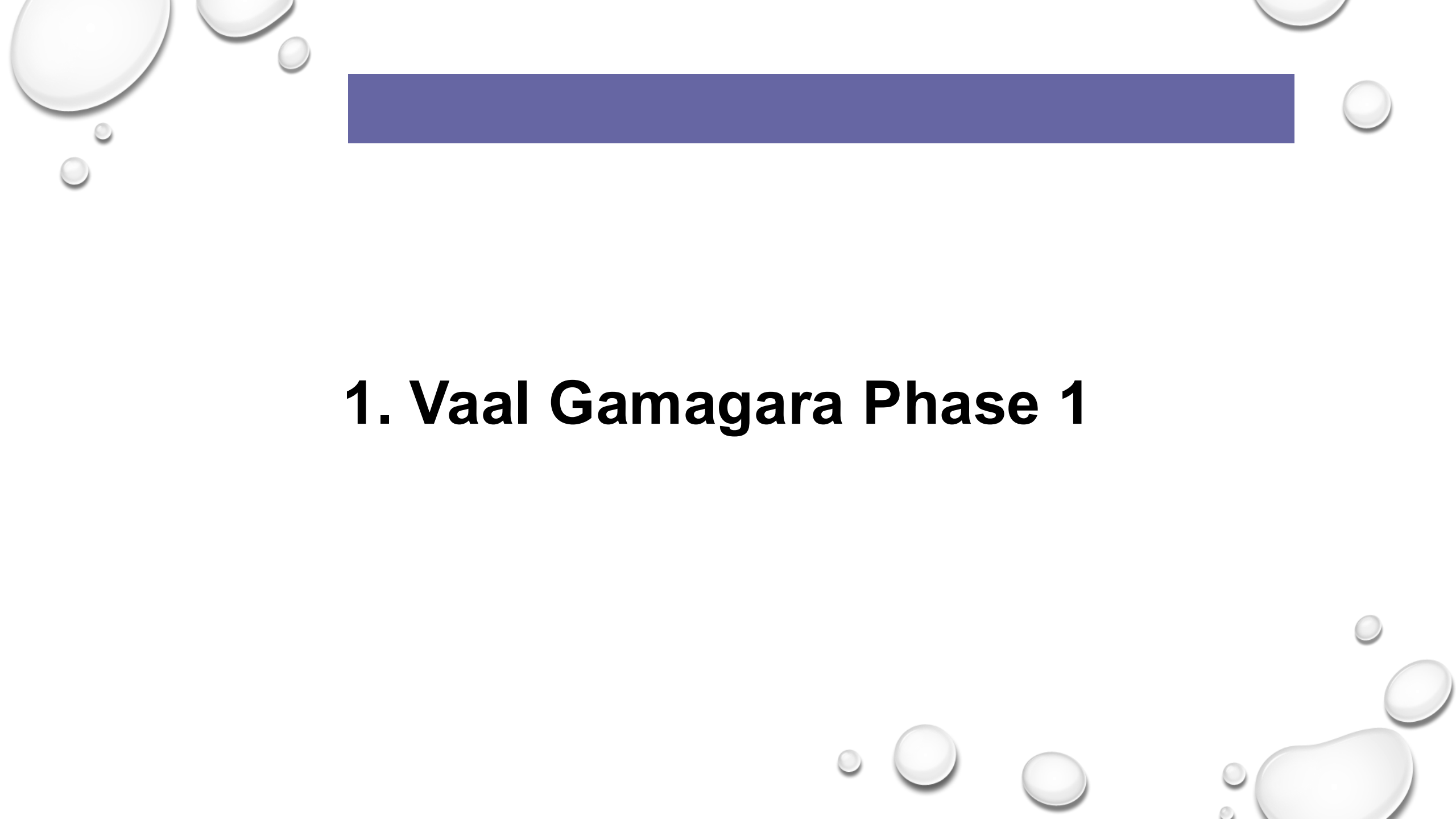
WATER INFRASTRUCTURE PROGRAM

Presented by:
Mr. R. Ramudzuli
(Acting Regional Manager: NC



INFRASTRUCTURE PROJECTS IN THE NORTHERN CAPE

Date: 28 June 2023



1. Vaal Gamagara Phase 1

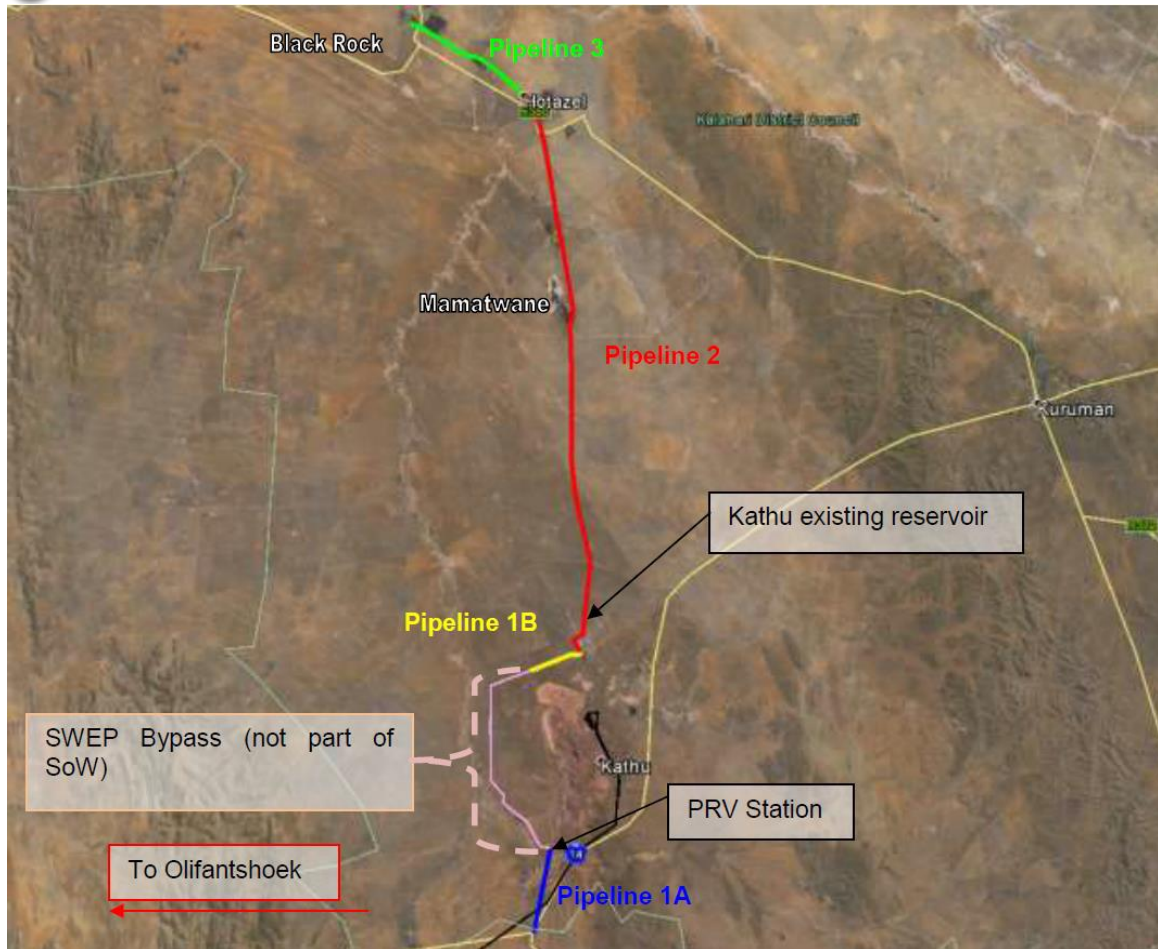
1. BACKGROUND

- ❑ The Vaal Gamagara Scheme is a 330 km pipeline water supply from Delporthoop to Black Rock.
- ❑ Core function is to supply potable bulk water for mining, industrial, agricultural and domestic use.
- ❑ The scheme currently supplies 20 million m³/annum while the current demand is approximately 26 million m³/annum.
- ❑ Demand forecast to 2043 is 28 million m³/annum for a 25 year planning horizon.
- ❑ The pipeline is approximately 52 years old (end of its lifespan) with frequent pipe bursts and breakdowns leading to high water losses and impacting negatively on the uninterrupted water supply objective.
- ❑ Due to the age of the infrastructure, the region is experiencing high maintenance costs to keep the scheme operational to an extent that former Sedibeng Water, now Bloem Water often gets assistance from the Mining Leadership Forum.

1. BACKGROUND (CONT'ED

- ❑ The Vaal Gamagara Bulk Water Supply Scheme Project was then conceptualized as a public private collaboration with two phases, with joint funding by government and a mining forum. Phase 1 was to be funded by government while the details of the collaboration are worked out for phase 2 which will be partially funded by the Mining Leadership Forum.
- ❑ The former Sedibeng Water was appointed as the Implementing Agent (IA) for Vaal Gamagara Regional Bulk Water Scheme on the 12 December 2013. Subsequently a memorandum of agreement between the former Sedibeng Water and the Department of Water and Sanitation was signed on the 23 December 2016.
- ❑ Following the completion of design development and preparation of documentation for contractor appointment, the Contractor was appointed and site handover took place on 4 October 2016.

2. SCOPE OF WORK



Upgrading of the existing 75 km pipeline from Roscoe to Black Rock

Pipeline 1A

- 7.8 km of DN900 and DN1100 new pipeline from Roscoe to Khumani.

Pipeline 1B

- 5.6 km of DN700 new pipeline from the end of SWEP by-pass to a new Pressure Reducing Valve (PRV) station at Kathu Reservoir. Note: The Scope was reduced from 5.6km to 0.38km after a condition assessment of the existing pipeline indicated that replacement could be delayed for some years.

Pipeline 2

- 54.5 km of DN700 and DN800 of a new pipeline from a new PRV station at Kathu Reservoir to Hotazel Reservoir.

Pipeline 3

- 11 km of DN600 pipeline between Hotazel Reservoir and Blackrock as well as 2.3km of DN400 pipeline to be installed in parallel with an existing DN560 pipeline.

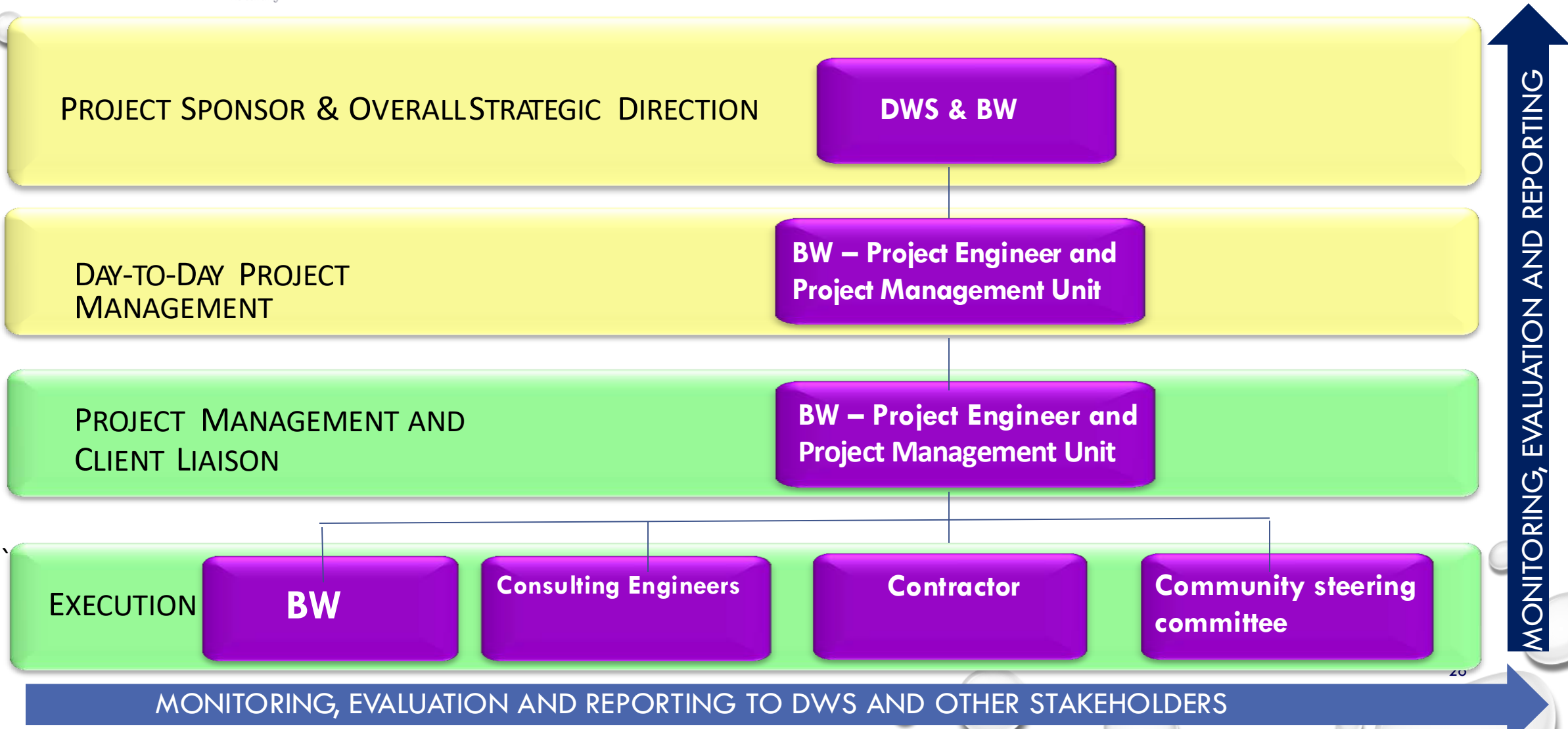
3. TIMEFRAMES

Milestone	Activities	Date
Procurement of consultant	Appointment of Consultant	6 November 2014
	Inception & Design Development	5 October 2015
	Contract documentation	08 April 2016
Appointment of Contractor	Contractor appointment	06 July 2016
	Site handover	04 October 2016
Construction Phase	Construction Commencement	11 November 2016
	Original contract duration	22 months
	Original Due Completion Date	03 August 2018
Completion	Completion Date	30 June 2022
	End of Defects Liability Period	30 June 2023

4. BUDGET

Service Providers	Type	Appointment Value (Inc.VAT)	Variation orders	Approved Extension of time claims	Revised Appointment Value (Inc.VAT)	Expenditure (Inc. VAT)
Ingerop South Africa (Pty) Ltd Tender: SW/JRR/201545	Project Management Unit	R121 159 580,19	R11 740 690,62		R132 900 270,81	R178 004 208,92
Royal Haskoning DHV (Pty) Ltd Tender: RFP (VGG) 15/2014	Consulting Engineers	R56 201 555,56	R21 303 111,96		R77 504 667,52	R65 659 086,83
Kgalagadi pipeline joint venture Tender: SW/VGGBP/201550	Contractor	R1 049 985 160,24	R202 503 918,26	R99 841 763,26	R1 452 330 841,76	R1 473 228 083,79
Total		R 1 227 346 295,99			R 1 762 735 780,09	R 1 716 891 379,54

5. PROJECT TEAM – Project Management Approach



6. JOB OPPORTUNITIES

Targeted Employment – Phase 1 Construction

Description	Direct	Indirect	Total
Women	50	107	157
Youth	75	105	180
Male	25	88	113
Total	150	300	450

Achieved Employment – Phase 1 Construction

Description	Direct (Local)	Direct (National)	Indirect	Total
Women	4	1	72	77
Youth	21	10	180	211
Male	8	49	444	501
Total	33	60	696	789

7. TRAINING

Month	Basic Rigging	Flagman	SHE Representatives	Legal Liability	Working at Heights	Hazard Identification & Risk Assessment	First Aid Level – 1 & 2	Basic Fire Fighting	Planning Fundamental Training	QS Development program	Operator Assessment	Operator Assessment
Dec 2016 – Dec 2017	7	9	8	15	2	0	5	8	3	1	10	4
Planned Training for Q4 2018			10	7		7	9	10				
Jan – Mar 2018		6	11		2	3	14	19				
Apr – Jun 2018												
Jul – Dec 2018				8	27							
Total	7	15	29	30	31	10	28	37	3	1	10	4

8. ECONOMIC DEVELOPMENT

Subcontractor Category	Target (Cumulative)	Achieved (Cumulative)	Percentage Achieved
Local	R 189 076 630.00	R 172 931 862.34	91%
Non-Local	R 100 227 331.83	R 98 133 475.77	98%
Total	R 323 848 227.14	R 316 371 475.18	98%

Ownership	Target (Cumulative)	Achieved	Percentage Achieved
Female Ownership	R 26 245 074.85	R 25 698 653.51	98%

We have utilized the services of 68 Local Subcontractors and Suppliers on the project and 11 Non-Local.

8. ECONOMIC DEVELOPMENT

Subcontractor Development

Name of Subcontractor	Services Offered	CIDB Grading Level	Amount Appointed For	Possible CIDB Grading Upon Completion
Ketshabile Business Enterprise	Construction of PRV Stations	1 GB PE, 1SQ PE	R 689,478.25	3GB PE
Mashego Maintenance and Projects	Fencing	1GB PE, 1SQ PE, 2CE PE	R 1 230 256,22	3 GP PE
Yonela General Services	Bush Clearing	1GB PE	R 199 380,00	2 GB PE
Bethu-Bethu Construction	Construction of concrete chambers	1GB PE	R 988,382.98	4CE PE/4GB PE

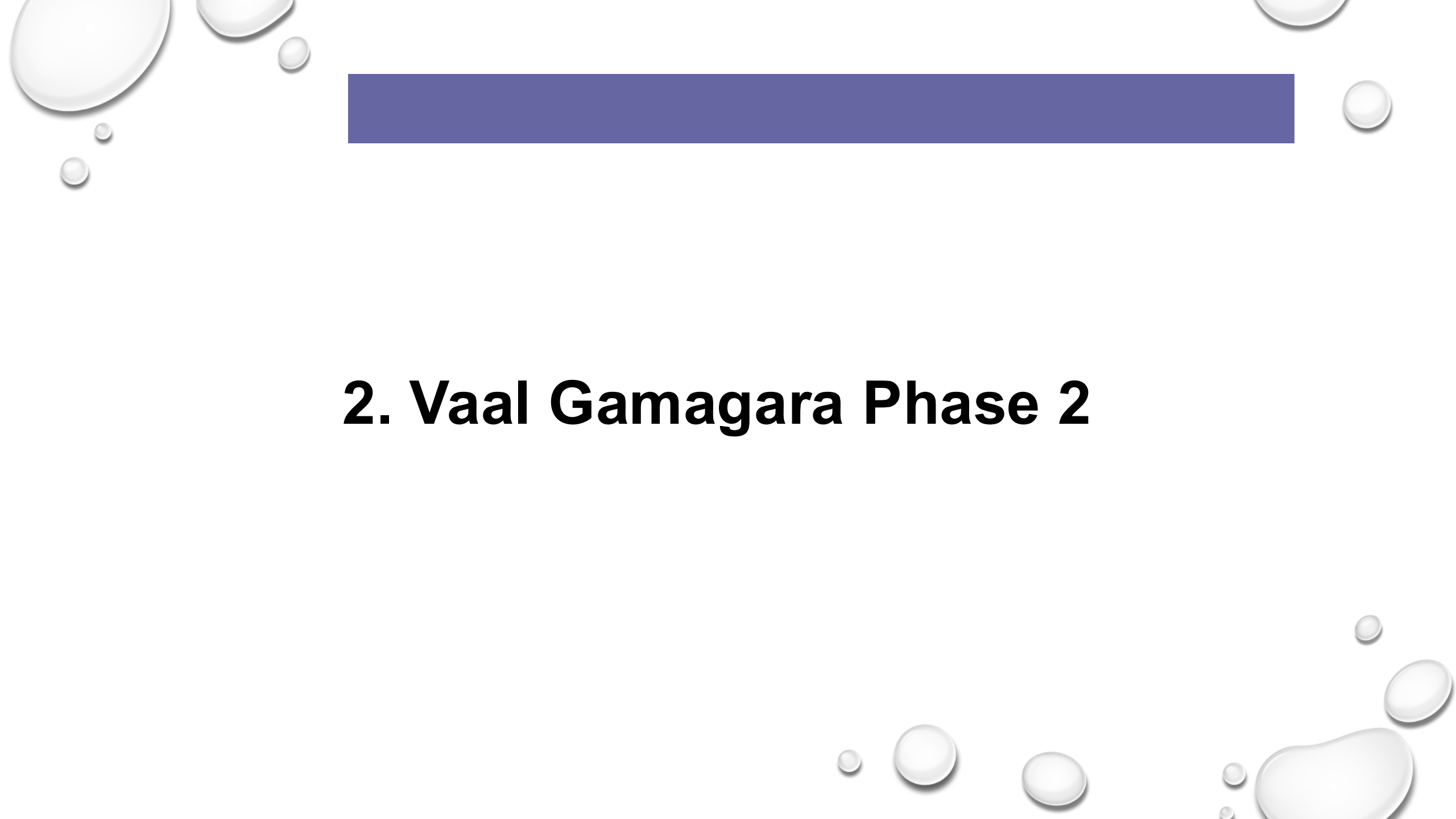
9. OUTCOMES AND OUTPUTS

9.1 Achievements

- ☐ Reliability of water supply to sustain life and to promote economic growth and development.
- ☐ Reduced Non Revenue Water (NRW) and water losses.
- ☐ Improved water quality that meets SANS 241 water specification – New Chlorine Facility in Khathu.

9.2 Challenges

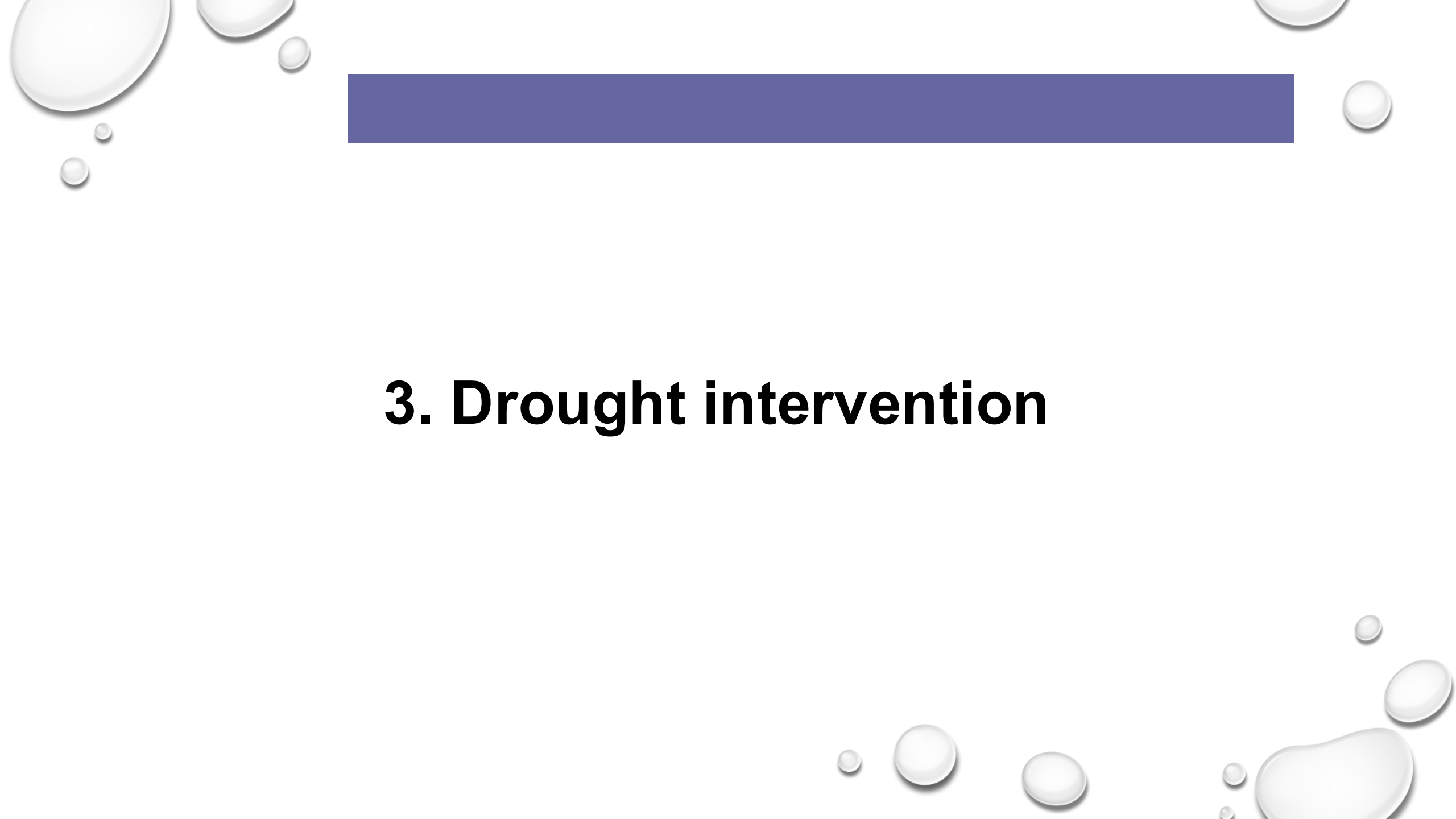
- ☐ Payment delays leading to suspension of work by the appointed Contractor.
- ☐ Covid19 related restrictions.
- ☐ Escalation of project costs due to inflation, unforeseen environmental constraints and scope changes



2. Vaal Gamagara Phase 2

2 VAAL GAMAGARA PHASE 2

Project	Service Providers	Appointment Value (Inc.VAT)	Amount paid to date (Inc.VAT)	Description of the project (High level scope of work)	Project Status
The upgrade of the existing VGG Regional Water Scheme Phase 2	Proplan Consulting Engineers	R600 000 000,00	R99 312 921,44	Phase 2 of the project consists of: Replacement of Pipeline from Clifton to Roscoe and Development of Well Sites SD1 and SD2. - Replacement of Pipeline from Beeshoek and Gloucester and refurbishment of Reservoirs and Trewill Pump Station and Sump. - Replacing Rising Main from Delportshoop to Clifton Reservoir.	Design stage. Project suspended due to unavailability of funds
Vaal Gamagara Water Supply Scheme: Phase 2: SD4 Groundwater Abstraction	King and Associates Engineering and Project Managers	R33 223 033,93	R777 250,38	- Refurbishment of Delportshoop Water Treatment Works and Pump Stations as well as refurbishment of Kneukel Pump Station and Sump. - Total of 250 km pipeline water supply.	



3. Drought intervention

3 DROUGHT RELIEF PROJECTS

Project Number	Project Name	% Completed	Practical Completion	Financial Account	Comments
RFQ-NCDR-202002-01	Garies Source Development (SD)	100%	Signed	Settled	All parties agreed and signed Project handover done 29 July 2021, as per originally agreed upon contract.
RFQ-NCDR-202002-02	Garies Desalination Plant	100%	On-going	80% of budget still unclaimed	
RFQ-NCDR-202002-03	Soebatsfontein SD	100%	Signed	Settled	All parties agreed and signed
RFQ-NCDR-202002-04	Spoegrivier SD	100%	Signed	Settled	All parties agreed and signed
RFQ-NCDR-202002-05	Kamieskroon SD	100%	Signed	Settled	All parties agreed and signed
RFQ-NCDR-202002-06	Paulshoek SD	100%	Signed	Settled	All parties agreed and signed
RFQ-NCDR-202002-08	Leliefontein SD	100%	Signed	Settled	All parties agreed and signed
RFQ-NCDR-202002-09	Klipfontein SD	100%	Signed	Settled	All parties agreed and signed
RFQ-NCDR-202002-10	Kheis SD	100%	Signed	Settled	All parties agreed and signed

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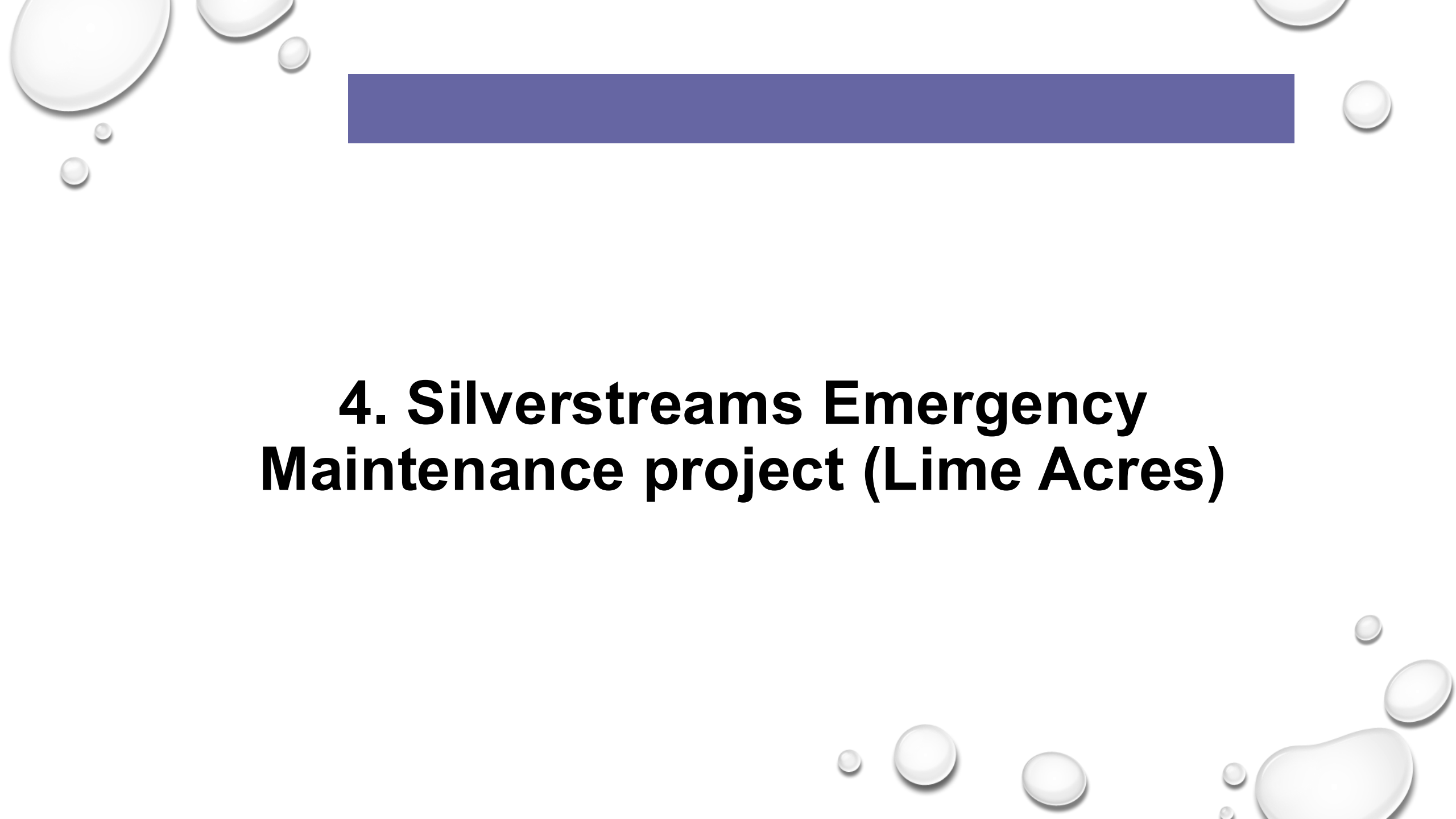
Project Number	Project Name	% Completed	Practical Completion	Financial Account	Comments
RFQ-NCDR-202002-12	Van Wyksvlei DP	100%	Signed	Settled	All parties agreed and signed
RFQ-NCDR-202002-13	Van Wyksvlei SD	100%	Signed	Awaiting retention	All parties agreed and signed
RFQ-NCDR-202002-14	Port Nolloth Myl 15	40%	On-hold	Settled	Project on-hold until further funding is granted.
RFQ-NCDR-202002-15	Port Nolloth Alex Pipe	88%	On-going	Awaiting 1 progress payment	Valve installation and chamber construction (100%), new pipe installation (waiting for final test and connection) (95%), installation of new valves at pump station (20%) & refurbishment of pump and motor (30%), Site clearance (100%)
RFQ-NCDR-202002-16	Port Nolloth WCDM	100%	N/A	N/A	Funds redirected to water tankering to assist curbing the spread of Covid-19.
RFQ-NCDR-202002-17	Calvinia SD	100%	Signed	Awaiting 2 payments retention	All parties agreed and signed
RFQ-NCDR-202002-18	Nieuwoudville SD	100%	Signed	Awaiting 2 payments retention	All parties agreed and signed

3 DROUGHT RELIEF PROJECTS

Project Number	Project Name	% Completed	Practical Completion	Financial Account	Comments
RFQ-NCDR-202002-19	Ntswelengwe	100%	On-going	Awaiting retention	Inspections done. Awaiting handover.
RFQ-NCDR-202002-20	Cassel refurbishment	98%	On-going	Awaiting retention	Inspections done. Awaiting handover.
RFQ-NCDR-202002-21	Ga-Sehunelo SD	100%	On-going	Awaiting retention	Inspections done. Awaiting handover.
RFQ-NCDR-202002-22	Mammabe SD	100%	On-going	Awaiting 2 payments retention	Inspections done. Awaiting handover.
RFQ-NCDR-202002-23	Manyeding SD	100%	On-going	Awaiting 2 payments retention	Inspections done. Awaiting handover.
RFQ-NCDR-202002-24-29	Strydenberg SD	100%	Signed	Awaiting final progress certificate and retention	Inspections done. Awaiting design changes.
RFQ-NCDR-202002-25	Domestic and Stock Watering	98%	On-going	Settled	Awaiting Municipality to agree on date for site inspections.
Water Tankering	Water Tankering	100%	Complete	Settled	

OVERALL PROJECT COMPLETION

99,30%



4. Silverstreams Emergency Maintenance project (Lime Acres)

11. CONCLUSION AND RECOMMENDATIONS

- ❑ Prioritise and make funds available for the implementation of Vaal Gamagara Phase 2. An amount of about R280 million as CRF has been paid to former Sedibeng Water by Mines
- ❑ The business case report for Private Partnership for future capital raising & funding of the Project has been submitted and presented to the Minister on the 05 October 2022.