

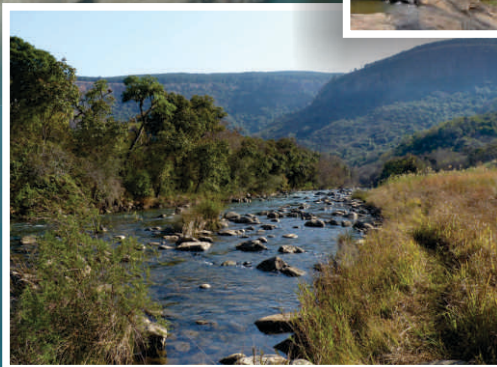


water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

CONTINUATION OF WATER REQUIREMENTS AND AVAILABILITY RECONCILIATION STRATEGY STUDY FOR THE MBOMBELA MUNICIPAL AREA

Inception Report



**FINAL
FEBRUARY 2018**



water & sanitation

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Water and Sanitation
REPUBLIC OF SOUTH AFRICA

CONTINUATION OF WATER REQUIREMENTS AND AVAILABILITY RECONCILIATION STRATEGY FOR THE MBOMBELA MUNICIPAL AREA

INCEPTION REPORT

FEBRUARY 2018

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CONTINUATION OF WATER REQUIREMENTS AND AVAILABILITY RECONCILIATION STRATEGY FOR THE MBOMBELA MUNICIPAL AREA

INCEPTION REPORT

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***CONTINUATION OF WATER REQUIREMENTS AND AVAILABILITY
RECONCILIATION STRATEGY FOR THE MBOMBELA MUNICIPAL
AREA: INCEPTION REPORT. P WMA 03/X22/00/6718***

Prepared by:

BJE/iX/WRP Joint Venture

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Authors: *Study Team*

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CONTINUATION OF WATER REQUIREMENTS AND AVAILABILITY RECONCILIATION STRATEGY FOR THE MBOMBELA MUNICIPAL AREA

INCEPTION REPORT

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Terms of Reference: Technical Support Group

LIST OF ABBREVIATIONS AND ACRONYMS

BJ	Black Jills Engineers Pty Ltd. (BJE);
CBO	Community Based Organisations
COGTA	Department of Cooperative Government and Traditional Affairs
DAFF	Department of Agriculture, forestry and Fisheries
DM	District Municipality
DMR	Department of Mineral Resources
DEA	Department of Environmental Affairs
DSS	Decision Support Systems (DSSs)
DWS	Department of Water and Sanitation
EWR	Ecological Water Requirements
IAP	Invasive Alien Plants
IDP	Integrated Development Plan
IUCMA	Inkomati-Usuthu Catchment Management Agency
iX	iX Engineers Pty Ltd.
JV	Joint Venture
NWRP	National Water Resource Planning
LED	Local Economic Development
LM	Local Municipality

LOS	Levels of Service
O&M	Operation and Maintenance
MMC	Member of the Mayoral Committee
NGO	Non-Governmental Organisations
PRIMA	Progressive Realization of the Incomaputo Agreement
PSP	Professional Service Provider
ROD	Record of Decisions
SDF	Spatial Development Framework
SMC	Study Management Committee
SSC	Strategy Steering Committee
ToR	Terms of Reference
TSG	Technical Support Group
WC/WDM	Water Conservation and Water Demand Management
WfW	Working for Water
WRP	WRP Consulting Engineers
WRPM	Water Resources Planning Model
WRYM	Water Resources Yield Model
WSA	Water Service Authorities
WUA	Water User Associations

CONTINUATION OF WATER REQUIREMENTS AND AVAILABILITY RECONCILIATION STRATEGY FOR THE MBOMBELA MUNICIPAL AREA INCEPTION REPORT

1 INTRODUCTION

1.1 Appointment

Proposals for the appointment of a Professional Services Provider (PSP) for the *Continuation of Water Requirements and Availability Reconciliation Strategy for the Mbombela Municipal Area*, were invited by the Directorate: National Water Resource Planning (NWRP) of the Department of Water and Sanitation (DWS) during February 2017. A Technical and Financial Proposal was submitted for the Study on 28 February 2017 by the BJE/iX/WRP Joint Venture (JV) comprising:

- Black Jills Engineers Pty Ltd. (BJE);
- iX Engineers Pty Ltd. (iX), and
- WRP Engineers Pty Ltd. (WRP) (Now part of the EOH group of companies).

The JV will be supported by the following specialists:

- Kayamandi Development Services.
- Anelle Lotter (Stakeholder Engagement).
- Delana Louw (Environmental Flow Requirements (EFR) and the Ecological Reserve).
- Henriette Anderson (Dam Specialist) and
- Peer reviewers

During June 2017, BJE/iX/WRP JV was notified that it was considered for appointment for the study, subject to the conclusion of a Professional Services Contract Agreement

between the DWS and BJE/IX/WRP JV. A Professional Services Contract Agreement was concluded and signed on 10 October 2017.

1.2 Study Objective

This Study follows on the study *Water Requirements and Availability Reconciliation Strategy for the Mbombela Municipal Area (2014)*. The overall objective of this Study is to systematically update, improve, and extend the Water Resource Reconciliation Strategy to cover the entire Crocodile River (East) and Sabie River catchments, in order for it to remain relevant, technically sound, economically viable and socially acceptable and sustainable.

1.3 Inception Report

In terms of the technical approach and methodology proposed in the Study Proposal, the proposed work was structured into thirteen (13) tasks of which an Inception Report was one of the deliverables.

This report comprises the Inception Report and Study Plan in fulfilment of the deliverables of the scope of work.

2 DEPARTMENT OF WATER AND SANITATION STUDY MANAGEMENT

To ensure the successful implementation of the study, the DWS will facilitate the establishment of a Strategy Steering Committees (SSC) for the Study. For the SSC to achieve its objectives, technical, scientific and administrative support will be required. This support will be provided by the Technical Support Group (TSG), which will include relevant DWS Directorates (National and Regional Office) and local stakeholders knowledgeable of the particular technical aspects relevant to the Study and the PSP who will be appointed and co-opted into the TSG.

The activities of the PSP will be managed by the DWS Directorate: NWRP.

3 SCOPE OF WORK: PROPOSED APPROACH AND METHODOLOGY

3.1 REVISED SCOPE OF WORK

The scope of the BJE/IX/WRP JV Study Proposal was changed based on decisions made at the First Study Management Committee Meeting on (24 October 2017). These proposed changes were considered in more detail, and were confirmed at an Interim Inception Report Meeting between the DWS Study Manager (14 November 2017). A comparison of BJE/IX/WRP JV Study Proposal and Revised Scope of Work is presented in **Table 3.1**.

The Study Programme was revised to be in line with the Revised Scope of Work. The Revised Study Programme is shown on **Figure A-2** in **Appendix A**.

The total Study Budget will remain unchanged. The cost for the preparation of the additional task, viz. the preparation the Strategy Summaries will be offset by a combination of the cost for the elimination of the *Socio Economics Task*, as envisaged in the Study Proposal Document and by further utilizing some of the Ad Hoc Task Study Budget as agreed.

Table 3.1: Comparison of BJE/IX/WRP Joint Venture Proposal and Revised Scope

BJE/IX/WRP Joint Venture Proposal	Revised Scope
Study Area: Mbombela Municipal Area	Revised Study Area: Crocodile River (East) and Sabie River catchments. Focus of the study tasks will be the Mbombela Local Municipality (LM), Bushbuck Ridge , Barberton and some small towns in the Nkomazi LM
Water Quality: No provision made as per Terms of Reference (ToR)	Water Quality: Analyse and assess existing available information from the Inkomati-Usuthu Catchment Management Agency (IUCMA) and previous studies to provide reasonable status of WQ and scope of future WQ investigations required
Groundwater Resources:	Groundwater Resources:

BJE/IX/WRP Joint Venture Proposal	Revised Scope
No provision made as per ToR	Use latest available existing information from past IUCMA, DWS and Rand Water studies.
Site Visit: No provision made as per ToR	Site Visit: Site visits to be arranged back to back either with the TSG or SSC meetings (total of 2 days have been allocated). PSP to identify areas of interest. IUCMA will assist the study team with guiding the trips and onsite coordination i.e. liaising with dam operators or farmers.
Socio Economic Task Includes as per ToR	Socio Economic Task Task removed and budget used to fund additional scope
Study Meetings: Study Management Committee (SMC) Meetings (x12) TSG Meetings (x 12 (x 6 to be held in the study area) SSC Meetings (x6)	Study Meetings: SMC Meetings (x2) TSG (x12) SSC Meetings (x6)

3.2 REVISED STUDY AREA

The revised study area, viz. the Crocodile River (East) and Sabie River catchments to be covered under this study is illustrated in **Figure 3-1** below.

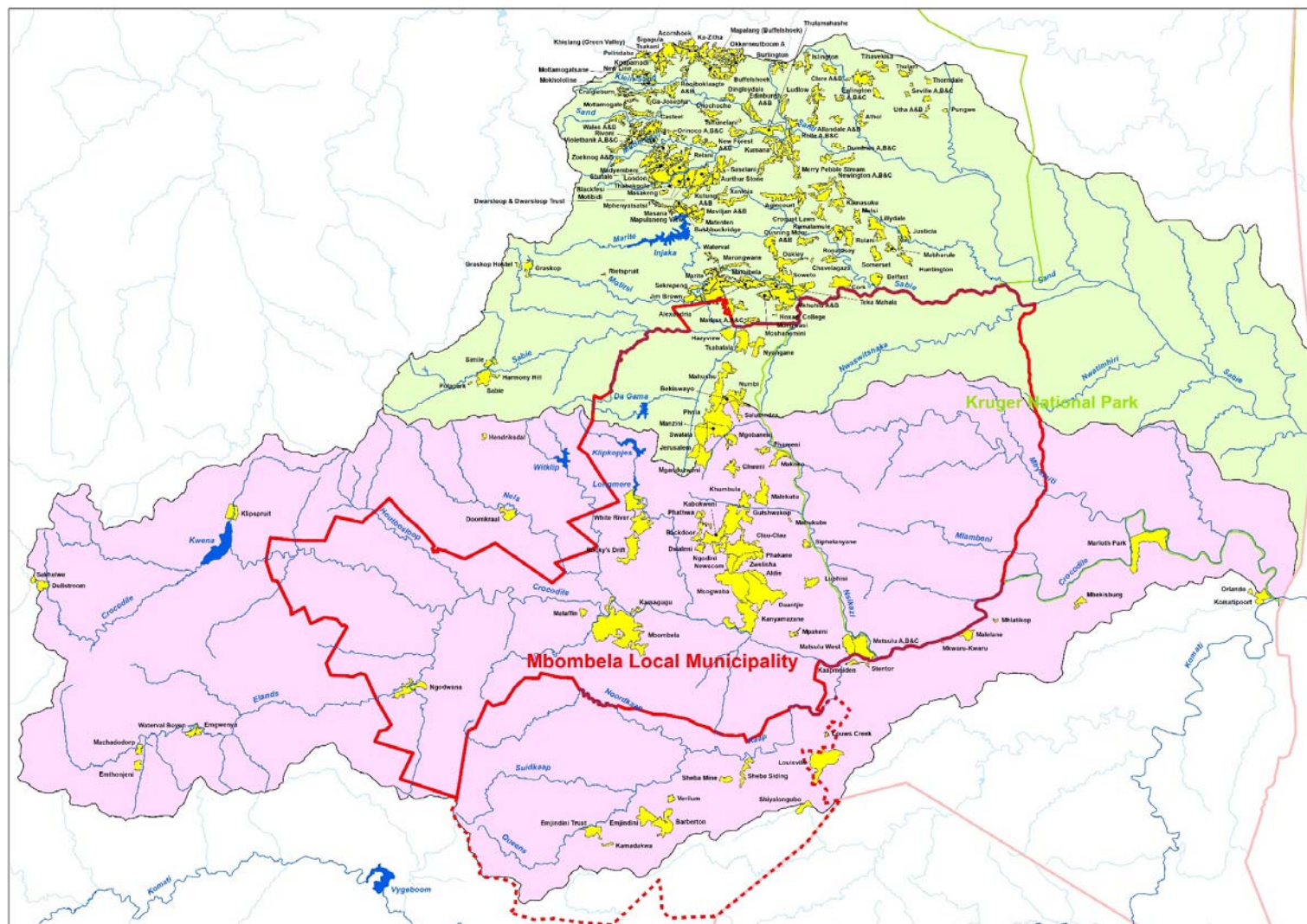


Figure 3-1: Revised Study Area

4 OVERVIEW OF THE REVISED STUDY PROCEDURE

The study tasks are presented in **Table 4.1** below.

Table 4.1: Proposed Study Tasks

TASK NUMBER	TASK DESCRIPTIONS
1	Inception and Literature Review
2	Economic growth and Demographic Analysis
3	Water Requirements and Return Flows
4	Water Conservation and Demand Management
5	Monitoring Network Expansion and Data Capturing
6	Water Resources Analysis
7	Infrastructure and Cost Assessment
8	Preliminary and Updated Reconciliation Strategy
9	Ad Hoc Support
10	Capacity Building and Training
11	Stakeholder Engagement
12	Study Reports
13	Study Management

The Logical Flow Diagram highlighting the broad flow of information between the proposed tasks is provided in **Appendix A (Figure A-1)**. The Study will be undertaken over a period of thirty-six (36) months from the date of appointment, with a preliminary strategy being made available within the first 12 months. The Detailed Study Programme, indicating the task duration and specific milestones, is provided in **Appendix A (Figure A-2)**.

5 DETAILED TASK DESCRIPTIONS AND DELIVERABLES

5.1 Task 1: Inception

The following activities were undertaken as part of this task:

- The previous *Continuation of Water Requirements and Availability Reconciliation Strategy for Mbombela Municipal Area Study Report* (2014) and other available relevant study reports and information relevant to this study were reviewed. The

Continuation of Water Requirements and Availability Reconciliation Strategy for Mbombela Municipal Area Study (DWA, 2014) and subsequent information and study reports reviewed are presented in **Table 5.1**.

- Finalisation and agreement on the TSG and the SSC members.
- The training structure and the individual/s from the DWS to benefit from skills transfer during the Study were agreed upon.
- Relevant authorities were contacted (DWS, IUCMA, Mbombela LM, Semcorp Silulumanzi, consultants involved in past studies) as part of the data and information sourcing exercise as presented in **Table 5.2**
- Agreement and approval were obtained from the DWS for the study tasks approach/methodology, work processes and programmes, budget, study management and administration functions, as well as individual responsibilities of the key members of the Study Team.

Table 5.1: Information and Reports Reviewed

Item	Report Name	Owner	Year	Relevance to Study
Water Requirements and Availability Reconciliation Strategy for the Mbombela Municipal Area				
1	Water Requirements and Availability Reconciliation Strategy for the Mbombela Municipal Area: Final Reconciliation Strategy	DWA	2014	Updated Reconciliation Strategy
2	Water Requirements and Availability Reconciliation Strategy for the Mbombela Municipal Area: Water Requirements and Water Resources Report	DWA	2013	Water Requirements and Water Resources
3	Water Requirements and Availability Reconciliation Strategy for the Mbombela Municipal Area: Water Conservation and Water Demand Management Potential Assessment	DWA	2013	Water Conservation and Water Demand Management
4	Water Requirements and Availability	DWA	2013	Water Resources Task

	Reconciliation Strategy for the Mbombela Municipal Area: Water Quality Report			(Water Quality Statement)
The Determination of Water Resource Classes and Associate Resource Quality Objectives in the Inkomati Water Management Area				
5	The Determination of Water Resource Classes and Associate Resource Quality Objectives in the Inkomati Water Management Area: Ecological Water Requirements	DWS	2015	Ecological Water Requirements
6	The Determination of Water Resource Classes and Associate Resource Quality Objectives in the Inkomati Water Management Area: Resource Quality Objectives	DWS	2015	Ecological Water Requirements
7	The Determination of Water Resource Classes and Associate Resource Quality Objectives in the Inkomati Water Management Area: Main report	DWS	2015	Ecological Water Requirements
Rand Water Reports				
8	Investigation into the Potential Use of Groundwater within Rand Water's Area of Service	Rand Water	2016	Groundwater Availability
Continuation of Reconciliation Strategies for All Towns in the Eastern Region				
9	Continuation of Reconciliation Strategies for All Towns in the Eastern Region: Water Reconciliation Strategy Update for the Schemes in the Sabie and Sand River	DWS	2016	Water requirements, water resources, water supply infrastructure
10	Continuation of Reconciliation Strategies for All Towns in the Eastern Region: Water Reconciliation Strategy Update for the	DWS	2016	Water requirements, water resources, water supply infrastructure

	Schemes in the Crocodile River Catchment in the Nkomazi Local Municipality			
Mbombela Local Municipality Master Plans				
11	Mbombela Local Municipality Master Plan Water System	Mbombela LM	2016	Water Requirements and Water Supply Infrastructure
12	Mbombela Local Municipality Master Plan Sewerage System	Mbombela LM	2016	Return Flows and Sanitation Infrastructure
IUCMA Reports				
13	Water Quality Status Reports (Sabie & Crocodile Catchments)	IUCMA	2016 / 2017	Water Quality
14	WREMP Model Setup (Sabie River System)	IUCMA	2017	Water Resources Modelling
15	WREMP Model Setup (Crocodile River System)	IUCMA	2017	Water Resources Modelling
16	Crocodile and Sabie River System Catchments Abstraction Data	IUCMA	2017	Water Use

Table 5.2: Consultation and Peer Review

Institution or Specialist	Subject Consulted On	Comment
DWS NWRP	<ul style="list-style-type: none"> Study related reports and information 	<ul style="list-style-type: none"> Reports and information received
IUCMA	<ul style="list-style-type: none"> Study related information and existing system models 	<ul style="list-style-type: none"> Information and System models (WREMP Setups) received for Crocodile and Sabie Systems
S Mallory	<ul style="list-style-type: none"> Clarification of System Models 	<ul style="list-style-type: none"> Clarification provided
Mbombela LM	<ul style="list-style-type: none"> Mbombela Master Planning Information WTW capacities, abstraction and production volumes WWTW capacities and return flow volumes 	<ul style="list-style-type: none"> Master plan information received In process of receiving WTW and WTTW
Semcorp Silulumanzi	<ul style="list-style-type: none"> WTW capacities, abstraction and production volumes WWTW capacities and return flow volumes 	<ul style="list-style-type: none"> In process of receiving info
Rand Water	<ul style="list-style-type: none"> Clarification of Bushbuckridge bulk water supply systems 	<ul style="list-style-type: none"> Awaiting feedback

The outcomes of the items listed above have been consolidated into this Inception Report, which will form the basis for the rest of the execution of the Study and will serve as the baseline against which progress of each task can be monitored and evaluated. This Inception Report becomes the Revised ToR for the remaining phases and tasks of the Study.

Task 1 Deliverables:

- *Report 1: Inception Report (this report)*

5.2 Task 2: Economic growth and Demographic Analysis

This Study will focus on the updating, refining, and reviewing the population and growth modelling undertaken previous *Continuation of Water Requirements and Availability Reconciliation Strategy for Mbombela Municipal Area Study* (DWA, 2014). The Demographic Analysis will focus on the Mbombela LM, Barberton as well as the Bushbuckridge Area.

The objective of this task is to determine, update, and refine the existing and possible future size and distribution of the population and the economy. All existing documents and reports will be utilised wherever possible, and the latest available data (Census (StatsSa), DWS Water Services, Mbombela LM, etc.) at settlements level of detail will be obtained.

Identification, sourcing and reviewing background information and base data will be undertaken to compile a practical and up-to-date quantitative and qualitative profile of the study area at the required detailed level. Information to be obtained to compile the demographic profile includes population figures, number of households, household size, income levels, etc. Information will also be obtained on historical trends in the area relating to birth and death rate, migration, urbanisation, illegal migration, HIV and AIDS infection rates, etc. This will be followed by reviewing all background information such as the Integrated Development Plans (IDPs), Spatial Development Frameworks (SDFs), Local Economic Development (LED) Plans, Housing Sector Plans, etc., in order to determine current priorities of the municipalities with regard to social and economic development issues.

Economic and demographic modelling will follow, and will be undertaken at the lowest geographical level in order to facilitate later grouping of settlements. Key incumbents from various public service organisations, will be consulted to augment information on current social and economic trends relevant to the Study. Economic growth modelling will take into account the potential of each of the areas, the SDFs and economic sector growth estimates to determine possible future economic growth by sector and possible spatial representation.

Use will be made of the latest satellite images, as well as updated and revised future growth from the base demographic data, using the latest available census data. The economic growth together with demographic trends will be utilised to model population growth and distribution in terms of low and high growth scenarios.

Task 2 Deliverables:

- *Updated population figures and growth scenarios (Mbombela LM, Barberton and the Bushbuckridge Area)*
- *Report 2: Demographic Analysis Report*

5.3 Task 3: Water Requirements and Return Flows

The current and future water requirements for the different water use sectors will be established as part of this task. The water requirement and return flows information for the study area will be sourced from the *First Phase Water Requirements and Availability Reconciliation Strategy Study for the Mbombela Municipal Area Study (DWA, 2014)*, the recent DWS All Towns Studies and other similar recent planning studies and investigations. The Mbombela LM, Barberton and Bushbuckridge Area (identified key areas) water requirement and return flow information will be updated as discussed below (Domestic and Industrial Sectors). The information of the remaining domestic and industrial users in the study area will be purely based on available information from past studies. The approach for the other water use sectors in the study area is also documented below.

Domestic and Industrial Sectors

Domestic water requirements are largely driven by economic activities and demographics (socio-economic trends) and the derivation of accurate demographic projections for the study area is important.

The current and future water requirements projections of the Mbombela LM, Barberton and Bushbuckridge Area will be revised by applying the approach discussed below. The following components required for determining current and projected water use for each of the demand centers will be assessed:

- Water supply zones and drainage areas with associated infrastructure.
- Demographics (current and projected – Task 2).
- Level of Service (LOS) (current and projected).
- Current and historic metered water use.
- Current and historic metered Waste Water Treatment Works (WWTW) return flows.

- Existing Water Conservation and Water Demand Management (WC/WDM) measures.
- Previous water requirement projections for reference purposes from the *First Phase Mbombela Reconciliation Study and DWS All Towns Study*.

Information sources will include (not all inclusive):

- The DWS Water Requirements and Availability Reconciliation Strategy Study for the Mbombela Municipal Area.
- The DWS All Towns Reconciliation Strategies for the Eastern Region (Phase 1 and Phase 2).
- Inkomati-Usuthu Catchment Management Agency Water Use Database.
- The DWS Blue Drop Reports.
- The DWS Green Drop Reports.
- District and Local Municipalities (liaison and planning documentation).

The theoretical, or benchmark water requirement projections, will first be determined by applying the water use categories as developed by DWS: Water Resource Planning Systems (refer **Table 5.3** below) to the projected demographics (unit consumptions to be confirmed by the TSG). Assumed theoretical treatment and distribution losses will also be applied. The water requirements will then be calibrated according to the actual recorded water use. A comparison of the theoretical and calibrated unit consumption will be the first indicator in identifying the WC/WDM Potential.

This calibrated model will then be used to determine possible future water requirement scenarios until 2040 (to be confirmed during the Inception Phase), which will in most cases only be limited to changes in domestic requirements patterns. Any known future changes in industrial and commercial requirements patterns, including major developments such as the Nkosi City development, proposed new hospital and university in Nelspruit, will also be considered. A limited number of scenarios (four) will be considered and the following are proposed (the actual scenarios used will be discussed with the SSC before proceeding with this task):

- Theoretical: Normal population growth scenario with no change in the LOS;

- Calibrated (actual recorded use): Normal population growth scenario with no change in the LOS;
- Calibrated (actual recorded use): High population growth scenario with increase in the LOS levels due to improved economic and social conditions and the implementation of government policies with regards to the provisioning of housing, water and sanitation services; and
- Calibrated (actual recorded use): High population growth scenario with changes in the LOS (as above) with the implementation of WC/WDM initiatives (Task 4: WC/WDM)

Table 5.3: Average Water Consumption per Water Use Category

WATER USE CATEGORY	DWELLING TYPE		AVERAGE WATER CONSUMPTION (ℓ/c/d)
1	Flats		226
2	Clusters		255
3	Single Residential	Low Income	101
4		Medium Income	189
5		High Income	304
6		Very High Income	442
7	Informal	Below RDP Level	12
8		RDP Level	40
9		Above RDP Level	80

The various industrial water users in the study area and their associated actual water use will be established. The expected future expansions and associated project water use will be confirmed with the major industries.

The water requirement and return flow projections for the remaining Urban and Industrial Sectors in the revised study area (excluding Mbombela LM, Barberton and Bushbuckridge) will be sourced from the existing information sources listed in this section above.

Irrigation and Afforestation

The largest water user in the Crocodile River (East) and Sabie River catchments is irrigation, with afforestation being the second largest. There are large areas of forestry within both the Crocodile River (East) and Sabie River catchments. It is a well-established fact that exotic forestry plantations (e. g Pine, Eucalyptus and Wattle) reduce the runoff that would otherwise flow into the rivers. It is therefore important that afforestation information is incorporated into any water resources analysis (Task 6: Water Resources Analysis).

The irrigation water use and afforestation information for the study area will be sourced from the *First Phase Water Requirements and Availability Reconciliation Strategy Study for the Mbombela Municipal Area Study (DWA, 2014)* i.e. Information included in the configured water resource models used in the study. The irrigation water use will be compared and confirmed with the latest information available from the latest *Validation and Verification of Existing Lawful Water Use in the Inkomati Water Management Area* being undertaken by the IUCMA.

Invasive Alien Plants

Invasive Alien Plants (IAPs) have an impact on water resources similar to that of exotic forestry plantations in that they also reduce the runoff. There are significant areas of IAPs in the study area and affects the runoff generated from the catchments.

Existing information on the IAPs in the study area will be sourced from the Mbombela Reconciliation Strategy (used data provided by the Department of Environmental Affairs (DEA) Working for Water (WfW) Project) and the IUCMA. The Study Team will also liaise with the DEA WfW (National Invasive Alien Plant Survey) to source the latest survey information and to compare it with the previous data used.

The IAP areas and their impacts on streamflow have been estimated by past studies (Inkomati Water Availability Assessment Study and *First Phase Water Requirements and Availability Reconciliation Strategy Study for the Mbombela Municipal Area Study (DWA, 2014)*). The latest IAP information will be incorporated into the decision support systems for Task 6 (Water Resources Analysis). A particular focus of this task will be to confirm the IAP infestation upstream Kweni Dam and to analyse the impact on the downstream yield should the IAPs be eradicated. The costs associated with the eradication of IAPs will be

confirmed with the WfW IAP Eradication Programme and compared to the costs of development options, WC/WDM etc. in Task 7.

Environmental Water Requirements and the Ecological Reserve

The Comprehensive Reserve Determination Study for Selected Water Resources (Rivers, Groundwater and Wetlands) in the Inkomati Water Management Area (DWAF, 2010) was undertaken by DWS. Subsequently *The Determination of Water Resource Classes and Associated Resource Quality Objectives in the Inkomati Water Management Area* (DWS 2015) was undertaken by the DWS and IUCMA and have been Gazetted (January 2016). The latter two processes have been undertaken subsequent to the *Inkomati Water Availability Assessment Study* and *First Phase Water Requirements and Availability Reconciliation Strategy Study for the Mbombela Municipal Area Study* (DWA, 2014) and the information will be reviewed to determine if the Environmental Water Requirements (EWR) from the Comprehensive Reserve Determination Study are still relevant. Changes in the EWR will influence the yield characteristics of the existing system.

International Obligations

The Crocodile River (East) and Sabie River originate in Mpumalanga and flows in an easterly direction into Mozambique and are thus classified as directly supporting international obligations, and therefore the agreements between South Africa and Mozambique must be honored, viz the Tripartite Interim Agreement and the Progressive Realization of the Incomaputo Agreement (PRIMA). All existing agreements will be confirmed and incorporated into the water resource analysis.

Task 3 Deliverables:

- *Updated Current and Future Water Requirement Database for the Different Water Use Sectors*
- *Report 3: Water Requirements and Return Flow Report*

5.4 Task 4: Water Conservation and Water Demand Management

The objective of this task is to review the status quo of WC/WDM in the respective water supply systems. This review will include the updating of each system's water resource and water loss balance diagram, assess the progress made with the implementation of

existing WC/WDM strategies and business plans and review the savings achieved to date. The water supply systems in the Mbombela and Bushbuckridge LMs will be covered.

The following sub-tasks will be undertaken.

Sub-task 4.1: Status Quo Assessment

Water Services Authorities (WSAs), viz. Mbombela LM and Bushbuckridge LM will be contacted to collect and collate their latest WC/WDM information. This will be followed-up with meetings to ensure the information is correctly understood and to fill any gaps.

WC/WDM information that will be sourced gathered includes:

- The International Water Association's (IWA) latest water balance information as prescribed by the DWS for each system
- The latest water resource balance diagram for each system which is aligned to the respective reconciliation or all town study
- The WSAs latest WC/WDM Strategy and Business Plan
- Progress and completion reports on WC/WDM interventions

Sub-task 4.2: Assessment of Results

Based on the results from Sub-task 4.1, conclusions and recommendations will be made on the way forward, which will include the following:

- Progress made with the reduction of water losses, non-revenue water and improvement of water use efficiency;
- The impact or potential impact of WC/WDM on water security in terms available supply and demand;
- Ensuring the status quo, targets, interventions, budgets and timelines are included in the WC/WDM Strategy and Business Plans;
- Ensuring the LM WC/WDM Strategy and Business Plan are funded and included in the IDP;
- Ensuring the LM WC/WDM Strategy and Business Plan have political support;
- Ensuring the results from projects indicate the savings, cost benefits, lessons learnt, sustainability and way forward.

Sub-task 4.3: Water Services Authority Feedback

The objective of this task will be to arrange feedback sessions for the WSAs specifically on WC/WDM. The Study Team will ensure the meeting is attended by at least the WSAs Technical Directors, Members of the Mayoral Committee (MMC) for Infrastructure (water), finance departments, the DWS Head Office and Mpumalanga Regional Office.

Sub-task 4.4: Reporting

The outcomes of Sub-tasks 4.1, 4.2 and 4.3 will be compiled in a single report for each WSA which will be updated biannually with the latest information.

Task 4 Deliverables:

- *WC/WDM Status Quo Assessment Module*
- *WC/WDM Assessment Module*
- *Report 4: Updated WC/WDM Plan*

5.5 Task 5: Monitoring Network Expansion and Data Capturing

This task is associated with both the Municipal and Water Resource Monitoring Networks.

Sub-task 5.1: Municipal Monitoring Network

This sub-task is closely linked to Task 4. The WC/WDM Assessment undertaken as part of the *First Phase Water Requirements and Availability Reconciliation Strategy Study for the Mbombela Municipal Area Study (DWA, 2014)* already made recommendations regarding vital areas where there is no water monitoring and where the monitoring network should be expanded. The status of these recommendations will be confirmed and recommendations for any areas for any additional areas identified for expansion as part of Task 5 will be made. Recommendations regarding automated near-real-time monitoring and web-based data capturing for simplifying data capturing and sharing will be made.

Sub-task 5.2: Water Resource Monitoring Network

Information on the water resource monitoring network will be sourced from the IUCMA. This will include information on the status quo of monitoring network as well as monitoring network expansion plans for operational and long-term planning purposes. The current status of the IUCMA's real time monitoring network and web-based data acquisition

system will be confirmed, and recommendations regarding the expansion of this system will be made.

Task 5 Deliverables:

- *Chapter in Report 4: Updated WC/WDM Plan and Report 5: Water Resource Analysis Report*

5.6 Task 6: Water Resources Analysis

The water resources of the Crocodile East and Sabie River catchments have been studied in detail as part of several past studies such as the Inkomati Water Availability Assessment Study, *The Comprehensive Reserve Determination Study for Selected Water Resources (Rivers, Groundwater and Wetlands) in the Inkomati Water Management Area (DWAF, 2010)*, *First Phase Water Requirements and Availability Reconciliation Strategy Study for the Mbombela Municipal Area Study (DWA, 2014)*, , , , etc. The purpose of this task is to latch on to the information and Decision Support Systems (DSSs) utilized in past investigations and to use this information as the baseline for water resource analysis required for the continuous updating and improvement of the reconciliation study based on updated available information.

The information and “knowledge” from the various decision support systems applied will be sourced and reviewed. This information, together with new information produced from this Study, viz. updated water requirements, land use, new development etc., will be combined into the DWS Standardized DSS (Water Resources Yield Model (WRYM) and Water Resources Planning Model (WRPM)) generally applied throughout South Africa. The updated and consolidated DSS will then be used to analyse the various identified scenarios, to be confirmed with the DWS, which will inform decisions required for the Updating of the Reconciliation Strategy Process (Task 8). Possible scenarios could include the following:

- Impact of updated EWR on the available system yields, should the EWR be changed as part of the more recent classification and resource quality objective studies (will be confirmed under Task 4)

- Impact of IAP eradication upstream of Kwena Dam on the Kwena Dam's yield as well as other possible areas where large IAP concentrations are identified as part of Task 3.
- Reallocation of afforestation to downstream users as a trade-off towards building another dam (assessment of the impact of removing afforestation on the yield of downstream dams).
- Further intervention planning.
- Facilitation the development of operating rules for Primkop Dam and upstream dams for optimizations purposes from a yield perspective.

The scenarios to be analyzed will be identified and confirmed with the client.

Task 6 Deliverables:

- *Water Resources Status Quo Assessment Module*
- *Water Resource Analysis Module*
- *Report 5: Water Resource Analysis Report*

5.7 Task 7: Infrastructure and Cost Assessment

The cost of all interventions options (infrastructure works and developments) will be developed and updated. The cost of implementing softer options, viz institutional reorganisation, alien vegetation eradication and the implementation of WC/WDM interventions, will also be developed and updated where and if required. The updating of costs will allow for the capital as well as the Operation and Maintenance (O&M) costs. All the costs will be updated and developed to a current base date.

The Matsulu Abstraction Works will be investigated and assessed. The Matsulu Abstraction Works weir runs short of water as a result of operations at the Kaapmuiden Diversion Weir on the Crocodile River and canal. Solutions will be identified, developed and costed if required.

Task 7 Deliverables:

- *Infrastructure Status Quo Assessment Module*
- *Development Options Module*
- *Report 6: Infrastructure and Cost Assessment*

5.8 Task 8: Updated Reconciliation Strategy

An Interim Reconciliation Strategy Status Update will be made available within the first 12 months based on the programmed tasks progress.

The updated information and outcomes of the Study tasks will be used to formulate alternative reconciliation scenarios, which will consist of a sequence of interventions that can be implemented to reconcile the water requirements with the water resources up to 2040 (to be confirmed during the Inception Phase) which will be documented in the Updated Reconciliation Strategy.

Task 8 Deliverables:

- *Report 7a Interim Reconciliation Strategy Status Update*
- *Report 7 Updated Reconciliation Strategy*

5.9 Task 9: Ad Hoc Support

During the course of the Study, the Study Team may be requested to undertake any other ad hoc studies and/or investigations as may be required in support of the Study. The Study Leader will assess the Scope of Work, the resources and time that will be required to undertake the various tasks and estimated costs. Upon approval by the DWS the work will then be undertaken, and a memo of the finding will be drafted.

Task 9 Deliverables:

- *Ad Hoc Support Memo 1*
- *Ad Hoc Support Memo 2*

5.10 Task 10: Capacity Building and Training

The objectives of the training task are as follows:

- To capacitate DWS Staff and team members in specialist aspects specifically relating to the Mbombela Reconciliation Strategy;
- To capacitate DWS staff (focusing on GTs) in the operations and use of the systems models used to produce elements of the strategy.

The task will be performed with consultation with the other Reconciliation Strategy studies being carried out by DWS: NWRP, where detailed training programmes were specified. The detailed training of the other studies will be in the form of lecture style training to transfer knowledge related to the various technical steps or themes associated with the development of reconciliation strategies. It is recommended that the training be coordinated for the identified individuals to attend. This will form the foundation from which further study specific training (specific to the Mbombela Reconciliation Strategy) can be facilitated.

Training for study specific activities shall be provided within the available time allocations in the form of the following:

- One on one training with DWS officials or provision of secondment of staff
- HDIs in the fields of water resource planning and development, and environmental management within the PSPs team.

The details and the timing of the envisaged training is presented below. The training can be provided in the form of either one on one training, secondment of staff or formal training. The training content focus can be aligned to the trainee/s needs:

- Training 1:
 - Content: Module 1: Overview of Reconciliation Strategy Components
Module 2: Water Requirements Determination
Module 3: Water Conservation and Water Demand Management
 - Timing: November/December 2018
 - Duration: Dependent on selected format (1 Day if formal training is selected, more time if secondment is selected)
 - Location: Pretoria
- Training 2:
 - Content: Module 3: Water Resource Availability (approach & results Interpretation)
Module 4: Water Balance and Reconciliation
Module 5: Intervention Planning
 - Timing: November/December 2019
 - Location: Pretoria
 - Attendees: One on one, secondment or formal training
 - Duration: Dependent on selected format (1 Day if formal training is selected, more time if secondment is selected)

Task 10 Deliverables:

- *Training material*

5.11 Task 11: Stakeholder Engagement

The stakeholder engagement activities will ensure buy in by key stakeholders through active involvement in the study. The stakeholder engagement activities will feed into the existing public participation engagements of the DWS in the study area that are currently being, or will soon be undertaken.

5.11.1 Database of Interested and Affected Parties

The stakeholder list for previous studies undertaken by the DWS in the study area (e.g. the SSC for the *First Phase Water Requirements and Availability Reconciliation Strategy Study for the Mbombela Municipal Area Study*) has been obtained from the DWS and will be updated. The following sectors of society will be identified and/or updated so as to afford them the opportunity to comment (the Stakeholder Database will be categorised accordingly) and participate in this study:

- National Government Departments, e.g. DWS (including IUCMA), Department of Mineral Resources (DMR), Department of Agriculture, forestry and Fisheries (DAFF), Department of Environmental Affairs (DEA) and Department of Cooperative Government and Traditional Affairs (CoGTA)).
- Provincial Government, e.g. Mpumalanga Premier's Office,
- Local Government, viz the Ehlanzeni District Municipality (DM) and Mbombela LM.
- Reference groups, e.g. Water User Associations (WUAs), Irrigation Boards, Forestry SA, SANParks and other existing forums.
- Agriculture and farmers' organisations, e.g. Agri-SA and operatives.
- Regional and Local Media (Lowvelder, Nelspruit Post, Mpumalanga News).
- Business and Commerce, e.g. Sappi, York Timbers, Komatiland, TSB Sugar etc.
- Environmental Authorities and Non-Governmental Organisations (NGOs).
- Community representatives, Community Based Organisations (CBOs), development organisations and/or authorities.

Relevant stakeholders from previous and existing studies will be included in the Stakeholder Database. It is assumed that this information will be made available by the DWS.

5.11.2 Announce the Study

The Study will be widely announced and a Background Information Document (BID) will be prepared as a basis for discussion with stakeholders about the Study. The BID will communicate information about the:

- Background to the Study (who, why, where) and motivation for the continuation and maintenance of the Reconciliation Strategy;
- Description of the Study Process that will be followed (who can participate in the process, how and when).

The BID will be accompanied by a comment sheet, inviting stakeholders to provide their comments upfront and also to name additional stakeholders who should participate in the Study.

5.11.3 Strategy Steering Committee

SSC will be established to guide the continuation and implementation of the Reconciliation Strategy. The membership of the previously formed SSC will form the basis to ensure a representative SSC consisting of various sectors in the study area. The purpose of the SSC would be to provide guidance in the progressive maintenance and implementation of the Reconciliation Strategy. With the announcement of the study, stakeholders will be requested to nominate members for the SSC. A Draft ToR for the SSC has been compiled (**Appendix C**) and will be distributed to all prospective members. The Draft ToR for the SSC will be discussed and agreed to at the first meeting of the SSC for members to understand their roles and responsibilities.

Six (6) SSC meetings (a meeting every six months during the 36-month contract period) have been scheduled for the Study.

5.11.4 Media Releases and Newsletters

Apart from the verbal dissemination of information during meetings, information about the Study will be presented in other formats such as media releases. Media releases will be

compiled to report via the media to the broader stakeholder base and will coincide, where possible, with each SSC meeting.

Newsletters will be compiled and distributed to the SSC at key milestones achieved between the two SSC meetings scheduled each year i.e. one (1) newsletter per annum. The purpose of the newsletters will be to report on progress and to keep the broader base of stakeholders informed about the Study, and also to give them an opportunity to comment on the milestones and findings.

5.11.5 Web Access

All public information (minutes of the SSC meetings, presentations, news releases, newsletters, etc.) will be made available to the DWS in electronic format to be uploaded on the DWS Website. The link where the information can be accessed will be disseminated to all the stakeholders.

Task 11 deliverables:

- *The BID*
- *Stakeholder Database*
- *Media Releases*
- *Three (3) Newsletters*
- *Web Access Arrangements.*
- *Six (6) SSC Meetings*

5.12 Task 12: Study Reports

The following Study Reports will be submitted:

- Report 1: Inception Report
- Report 2: Demographics Report
- Report 3: Water Requirements and Return Flow Report
- Report 4: Updated WC/WDM Plan
- Report 5: Water Resource Analysis Report
- Report 6: Infrastructure and Cost Assessment
- Report 7a Interim Reconciliation Strategy Status Update
- Report 7: Updated Reconciliation Strategy Report

5.13 Task 13: Study Management

The success of the study of this nature, involving a multi-disciplinary team of professionals preparing specialist reports for the client as well as stakeholders who become part owners of the Strategy to be developed requires good communication skills and acknowledged champions with a strategic vision and sound technical understanding of the issues at hand.

5.13.1 Client Liaison Meetings

Liaison with the DWS Study Manager will include the following activities:

- Two (2) SMC Meetings in Pretoria.
- Twelve (12) TSG Meetings (x6 meetings to be held in the study area and x6 meetings in Pretoria). The TSG Meetings will be facilitated by DWS Directorate: NWRP (with support from the PSP) and will involve relevant DWS Directorates, Municipalities and other stakeholders. The purpose of the TSG is to provide technical, scientific and administrative support to the SSC. A Draft ToR for the TSG is presented in **Appendix C**.
- Six (6) SSC Meeting, at a stakeholder venue to further encourage stakeholder engagement. A Draft ToR for the TSG is presented in **Appendix C**.
- Interim communication (between meetings) to advise the DWS Study Manager of, inter alia, important events or problem situations, possible changes to the scope of work, appointment of sub-consultants, etc.
- Compile and update the Record of Decisions (RoD) and ensure that all recorded actions are attended to within the specified budget and time limits.
- Motivate the appointment of proposed new members of the consultant team to the DWS Study Manager as and when required.
- Implement the appointment of the sub-consultants and/or co-consultants as well as specialists after approval by the DWS.

5.13.2 Coordination of the Study Team

The designated study management functions will be undertaken as follows:

- The Study Leader and Deputy Study Leader will be responsible to provide direction to the Study Team in the execution of the various tasks and interaction with the DWS as well as all the other stakeholders.
- The Deputy Study Leader will be responsible for the day-to-day coordination of the Study Team and activities will include:
 - Serving as link between the DWS Study Manager and Study Team on administrative matters.
 - Ensuring that the sub-consultants and/or co-consultants as well as specialists are properly briefed by the various Task Leaders prior to commencing with their work.
 - Convene regular meetings with the Task Leaders as dictated by the Study Programme and progress.
 - Rendering guidance and assistance to the Task Leaders.
 - Monitoring and control of performance, programming and cost of the Study, including revision of the Study Plan if and when necessary.

5.13.3 Financial Control

A Budget Monitoring System comprising basically an interactive Microsoft Excel Spreadsheet Model will be used to monitor and control the costs. Budgets have been assigned to each of the deliverables (refer to **Table 8.1** below). Actual costs incurred will be correlated with completion targets to ensure compliance with progress.

Should deviations from the allocated costs for the key deliverables become evident, the Study Leader shall assess the reason/s and impact/s thereof and institute corrective action as required.

Where additional work may be required, the Study Leader shall obtain a detailed motivation and budget (both time and costs) from the relevant Task Leader for such additional activities for assessment and submission to the DWS Study Manager for consideration and approval. It is understood that no additional expenses outside the approved budget will be allowed without the prior written approval from the DWS.

5.13.4 Study Administration

Study administration duties to be performed will include the following:

- Compiling, certifying and submitting invoices to the DWS from inputs received from the various Task Leaders. The PSP will submit only one (1) invoice per month to the DWS. The Study Leader will arrange payment to the Study Team members after receiving payment from the DWS.
- Keeping minutes of meetings with the DWS and other stakeholders, as well as the distribution thereof to the interested parties.
- Ensuring that all Study files are kept up to date and to be readily accessible to the DWS if and when required.
- Coordinating the close-out procedures for the Study that will, inter alia, include compilation and submission of Study data for record purposes as required by the DWS.

Task 13 Deliverables:

- *Study Management Committee Meetings (2 meetings)*
- *Technical Support Group Meetings (12 meetings (6 meetings in Pretoria and 6 meetings in Study Area))*
- *Strategy Steering Committee Meetings (6 meetings)*
- *Periodic progress and financial reports will be submitted to the Study Manager throughout the duration of the study.*
- *Minutes of meetings as well as lists of administrative and study decisions will be maintained throughout the duration of the Study.*

6 STUDY PROGRAMME

The Study Programme of the tasks is provided in **Appendix A** on **Figure A-2**.

7 STUDY TEAM

The names and rates of the Study Team members and further details of the key personnel are presented in **Table 7.1** below. The proposed organogram for the Study is presented in **Annexure A** on **Figure A-3**.

Table 7.1: Study Team.

RESOURCE		RATE (R/h)	COMPANY	PROJECT DESIGNATION	HDI	HDI
NAME	ID				STATUS	CATEGORY
Wegelin, W	WW	1 250	WRP	Key Support	N	WM
Talanda, C	CT	1 300	WRP	Study Leader	N	WM
Zondo, N	NZ	750	WRP	Task Leader: Task 4	Y	BM
Barnard, S	SB	750	WRP	Task Leader: Task 3	Y	WF
Cele, S	CS1	400	WRP	Support	Y	BM
Seago, C	CS2	1 200	WRP	Task Leader: Task 6	Y	WF
Serfontein, E	ES	1 300	BJ/iX	Task Leader: Task 9	N	WM
Louw, L	LL	1 300	BJ/iX	Task Leader: Task 7	Y	WF
Mandaza, R	RM	780	BJ/iX	Key Support	N	BF*
Mkhize, I	IM	510	BJ/iX	Support	Y	BM
Dhlangezwe, I	ID	500	BJ/iX	Deputy Study Leader	Y	BF
van Schoor, B	BvS	215	BJ/iX	Support	N	WM
Ramashapa, L	LR	560	BJ/iX	Support	Y	BF
Maponya, K	KM	465	BJ/iX	Support	Y	BF
Aird, R	RA	1 050	Kayamandi	Key Support	N	WM
Churr, N	NC	550	Kayamandi	Task Leader: Task 2	Y	WF
Koen, C	CK	850	Kayamandi	Key Support	Y	WF
Tsotetsi, M	MT	450	Kayamandi	Support	Y	BF
Lotter, A	AL	900	Specialist: Stakeholder Facilitation	Task Leader: Task 11	Y	WF
Louw, D	DL	1 000	Specialist: EWR	Key Support	Y	WF
Anderson, H	HA	1 200	Specialist: Dam Engineer	Key Support	Y	WF
van Rooyen, P	PvR	1 400	WRP	Study Director	N	WM

8 STUDY BUDGET

The costs presented in this document (**Appendix B**) are based on the scope of work and the Study Programme originally included in the proposal. The Study has been programmed for thirty six (36) months and commenced in October 2017.

9 REFERENCES

- DWAF, 2010 **Comprehensive** Reserve Determination Study for Selected Water Resources (Rivers, Groundwater and Wetlands) in the Inkomati Water Management Area, Mpumalanga. Sabie and Crocodile Systems: Main Report: Report no. 26/8/3/10/12/015. Prepared by Water for Africa on behalf of the Department of Water Affairs and Forestry Chief Directorate: Resource Directed Measures. March 2010
- DWA, 2014 **Water Requirements and Availability Reconciliation Strategy for the Mbombela Municipal Area. P WMA 05/X22/00/2012/6.** Prepared by mw Water Resources in association with Aurecon, SRK, Kayamandi and WRP on behalf of the Department of Water Affairs, Directorate: National Water Resources Planning. February 2014.
- DWS, 2015 **The Determination of Water Resource Classes and Associated Resource Quality Objectives in the Inkomati Water Management Area (2013). Main Report. Report Number: RDM/WMA05/00/CON/CLA/0215.** Prepared by Water for Africa on behalf of the Department of Water and Sanitation Chief Directorate: Water Ecosystem. April 2015.

APPENDIX A: Logical Flow Diagram, Programme and Organogram

Figure A-1: Logical Flow diagram

Figure A-2: Study Programme

Figure A-3: Organogram

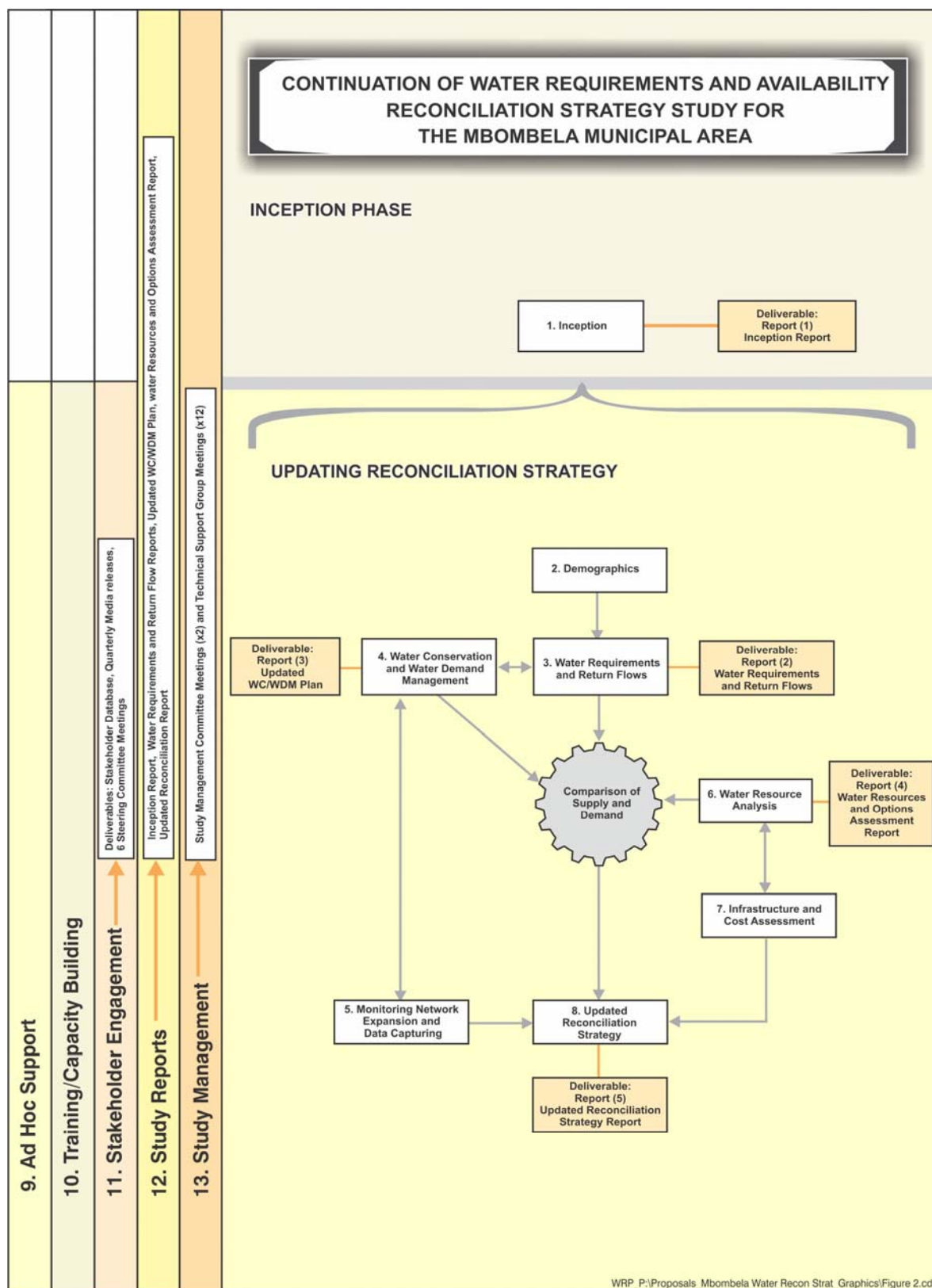


Figure A-1: Logical Flow Diagram

TASKS		YEAR 1 (2017/2018)												YEAR 2 (2018/2019)												YEAR 3 (2019/2020)											
NO.	DESCRIPTION	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Inception																																				
2	Demographics																																				
3	Water Requirements and Return Flows																																				
4	Water Conservation and Water Demand Management																																				
5	Monitoring Network Expansion and Data Capturing																																				
6	Water Resource Analysis																																				
7	Infrastructure and Cost Assessment																																				
8	Updated Reconciliation Strategy																																				
9	Ad Hoc Support																																				
10	Training/Capacity Building																																				
11	Stakeholder Engagement																																				
	Strategy Steering Committee (SSC) Meetings																																				
12	Reports																																				
	Report (1) Inception Report																																				
	Report (2): Demographics																																				
	Report (3): Water Requirements and Return Flows																																				
	Report (4): Updated WC/WDM Plan																																				
	Report (5): Water Resource Analysis Report																																				
	Report (6): Infrastructure and Cost Assessment																																				
	Report (7a): Interim Reconciliation Strategy Status Update																																				
	Report (7): Updated Reconciliation Strategy Report																																				
13	Study Management																																				
	Study Management (SM)																																				
	Technical Support Groupt (TSG) meetings																																				

Figure A-2: Study Programme

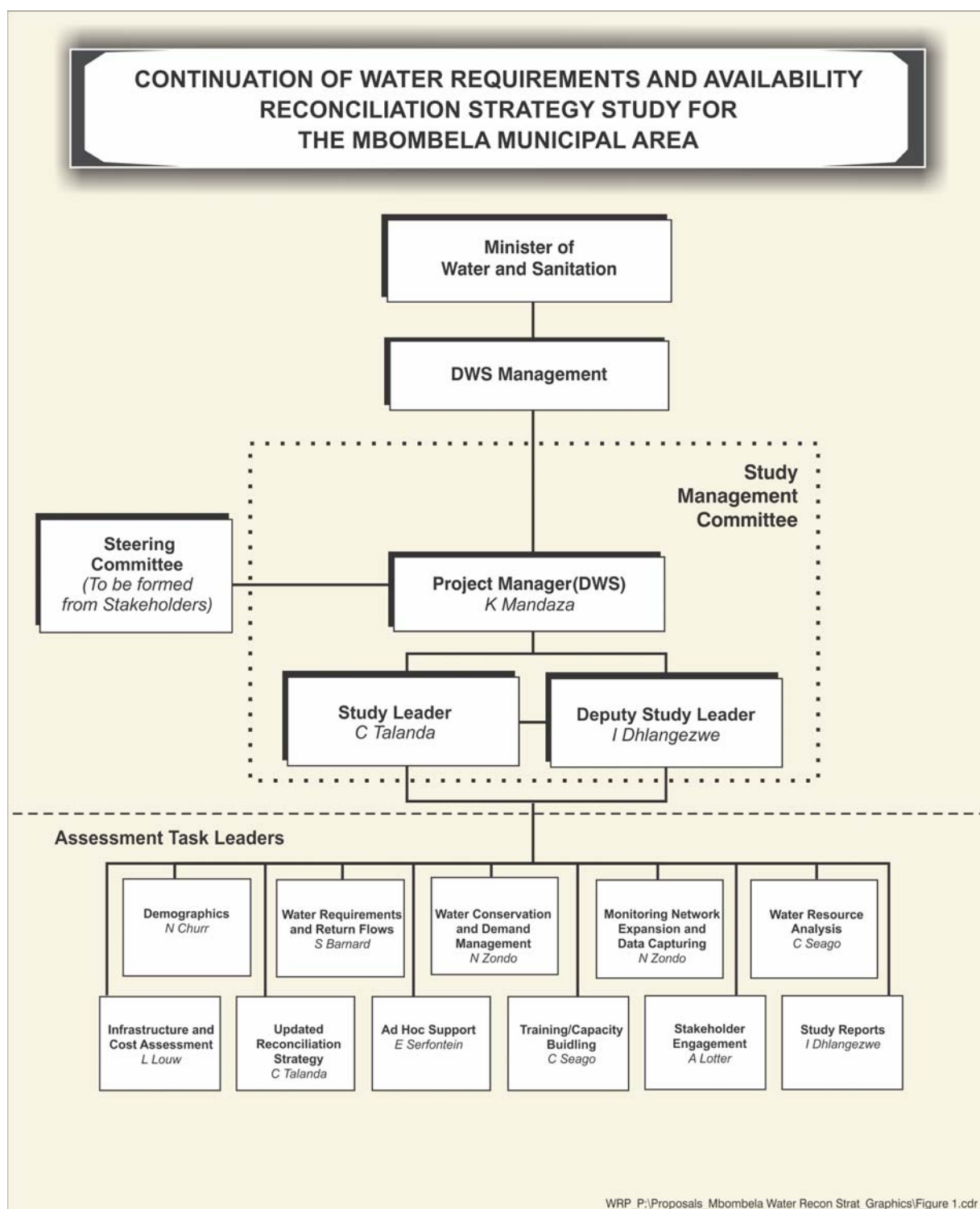


Figure A-3: Organogram

APPENDIX C:

Terms of Reference: Strategy Steering Committee

Terms of Reference: Technical Support Group

Continuation of Water Requirements and Availability Reconciliation Strategy for the Mbombela Municipal Area

Terms of Reference: Strategy Steering Committee

Introduction/Preamble

In 2014 the Department of Water Affairs and Sanitation (DWS) and relevant Stakeholders, developed a Strategy to ensure the ongoing reconciliation of supply and requirement for the Mbombela Municipal area. One of the recommendations which came out of the Strategy Study was that a Strategy Steering Committee be formed with a clearly defined mandate and scope of work. The primary function of the Strategy Steering Committee will be to ensure the implementation of the strategy and to make recommendations, on an annual basis, on long-term planning activities required to ensure ongoing reconciliation of requirement and available supply in the Mbombela area.

A number of organisations currently own, operate and receive water from the system. The main role-players to date have been the DWS, various Water Service Providers including the Local Municipality and various Water User Associations and other users. Although these organisations will continue to play a significant role in future decisions, other organisations need a forum to ensure that their requirements can be clearly conveyed, that they can make contributions when needed, and that they are continuously informed about the development and decisions regarding the water supply system. Organisations represented on the Steering Committee must ensure that recommendations made in the Strategy document are implemented and assume a collective responsibility for ensuring the ongoing reconciliation of supply and requirement.

1. Objectives

The objectives of the Strategy Steering Committee are:

- To ensure implementation of the recommendations of the Mbombela Reconciliation Strategy.
- To update the Strategy to ensure that it is relevant.
- To ensure that the Strategy and its recommendations are appropriately communicated.

2. Implementation of Strategy Recommendations

- Monitor the implementation of the recommendations contained in the first Reconciliation Strategy Study.
- Monitor the progress and compliance with set targets and objectives, e.g.
 - Target dates for initiating and completing studies

- Water Conservation and Demand Management
 - Implementation of other interventions
- Assess the implications of deviations.
- Make recommendations on mitigation measures and adjustments to ensure the ongoing reconciliation of supply and requirements.

3. Updating of the Strategy

- Review / update and revise the Reconciliation Strategy.
- Monitor and update water requirements on an annual basis.
- Reassess the available resources and the existing system yield.
- Make recommendations to DWS on additional studies required to update the water requirement and system yield.
- Undertake an annual reconciliation of supply and requirements.
- Update the Scenario Planning Process to cater for changes in water requirements, yield and potential delays in the implementation of selected interventions.
- Finalise the process for the Selection of Interventions for implementation
- Make recommendations to DWS, other WSAs and Water User Associations on the need for further studies and on the need to implement interventions

4. Communication

- Communicate annually and as and when required, progress on the implementation of the recommendations of the Reconciliation Strategy Study to the following Authorities:
 - DWS,
 - City of Mbombela Local Municipality,
 - Bushbuck Ridge Local Municipality,
 - Sembcorp Silulumanzi
 - Inkomati Usuthu Catchment Management Agency
- Communicate annually and as and when required, progress on the implementation of the recommendations of the Reconciliation Strategy Study to other Stakeholders, e.g.
 - Organised Agriculture
 - Environmental NGOs
 - Bulk Industrial and mining users
- Communicate progress on the implementation of the recommendations of the Reconciliation Strategy Study to the general public.
- Liaise with Departments involved in producing Provincial Strategies and provide input into Provincial Strategies.
- Brief relevant municipalities on imminent decisions
- Inform politicians of press releases relating to the reconciliation of supply and requirement
- Liaise with the Operation Committee as required.
- Provide information for the DWS websites.

Reporting

The Reconciliation Strategy Steering Committee is a steering committee formed to ensure the ongoing reconciliation of water supply and requirement. Whilst the committee comprises of representatives from national government, provincial government, local government and agriculture, the meetings shall be facilitated and chaired by DWS: Intergrated Water Resource Planning. As a Steering Committee, the primary function of the meetings will be to give guidance to DWS: National Water Resource Planning.

Administrative and Technical Support Group

An Administrative and Technical Support Group will be appointed to support the Strategy Steering Committee. The Support Group will provide administrative, scientific and technical support. This support will be facilitated through DWS: National Water Resource Planning.

Representation

The institutions/agencies to be represented on the Strategy Committee are listed as follows:

- National, provincial and local government;
 - DWS (including the IUCMA)
 - Department of Mineral Resources (DMR)
 - COGTA
 - Mpumalanga Department of Agriculture and Rural Development, Environment and Land Administration (MDARDLEA)
 - Mpumalanga Tourism and Parks Association (MPTA)
 - Office of the Premier
 - Municipalities (local and district) in the study area
 - SALGA
- Relevant residents' associations, rates payers organisations, community based organisations, agricultural organisations and Non-government organisations (NGOs);
 - Mpumalanga Agri (Agri SA)
 - Farmers' Associations
 - Komatiland Forests
- Environmental and water bodies, forums, groups and associations;
 - Mpumalanga Wetlands Forum
 - Federation for Sustainable Environment (FSE)
 - Birdlife Africa
 - Working for Water
 - Sub Catchment Forums

- Water User Associations
- WESSA
- AWARD
- Rand Water
- Private sector (mining, business, industries) in the vicinity;
 - Semcorp Silulumanzi
 - Sappi
 - PG Bison
 - TSB Sugar
- Parastatals
 - SANParks

Meetings

It is envisaged that 2 meetings will be held each year

- Meeting 1:
 - To consider / review progress with implementation
 - To deal with communications
- Meeting 2:
 - To consider / review progress with implementation
 - To update the Reconciliation Strategy Study
 - To deal with communications

Continuation of Water Requirements and Availability Reconciliation Strategy for the Mbombela Municipal Area

Terms of Reference: Technical Support Group

Introduction/Preamble

In 2014 the Department of Water Affairs and Sanitation (DWS) and relevant Stakeholders, developed a Strategy to ensure the ongoing reconciliation of supply and requirement for the Mbombela Municipal Area. One of the recommendations that came out of the Strategy Study was that a Strategy Steering Committee be formed with a clearly defined mandate and scope of work. The primary function of the Strategy Steering Committee will be to ensure the implementation of the strategy and to make recommendations, on an annual basis, on long-term planning activities required to ensure ongoing reconciliation of requirement and available supply in the Mbombela area.

For the Strategy Steering Committee to achieve its mandate, technical, scientific and administrative support is required. This support will be facilitated by the DWS Directorate: National Water Resource Planning through a Technical Support Group. The Technical Support Group will consist of stakeholders knowledgeable of the particular technical aspects relevant to the project and will include the relevant DWS directorates (National and Regional Office), Municipalities and other major stakeholders.

Objectives

The objectives of the Technical Support Group are:

- Provide technical inputs to the study tasks from a local and regional perspective
- Provide administrative, technical and scientific support to the Strategy Steering Committee
- Assist with the implementation of the reconciliation strategy

Functions of the Technical Support Group

The functions of the Technical Support Group are:

- Give technical support to the Project Manager
- Assistance with the implementation of the current Reconciliation Strategy;
- Implementation of revised plans of action, including the models set-up in the Water Availability Assessment Study;

- Periodic review and updating of requirement scenarios based on the latest information from all users;
- Monitoring the effectiveness of the Strategy through the regular comparison of water requirements and water availability and making recommendations to the Strategy Steering Committee regarding maintenance of the Strategy and the way forward;
- Participating in water resource management as it relates to the Strategy, e.g. through support in the further development of the Catchment Management Strategy and the phasing in of the ecological Reserve for existing infrastructure;
- Supporting the Strategy Steering Committee in establishing and maintaining appropriate stakeholder engagement, e.g. keeping the public informed through press releases and public information meetings, regularly providing the latest information on strategy issues and decisions to all local authorities and obtaining stakeholder inputs to those decisions; and
- Assisting the Strategy Steering Committee in all activities that may arise from the execution of its responsibilities, where such activities may require the backing of the Support Group.

Reporting & Meetings

A Technical Support Group will be appointed to support the Strategy Steering Committee. Technical Support Group meetings will be arranged and will be facilitated and chaired by DWS: National Water Resource Planning. It is envisaged that 4 meetings will be held each year. Two of the four meetings will take place prior to the two Strategy Steering Committee meetings each year and act as a dry-run meetings for the SSC Meeting.

Representation

The institutions/agencies to be represented on the Strategy Committee are listed as follows:

- DWS National and Provincial
- City of Mbombela Local Municipality,
- Bushbuck Ridge Local Municipality,
- Sembcorp Silulumanzi
- Inkomati Usuthu Catchment Management Agency
- Department of Agriculture, Forestry and Fisheries