



**DEPARTMENT OF WATER AND SANITATION
REPUBLIC OF SOUTH AFRICA**

REQUEST FOR BID

**REQUEST FOR BID NUMBER: WP11522
DESCRIPTION**

APPOINTMENT OF A PROFESSIONAL SERVICE PROVIDER (PSP) FOR PROVISION OF GENERAL MODELLING AND WATER RESOURCE EVALUATION SERVICES TO SUPPORT INTEGRATED WATER RESOURCE PLANNING AND QUALIFICATION OF ALLOCABLE WATER RELATED TO THE WESTERN CAPE WATER SUPPLY SYSTEM (WCWSS) FROM THE BREEDERIVER CATCHMENT FOR A PERIOD OF 36 MONTHS

ISSUE DATE:

24 JUNE 2025

CLOSING DATE:

**24 JULY 2025
TIME: 11:00**

Briefing Session not Compulsory

Date: 9 July 2025

Time: 10:00

Teams: [Join the meeting now](#)

Meeting ID: 325 047 632 236 0

Passcode: gH9hG9Ck

**SUBMIT TENDER DOCUMENT
TO**

**ALL BID RESPONSES MUST BE SUBMITTED ONLINE THROUGH E-TENDER'S
E-SUBMISSION PORTAL**

**PLEASE NOTE THAT NO BID DOCUMENTS WILL BE ACCEPTED VIA EMAIL OR
DEPARTMENTAL TENDER BOX.**

TENDERER: (Company address and stamp)

SCAM ALERT: BIDDERS ARE ALERTED TO SCAM SYNDICATES OPERATING AS DEPARTMENT OFFICIALS. BIDDERS ARE THEREFORE ADVISED TO REPORT ANY SUSPICIOUS INFORMATION TO THE DEPARTMENT. DEPARTMENT OFFICIALS WILL NOT CONTACT BIDDERS FOR BRIBES IN EXCHANGE OF BID AWARDS



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

DIRECTIVE TO BIDDERS ON COMPLETION OF SBD FORMS AND PACKAGING OF BID PROPOSAL

The purpose of this document is to guide bidders on the completion of SBD forms and packaging of a Bid Proposals with each document being placed under the correct Annexure. The last column of the table below (this column must be ticked as an indication that each document and its requirements have been complied with by the bidder). The dates on this all-SBD forms must be a date which is within the bid advert period

TABLE OF CONTENTS FOR BID PROPOSALS

DOCUMENT	ANNEXURE	DIRECTIVE	COMPLIED/NOT COMPLIED
SBD 1	A	Bidders are required to complete this document in full and be signed off. The date on this form must be a date which is within the bid advert period	
SBD .3.3	B	Bidders are required to complete the applicable form in full and ensure that the amounts in the document are properly calculated. The total amount (inclusive of VAT) as reflected herein will be regarded as the Total Bid Price. Bidders who are not VAT Vendors are not allowed to charge VAT Bidders are required to constantly verify their TAX Status on CSD to ensure that their task matters are in order	
SBD 4	C	This document must be completed in full. Bidders' attention is drawn particularly to paragraph 2.3 which requires the bidder to disclose if the company or any of its directors have interest in other companies whether they have bid or not. Bidders are required to provide all information. Should a bidder have more companies to declare, such information can be provided on a separate sheet in the format prescribed in the form and be attached to the SBD 4. Information captured must be in line with what is captured in the CSD report	
SBD 6.1	D	This document must be completed in full. Bidders are advised to ensure that information captured in this this form is aligned to information contained in the CSD Reports.	
BBBEE Certificate/Sworn affidavit	E	Bidders are required to submit a valid BBBEE Certificate or sworn affidavit.	
CSD Report	F	Bidders are requested to provide copies of reg CSD Report.	
Certificate of authority for signatory	G	3 Different forms are attached. Bidders are required to only complete one form which is relevant to their situation	
Copy of an Identity document of the authorised individual	H	The ID copy to be attached should be that of a person authorised to represent the Service provider as per the completed certificate of authority for signatory form	
Copy of Company's CIPC Certificate	I	Bidders are required to attach copies of the CIPC Certificates	
Bid Proposal	J	A detailed bid proposal inline with the Specifications must be attached	

PART A INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF DEPARTMENT/ PUBLIC ENTITY)

BID NUMBER:	WP11522	CLOSING DATE:	24 JULY 2025	CLOSING TIME:	11H00
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DESCRIPTION	APPOINTMENT OF A PROFESSIONAL SERVICE PROVIDER (PSP) FOR PROVISION OF GENERAL MODELLING AND WATER RESOURCE EVALUATION SERVICES TO SUPPORT INTEGRATED WATER RESOURCE PLANNING AND QUALIFICATION OF ALLOCABLE WATER RELATED TO THE WESTERN CAPE WATER SUPPLY SYSTEM (WCWSS) FROM THE BREEDE RIVER CATCHMENT FOR A PERIOD OF 36 MONTHS
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BID RESPONSE TO

**ALL BID REPOSSES MUST BE SUBMITTED ONLINE THROUGH E-TENDER'S E-SUBMISSION PORTAL
PLEASE NOTE THAT NO BID DOCUMENTS WILL BE ACCEPTED VIA EMAIL OR DEPARTMENTAL TENDER BOX.**

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO

CONTACT PERSON	Mr JACOB MABUSELA
TELEPHONE NUMBER	012 336 7240
CELLPHONE	
E-MAIL ADDRESS	mabuselaj@dws.gov.za

TECHNICAL ENQUIRIES MAY BE DIRECTED TO:

CONTACT PERSON	Ms J Pashkin
TELEPHONE NUMBER	012 336 8695
CELLPHONE	pashkinj@dws.gov.za
E-MAIL ADDRESS	

SUPPLIER INFORMATION

NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT		TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER PART B:3]
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QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?

☐ YES ☐ NO

DOES THE ENTITY HAVE A BRANCH IN THE RSA?

☐ YES ☐

NO

DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?

☐ YES ☐ NO

DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?

☐ YES ☐

NO

IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?

☐ YES ☐

NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.

PART B
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

- 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- 1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED-(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.**
- 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
- 1.4. **THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).**

2. TAX COMPLIANCE REQUIREMENTS

- 2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
- 2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
- 2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
- 2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
- 2.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
- 2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF BIDDER:

.....

CAPACITY UNDER WHICH THIS BID IS SIGNED:

.....

(Proof of authority must be submitted e.g. company resolution)

DATE:

.....

PRICING SCHEDULE
(Professional Services)

NAME OF BIDDER: BID NO: **WP11522**

CLOSING TIME 11:00 CLOSING DATE: **24 JULY 2025**

OFFER TO BE VALID FOR 180 DAYS FROM THE CLOSING DATE OF BID.

ITEM NO	DESCRIPTION	BID PRICE IN RSA CURRENCY ** (ALL APPLICABLE TAXES INCLUDED)	
1.	The accompanying information must be used for the formulation of proposals.		
2.	Bidders are required to indicate a ceiling price based on the total estimated time for completion of all phases and including all expenses inclusive of all applicable taxes for the project.	R.....	
3.	PERSONS WHO WILL BE INVOLVED IN THE PROJECT AND RATES APPLICABLE (CERTIFIED INVOICES MUST BE RENDERED IN TERMS HEREOF)		
4.	PERSON AND POSITION	HOURLY RATE	DAILY RATE
	.....	R.....	.....
	.....	R.....	.....
	.....	R.....	.....
	.....	R.....	.....
	.....	R.....	.....
5.	PHASES ACCORDING TO WHICH THE PROJECT WILL BE COMPLETED, COST PER PHASE AND MAN-DAYS TO BE SPENT		
	.....	R.....	..... days
	.....	R.....	..... days
	.....	R.....	..... days
	.....	R.....	..... days
5.1	Travel expenses (specify, for example rate/km and total km, class of airtravel, etc). Only actual costs are recoverable. Proof of the expenses incurred must accompany certified invoices.		
	DESCRIPTION OF EXPENSE TO BE INCURRED	RATE	QUANTITY AMOUNT
	.....	.....	R.....
	.....	.....	R.....
	.....	.....	R.....
	.....	.....	R.....
		TOTAL: R.....	

*** all applicable taxes" includes value- added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.

Bid No.:

Name of Bidder:

- 5.2 Other expenses, for example accommodation (specify, e.g. Three star hotel, bed and breakfast, telephone cost, reproduction cost, etc.). On basis of these particulars, certified invoices will be checked for correctness. Proof of the expenses must accompany invoices.

DESCRIPTION OF EXPENSE TO BE INCURRED	RATE	QUANTITY	AMOUNT
.....	R.....
.....	R.....
.....	R.....
.....	R.....

TOTAL: R.....

6. Period required for commencement with project after acceptance of bid
7. Estimated man-days for completion of project
8. Are the rates quoted firm for the full period of contract? *YES/NO
9. If not firm for the full period, provide details of the basis on which adjustments will be applied for, for example consumer price index.
-
-
-

*[DELETE IF NOT APPLICABLE]

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of his invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest¹ in the enterprise, employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

.....

¹ the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

- 2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:

Name of company related to	CSD Registration number of the company related to

3 DECLARATION

I, the undersigned, (name)..... in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of

² Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

the awarding of the contract.

3.5 There have been no consultations, communications, agreements, or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of bidder

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and

1.2 To be completed by the organ of state

a) The applicable preference point system for this tender is the 80/20 preference point system.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals.

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

80/20	or	90/10	
$P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right) \text{ or } P_s = 90 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$			

Where

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{min} = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

$$Ps = 80 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right) \text{ or } Ps = 90 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system: or
- (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Women	5	
People with disability	5	
Youth (35 and below)	5	
Location of enterprise (Province)	2	
B-BBEE status level contributors from level 1 to 2 which are QSE or EME	3	
Total points for SPECIFIC GOALS	20	

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm.....

4.4. Company registration number:

4.5. TYPE OF COMPANY/ FIRM

Partnership/Joint Venture / Consortium

One-person business/sole propriety

Close corporation

Public Company

Personal Liability Company

(Pty) Limited

Non-Profit Company

State Owned Company

[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the

company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
 - (a) disqualify the person from the tendering process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation.
 - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution, if deemed necessary.

.....
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME:
DATE:
ADDRESS:
.....
.....
.....
.....

STANDARD EVALUATION CRITERIA IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

THE 80/20 POINTS AWARDED FOR PRICE AND SPECIFIC GOALS

The 80/20 Preferential Procurement System will be used in evaluating these bids:

Evaluation element	Weighting (Points)
SPECIFIC GOALS	20
PRICE	80
Total	100

Price

A maximum of 80 points are allocated for price on the following basis:

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where:

P_s = Points scored for comparative price of bid under consideration

P_t = Comparative price of bid under consideration

P_{\min} = Comparative price of lowest acceptable bid

Preference point system

SPECIFIC GOALS	NUMBER OF POINTS TO BE ALLOCATED
Women	5
People with disability	5
Youth (35 and below)	5
Location of enterprise (Province)	2
B-BBEE status level contributors from level 1 to 2 which are QSE or EME	3
Total points for SPECIFIC GOALS	20

Documents Requirement for verification of Points allocation: -

Procurement Requirement

Women
Disability
Youth
Location
B-BBEE status level contributors from level 1 to 2 which are QSE or EME

Required Proof Documents

Full CSD Report
Full CSD Report
Full CSD Report
Full CSD Report
Valid BBBEE certificate/sworn affidavit
Consolidated BEE certificate in cases of Joint Venture
Full CSD Report

The definition and measurement of the goals above is as follows:

Women, disability, and youth:

This will be measured by calculating the pro-rata percentage of ownership of the bidding company which meets this criterion. E.g., Company A has five shareholders each of whom own 20% of the company. Three of the five shareholders meet the criterion, i.e. they are women/disability/youth. Therefore, this bidder will obtain 60% of the points allowable for this goal.

Location of enterprise

Local equals province. Where a project cuts across more than one province, the bidder may be located in any of the relevant provinces to obtain the points.

B-BBEE status level contributors from level 1 to 2 which are QSE or EME

Measured in terms of normal BBBEE requirements.

Note: Formula for calculating points for specific goals

Preference points for entities are calculated on their percentage shareholding in a business, provided that they are actively involved in and exercise control over the enterprise. The following formula is prescribed:

$$PC = Mpa \times \frac{P\text{-own}}{100}$$

Where

PC= Points awarded for specific goal

Mpa= The maximum number of points awarded for ownership in that specific category

P-own = The percentage of equity ownership by the enterprise or business

RESOLUTION OF BOARD OF DIRECTORS FOR COMPANY /CLOSE CORPORATION/ PARTNERSHIP

RESOLUTION of a meeting of the Board of *Directors / Members / Partners of:

(legally correct full name and registration number, if applicable, of the Enterprise)

Held at _____ (place)

on _____ (date)

RESOLVED that:

- The Enterprise submits a Bid / Tender to the Department of Water and Sanitation in respect of the following project:

(project description as per Bid / Tender Document)

Bid / Tender Number: _____ (Bid / Tender Number as per Bid / Tender Document)

- *Mr/Mrs/Ms: _____

in *his/her Capacity as: _____ (Position in the Enterprise)

and who will sign as follows: _____

be, and is hereby, authorized to sign the Bid / Tender, and any and all other documents and/or correspondence in connection with and relating to the Bid / Tender, as well as to sign any Contract, and any and all documentation, resulting from the award of the Bid / Tender to the Enterprise mentioned above.

	Name	Capacity	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			



Resolution of Board of Directors

14			
15			
16			
17			
18			
19			
20			

The bidding enterprise hereby absolves the Department of Water and Sanitation from any liability whatsoever that may arise as a result of this document being signed.

Note:

1. * Delete which is not applicable.
2. **NB:** This resolution must, where possible, be signed by all the Directors / Members / Partners of the Bidding Enterprise.
3. In the event that paragraph 2 cannot be complied with, the resolution must be signed by Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (attach proof of shareholding / ownership hereto).
4. Directors / Members / Partners of the Bidding Enterprise may alternatively delegate a person to sign this document on behalf of the Bidding Enterprise, which person must be so authorized by way of a duly completed Delegation of Authority letter, signed by the Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (proof of shareholding / ownership and Delegation of Authority letter are to be attached hereto).
5. Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

ENTERPRISE STAMP



RESOLUTION OF BOARD OF DIRECTORS TO ENTER INTO CONSORTIA OR JOINT VENTURES

RESOLUTION of a meeting of the Board of *Directors / Members / Partners of:

(Legally correct full name and registration number, if applicable, of the Enterprise)

Held at _____ *(place)*

on _____ *(date)*

RESOLVED that:

1. The Enterprise submits a Bid /Tender, in consortium/Joint Venture with the following Enterprises:

(List all the legally correct full names and registration numbers, if applicable, of the Enterprises forming the Consortium/Joint Venture)

to the Department of Water and Sanitation in respect of the following project:

(Project description as per Bid /Tender Document)

Bid / Tender Number: _____ *(Bid / Tender Number as per Bid / Tender Document)*

2. *Mr/Mrs/Ms: _____

in *his/her Capacity as: _____ *(Position in the Enterprise)*

and who will sign as follows: _____

be, and is hereby, authorised to sign a consortium/joint venture agreement with the parties listed under item 1 above, and any and all other documents and/or correspondence in connection with and relating to the consortium/joint venture, in respect of the project described under item 1 above.

3. The Enterprise accepts joint and several liability with the parties listed under item 1 above for the due fulfilment of the obligations of the joint venture deriving from, and in any way connected with, the Contract to be entered into with the Department in respect of the project described under item 1 above.
4. The Enterprise chooses as its *domicilium citandi et executandi* for all purposes arising from this joint venture agreement and the Contract with the Department in respect of the project under item 1 above:

Physical address: _____

_____ *(code)*



Postal Address: _____

_____ (code)

Telephone number: _____

Fax number: _____

	Name	Capacity	Signature
1			
2			
3			
4			
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11			
12			
13			

The bidding enterprise hereby absolves the Department of Water and Sanitation from any liability whatsoever that may arise as a result of this document being signed

Note:

- * Delete which is not applicable.
- NB:** This resolution must, where possible, be signed by all the Directors / Members / Partners of the Bidding Enterprise.
- In the event that paragraph 2 cannot be complied with, the resolution must be signed by Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (attach proof of shareholding / ownership hereto).
- Directors / Members / Partners of the Bidding Enterprise may alternatively delegate a person to sign this document on behalf of the Bidding Enterprise, which person must be so authorized by way of a duly completed Delegation of Authority letter, signed by the Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (proof of shareholding / ownership and Delegation of Authority letter are to be attached hereto).
- Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

ENTERPRISE STAMP



SPECIAL RESOLUTION OF CONSORTIA OR JOINTVENTURES

RESOLUTION of a meeting of the duly authorized representatives of the following legal entities who have entered into a consortium/joint venture to jointly bid for the project mentioned below: *(legally correct full names and registration numbers, if applicable, of the Enterprises forming a Consortium/Joint Venture)*

1.

2.

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8.



Held at _____

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e)

RESOLVED that:

- A. The above-mentioned Enterprises submit a Bid in Consortium/Joint Venture to the Department of Water and Sanitation in respect of the following project:

(Project description as per Bid /Tender Document)

Bid / Tender Number: _____ (Bid / Tender Number as per Bid /Tender Document)

- B. *Mr/Mrs/Ms: _____ in _____ *his/her

Capacity as: _____ (Position in the

Enterprise)and who will sign as follows: _____

be, and is hereby, authorized to sign the Bid, and any and all other documents and/or correspondence in connection with and relating to the Bid, as well as to sign any Contract, and any and all documentation, resulting from the award of the Bid to the Enterprises in Consortium/Joint Venture mentioned above.

- C. The Enterprises constituting the Consortium/Joint Venture, notwithstanding its composition, shall conduct all business under the name and style of:

- D. The Enterprises to the Consortium/Joint Venture accept joint and several liability for the due fulfilment of the obligations of the Consortium/Joint Venture deriving from, and in any way connected with, the Contract entered into with the Department in respect of the project described under item A above.

- E. Any of the Enterprises to the Consortium/Joint Venture intending to terminate the consortium/joint venture agreement, for whatever reason, shall give the Department 30 days written notice of such intention. Notwithstanding such decision to terminate, the Enterprises shall remain jointly and severally liable to the Department for the due fulfilment of the obligations of the Consortium/Joint



Venture as mentioned under item D above.

- F. No Enterprise to the Consortium/Joint Venture shall, without the prior written consent of the other Enterprises to the Consortium/Joint Venture and of the Department, cede any of its rights or assign any of its obligations under the consortium/joint venture agreement in relation to the Contract with the Department referred to herein.
- G. The Enterprises choose as the *domicilium citandi et executandi* of the Consortium/Joint Venture for all purposes arising from the consortium/joint venture agreement and the Contract with the Department in respect of the project under item A above:

Physical address: _____

(code)Postal Address: _____

_____ (code)

Telephone number: _____

Fax number: _____

	Name	Capacity	Signature
1			
2			
3			
4			
5			



Resolution of Board of Directors to enter into Consortia or Joint Ventures

6			
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The bidding enterprise hereby absolves the Department of Water and Sanitation from any liability whatsoever that may arise as a result of this document being signed.

Note:

1. * Delete which is not applicable.
2. **NB:** This resolution must be signed by all the Duly Authorized Representatives of the Legal Entities to the consortium/joint venture submitting this tender, as named in item 2 of **RESOLUTION OF BOARD OF DIRECTORS TO ENTER INTO CONSORTIA OR JOINT VENTURES**
3. Should the number of the Duly Authorized Representatives of the Legal Entities joining forces in this tender exceed the space available above, additional names, capacity and signatures must be supplied on a separate page.
4. **RESOLUTION OF BOARD OF DIRECTORS TO ENTER INTO CONSORTIA OR JOINT VENTURES**, duly completed and signed, from the separate Enterprises who participate in this consortium/joint venture, must be attached to this **SPECIAL RESOLUTION OF CONSORTIA OR JOINT VENTURES**



Annexure A

GOVERNMENT PROCUREMENT GENERAL CONDITIONS OF CONTRACT July 2010

NOTES

The purpose of this document is to:

- (i) Draw special attention to certain general conditions applicable to government bids, contracts and orders; and
- (ii) To ensure that clients be familiar with regard to the rights and obligations of all parties involved in doing business with government.

In this document words in the singular also mean in the plural and vice versa and words in the masculine also mean in the feminine and neuter.

- The General Conditions of Contract will form part of all bid documents and may not be amended.
- Special Conditions of Contract (SCC) relevant to a specific bid, should be compiled separately for every bid (if applicable) and will supplement the General Conditions of Contract. Whenever there is a conflict, the provisions in the SCC shall prevail.

TABLE OF CLAUSES

1. Definitions
2. Application
3. General
4. Standards
5. Use of contract documents and information; inspection
6. Patent rights
7. Performance security
8. Inspections, tests and analysis
9. Packing
10. Delivery and documents
11. Insurance
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General Conditions of Contract

1. Definitions

1. The following terms shall be interpreted as indicated:
 - 1.1 “Closing time” means the date and hour specified in the bidding documents for the receipt of bids.
 - 1.2 “Contract” means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
 - 1.3 “Contract price” means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
 - 1.4 “Corrupt practice” means the offering, giving, receiving, or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution.
 - 1.5 "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
 - 1.6 “Country of origin” means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
 - 1.7 “Day” means calendar day.
 - 1.8 “Delivery” means delivery in compliance of the conditions of the contract or order.
 - 1.9 “Delivery ex stock” means immediate delivery directly from stock actually on hand.
 - 1.10 “Delivery into consignees store or to his site” means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
 - 1.11 "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.

- 1.12 "Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.13 "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.
- 1.14 "GCC" means the General Conditions of Contract.
- 1.15 "Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.16 "Imported content" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.
- 1.17 "Local content" means that portion of the bidding price which is not included in the imported content provided that local manufacture does take place.
- 1.18 "Manufacture" means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.
- 1.19 "Order" means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20 "Project site," where applicable, means the place indicated in bidding documents.
- 1.21 "Purchaser" means the organization purchasing the goods.
- 1.22 "Republic" means the Republic of South Africa.
- 1.23 "SCC" means the Special Conditions of Contract.
- 1.24 "Services" means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.

- 1.25 “Written” or “in writing” means handwritten in ink or any form of electronic or mechanical writing.
- 2. Application**
- 2.1 These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
- 2.2 Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.
- 2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.
- 3. General**
- 3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.
- 3.2 With certain exceptions, invitations to bid are only published in the Government Tender Bulletin. The Government Tender Bulletin may be obtained directly from the Government Printer, Private Bag X85, Pretoria 0001, or accessed electronically from www.treasury.gov.za
- 4. Standards**
- 4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.
- 5. Use of contract documents and information; inspection.**
- 5.1 The supplier shall not, without the purchaser’s prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 5.2 The supplier shall not, without the purchaser’s prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.
- 5.3 Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier’s performance under the contract if so required by the purchaser.
- 5.4 The supplier shall permit the purchaser to inspect the supplier’s records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.
- 6. Patent rights**
- 6.1 The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.
- 7. Performance**
- 7.1 Within thirty (30) days of receipt of the notification of contract award,

security

the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.

- 7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.
- 7.3 The performance security shall be denominated in the currency of the contract, or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:
 - (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
 - (b) a cashier's or certified cheque
- 7.4 The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.

8. Inspections, tests and analyses

- 8.1 All pre-bidding testing will be for the account of the bidder.
- 8.2 If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or an organization acting on behalf of the Department.
- 8.3 If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.
- 8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.
- 8.5 Where the supplies or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.
- 8.6 Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.
- 8.7 Any contract supplies may on or after delivery be inspected, tested or analyzed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the

cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies which do comply with the requirements of the contract. Failing such removal the rejected supplies shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute supplies forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the supplier.

- 8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 23 of GCC.

9. Packing

- 9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
- 9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the purchaser.

10. Delivery and documents

- 10.1 Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.
- 10.2 Documents to be submitted by the supplier are specified in SCC.

11. Insurance

- 11.1 The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the SCC.

12. Transportation

- 12.1 Should a price other than an all-inclusive delivered price be required, this shall be specified in the SCC.

13. Incidental services

- 13.1 The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:
- (a) performance or supervision of on-site assembly and/or commissioning of the supplied goods;
 - (b) furnishing of tools required for assembly and/or maintenance of the supplied goods;
 - (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
 - (d) performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties,

- provided that this service shall not relieve the supplier of any warranty obligations under this contract; and
- (e) training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.

13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

14. Spare parts

14.1 As specified in SCC, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:

- (a) such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and
- (b) in the event of termination of production of the spare parts:
 - (i) Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
 - (ii) following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.

15.2 This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.

15.3 The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.

15.4 Upon receipt of such notice, the supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.

15.5 If the supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser

may have against the supplier under the contract.

16. Payment

- 16.1 The method and conditions of payment to be made to the supplier under this contract shall be specified in SCC.
- 16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfillment of other obligations stipulated in the contract.
- 16.3 Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.
- 16.4 Payment will be made in Rand unless otherwise stipulated in SCC.

17. Prices

- 17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized in SCC or in the purchaser's request for bid validity extension, as the case may be.

18. Contract amendments

- 18.1 No variation in or modification of the terms of the contract shall be made except by written amendment signed by the parties concerned.

19. Assignment

- 19.1 The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

20. Subcontracts

- 20.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under this contracts if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

21. Delays in the supplier's performance

- 21.1 Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.
- 21.2 If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.
- 21.3 No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.
- 21.4 The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily

available.

21.5 Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 without the application of penalties.

21.6 Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without canceling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

22. Penalties

22.1 Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

23. Termination for default

23.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:

- (a) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;
- (b) if the Supplier fails to perform any other obligation(s) under the contract; or
- (c) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

23.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.

23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.

23.4 If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the

envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the intended penalty as not objected against and may impose it on the supplier.

23.5 Any restriction imposed on any person by the Accounting Officer / Authority will, at the discretion of the Accounting Officer / Authority, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the Accounting Officer / Authority actively associated.

23.6 If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:

- (i) the name and address of the supplier and / or person restricted by the purchaser;
- (ii) the date of commencement of the restriction
- (iii) the period of restriction; and
- (iv) the reasons for the restriction.

These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.

23.7 If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.

24. Anti-dumping and countervailing duties and rights

24.1 When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to the State or the State may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him

25. Force Majeure	<p>25.1 Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.</p> <p>25.2 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.</p>
26. Termination for insolvency	<p>26.1 The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.</p>
27. Settlement of Disputes	<p>27.1 If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.</p> <p>27.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.</p> <p>27.3 Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.</p> <p>27.4 Mediation proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.</p> <p>27.5 Notwithstanding any reference to mediation and/or court proceedings herein,</p> <p style="padding-left: 40px;">(a) the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and</p> <p style="padding-left: 40px;">(b) the purchaser shall pay the supplier any monies due the supplier.</p>
28. Limitation of liability	<p>28.1 Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6;</p> <p style="padding-left: 40px;">(a) the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and</p>

		(b) the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.
29. Governing language	29.1	The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.
30. Applicable law	30.1	The contract shall be interpreted in accordance with South African laws, unless otherwise specified in SCC.
31. Notices	31.1	Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice
	31.2	The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.
32. Taxes and duties	32.1	A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.
	32.2	A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.
	32.3	No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid the Department must be in possession of a tax clearance certificate, submitted by the bidder. This certificate must be an original issued by the South African Revenue Services.
33. National Industrial Participation Programme (NIP)	33.1	The NIP Programme administered by the Department of Trade and Industry shall be applicable to all contracts that are subject to the NIP obligation.
34. Prohibition of Restrictive practices	34.1	In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder (s) is / are or a contractor(s) was / were involved in collusive bidding (or bid rigging).
	34.2	If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act No. 89 of 1998.

- 34.3 If a bidder(s) or contractor(s), has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.

Js General Conditions of Contract (revised July 2010)



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

DIRECTORATE: STRATEGIC WATER RESOURCE PLANNING

**PROVISION OF GENERAL MODELLING AND WATER RESOURCE EVALUATION SERVICES TO
SUPPORT INTEGRATED WATER RESOURCE PLANNING AND QUANTIFICATION OF
ALLOCABLE WATER RELATED TO THE WESTERN CAPE WATER SUPPLY SYSTEM (WCWSS)
FROM THE BREEDE RIVER CATCHMENT FOR A PERIOD 36 MONTHS**

TERMS OF REFERENCE

MARCH 2025

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List of Abbreviations

CBRWUA	Central Breede River Water Users' Association
CMS	Catchment Management Strategy
DWA	Department of Water Affairs
DWS	Department of Water and Sanitation
HDE	Historically Disadvantaged Enterprise
HDI	Historically Disadvantaged Individual
IAPs	Invasive Alien Plants
IFR	In-stream Flow Requirements
EWR	Ecological Water Requirements
NWA	National Water Act
NWRS	National Water Resources Strategy
PSP	Professional Service Provider
SFR	Stream flow Reductions
SMC	Study Management Committee
SAM	Study Administration Management
ToR	Terms of Reference
WMA	Water Management Area
WRC	Water Research Commission
WRPM	Water Resource Planning Model
WRYM	Water Resource Yield Model

1. INTRODUCTION

The Department of Water and Sanitation (DWS) is calling for proposals from Professional Service Providers (PSPs) for the provision of water resource modelling and water resource evaluation services for allocable water quantification and to support related integrated water resources planning in the Breede River catchment related to the Western Cape Water Supply System (WCWSS) in the Western Cape Province. A description of the background to this Call for Proposals and the Terms of Reference (ToR) for the ensuing study follows.

1.1 Description of the study area, available data, previous studies and considerations related to water resource management

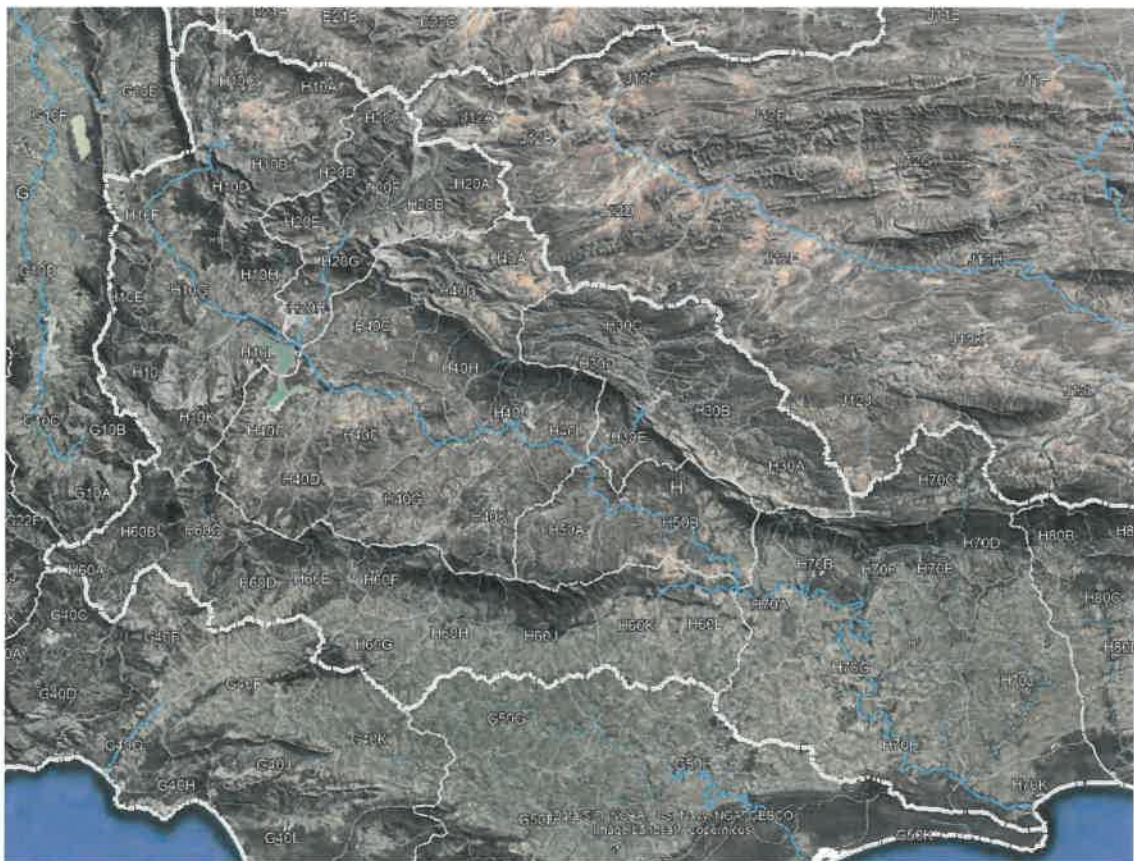


Figure 1: General location of Study Area.

A general location of the Study Area is shown in Figure1 above.

The Study Area encompasses the primary catchment H and covers the entire Breede River catchment. The Breede River originates in the Skurweberg Mountains near Ceres in the Western Cape and flows for about 320 km before exiting into the Indian Ocean. There are many tributaries that contribute significantly to the flow of the Breede River. These include the Hex River (which joins the Breede upstream of Worcester), the Riviersonderend River

(the biggest tributary, which joins the Breede upstream of Swellendam), and the Buffelsjags River (which joins the Breede just downstream of Swellendam).

The Breede River plays a significant role in driving the economy of the catchment, particularly the upper and middle areas of the Breede River, whose economy is driven by the agriculture sector.

The following considerations regarding the Study Area's water-related situation, must be taken into account, namely:

- The primary categories of water use in the catchment are as follow: irrigated agriculture, domestic and industrial, the ecological Reserve requirements and invasive alien plants (IAPs).
- Hydrology of the catchment area
- The Greater Brandvlei Dam (also known as the Brandvlei Dam and the Kwaggaskloof Dam), completed in 1936 and fully raised by 1987, provides water to various irrigation schemes throughout the agricultural sector of the region.
- There are number of dams in the catchment area:
 - Stettynskloof Dam on the Holsloot River, a tributary of the Breede River.
 - Zwiendelaars Dam
 - Theewaterskloof Dam on Sonderend River near Villiersdorp
 - Elandskloof Dam on the Elands River, a tributary of the Sonderend River
 - Moordkuil Dam on the Hooks River, a tributary of the Breede River.
 - Keerom Dam on the Nuy River, a tributary of the Breede River.
 - Klipberg Dam on the Konings River, itself a tributary of the Keisers River, which is a tributary of the Breede River.
 - Pietersfontein Dam on the Pietersfontein River, a tributary of the Kogmanskloof River, again a tributary of the Breede River.
 - Poortjieskloof Dam on the Groot River also flowing into the Kogmanskloof River
 - Buffeljags Dam on the Buffeljags River a tributary of the Breede River

The locations of dams in the catchment is shown in Figure 2 below.

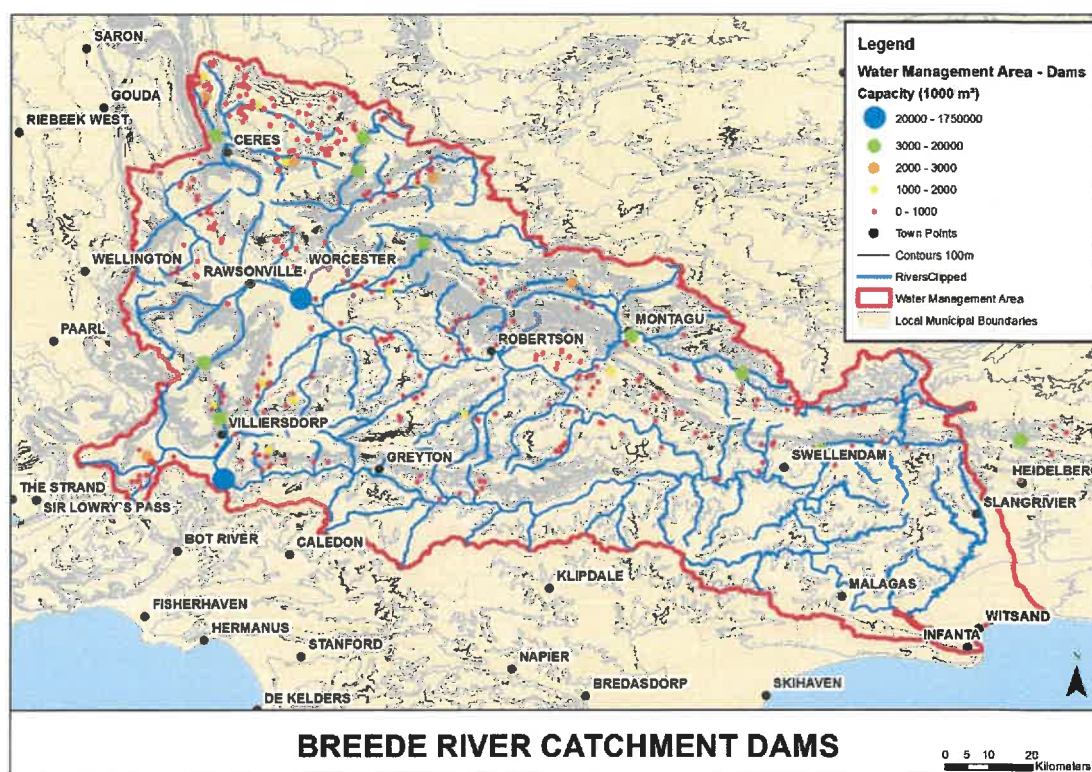


Figure 2: Dams in the Breede River Catchment.

- The Theewaterskloof Dam is the biggest dam in the catchment and is the dominant surface water sources, which forms part of the Western Cape Water Supply System (WCWSS).
- The WCWSS serves the City of Cape Town (CCT), surrounding urban centres and irrigation farmers. It consists of infrastructure components owned and operated by both the CCT and the Department of Water and Sanitation (DWS).

1.2 Previous studies

STUDIES	REPORTS	Source of Reports
WCWSS Reconciliation Strategy Study (2008) and further updates	Strategy reports. Latest Annual Status Report is the 2023/2024 including WCWSS Systems Analysis Report	To be shared with prospective Bidders in a shared Folder
WCWSS Augmentation Project (Prefeasibility	Preliminary Study Phase and Detailed Feasibility	To be shared with prospective Bidders in a shared Folder

and Feasibility)	phase	
Feasibility Study to Increase the Yield and Allocations from the Buffeljags Dam	Agri-economic Report, Socio-economic Report, Feasibility Report	To be shared with prospective Bidders in a shared Folder

2. OBJECTIVES OF STUDY

The objectives of the Study are:

- to review and update the hydrology (Pitman model) and water use requirements of the Breede River Catchment up to present day;
- to configure the Water Resource Yield Model (WRYM) monthly system model in the Study Area at a quaternary catchment scale, or finer where required, in a manner that is suitable for allocable water quantification;
- to use the reconfigured models to perform evaluations of water availability (both surface water and groundwater) under different scenarios of water resource classification and water use growth scenarios;
- to set up the Water Resource Planning Model (WRPM) for use by the Department's Chief Directorate: National Water Resource Planning and its components, other units within National Office of the Department of Water and Sanitation, the Western Cape Provincial Operations, the Breede Olifants CMA and the Western Cape Water Supply System (WCWSS) Reconciliation Study Steering Committee, to ensure timely recommendations and informed decisions on studying or implementing augmentation interventions for the area can be made;
- to determine the volume of water that can be transferred from the Upper Breede River over and above to the existing allocation from the Theewaterskloof Dam
- to provide in-house training and skills development to departmental and CMA officials on water resources modelling.

3. BACKGROUND

The NWA prescribes the establishment of compulsory licensing for all registered users in catchments that have been prioritised for this purpose, based on any of the following conditions:

- “water stress”, i.e. where the water requirements exceed the available supplies, or where water quality is becoming a serious problem;
- the need to achieve equity in water allocation;
- the need to promote beneficial water use;
- the need to facilitate efficient water management; and
- the need to protect water resource quality and health.

The Breede River Catchment constitutes the primary catchment designated as drainage catchment H in the naming convention adopted for the country (the entire country is delineated into primary catchments from A to X). It has been prioritised for further study because of the existing inter-basin transfer to the Berg River Catchment and potential increase in the amount of water that can be transfer to augment water resource of the WCWSS.

The Western Cape Reconciliation Strategy Study identified number of interventions including desalination, effluent treatment for re-use, groundwater development and possible surface water augmentation options to reconcile the predicted future water requirement scenarios with water availability over a 30-year planning horizon.

The DWS commissioned further Pre-Feasibility Study level (Phase 1) investigations into the following six potential surface water development options in 2008:

- Michell's Pass Diversion Scheme or Breede-Berg Water Transfer Scheme (BBTS);
- First Phase Augmentation of Voëlvlei Dam;
- Further Phases of Voëlvlei Dam Augmentation;
- Molenaars River Diversion;
- Upper Wit River Diversion; and
- Further Phases of the Palmiet Transfer Scheme.

Based on the findings of the Pre-Feasibility Study, these six possible options investigated were prioritized identifying most viable schemes for further investigation at Feasibility Study level. One of those schemes is BBTS, also referred to as the Michell's Pass Diversion Scheme.

The 2012 Feasibility Study recommended a Michell's Pass diversion with optimum capacity of 5 m³/s as the basis for the proposed BBTS. The proposed scheme involves the diversion of winter water from the upper Breede River at the same site as that of the current Artois Canal diversion supplying water to irrigators and the town of Wolseley.

The proposed BBTS comprises a new diversion weir and gravity pipeline system to convey the water to the Klein Berg River, from where the water is conveyed via the Klein Berg River Canal to the Voëlvlei Dam, which is located in the adjacent Berg River catchment, to augment the WCWSS. The scheme would also supply the summer and winter irrigation requirements of the existing users of the Artois Canal, including the town of Wolseley, and the EWR of the Breede River downstream of the proposed weir.

If the BBTS is constructed, future abstractions should comply with both the summer and winter Ecological Water Reserve (EWR) requirements of the Breede River catchment. In this regard two alternative BBTS schemes were considered during the 2012 Feasibility Study to transfer water while also supplying the EWR in the Breede River.

Any transfer of water out of the Upper Breede River Basin will impact on downstream water users. In this case the yield of Brandvlei Dam would be reduced unless the capacity of the infrastructure to pump or supply water into the dam is increased. Therefore, allowance for maintaining the yield of Brandvlei Dam through an upgrade of the pump station at Papenkuils was proposed.

BBTS is based on the overall operating rule that only surplus winter water would be abstracted and only such amounts after provision is made for existing users and the downstream Ecological Water Requirement (EWR). No abstraction will take place outside those periods.

The extent and impact of sedimentation in the dams need to be assessed.

The recent Verification and Validation of Water Use study for the Breede River catchment area undertaken by the Western Cape Regional Office and Breede Olifants CMA must be thoroughly analysed and the results incorporated into the modelling.

This ToR is aimed at the provision of specialised water resource modelling and water resource evaluation services in catchment H, to support the water availability assessment process and general integrated water resources planning in this defined study area.

3.1 Parallel Projects that Support the Water Availability Assessment Process

Additional to the task of water resource evaluation through the water resource-related modelling services, several individual projects are required to support the water allocation process in every catchment under assessment, each one dealing with a particular aspect of the process. In any specific catchment these could include projects such as:

- verification and validation (V&V) of existing lawful water use;
- determination of the ecological Reserve and Resource Quality Objectives (RQO) for current and alternative water resource classifications;
- formulation of future water requirements scenarios based on relevant demographic, economic and social development studies;
- water balance studies to determine the “allocable volume” of water in the catchments under consideration;
- development and gazetting of certain minimum components of the Catchment Management Strategy (CMS), particularly the water allocation plan;
- development and implementation of a communication Strategy about water allocation scheduling and compulsory licensing;

- participative stakeholder engagement processes to support the water allocation process, with particular focus on poor or previously marginalised communities, to understand their water needs that need to be planned and catered for; and
- the formulation of an allocation schedule and its gazetting after appropriate stakeholder engagement.

Some of these projects inevitably overlap with each other in time, while others need to be sequential in nature, because they rely on output from preceding projects or studies. The scope of these projects will necessitate the engagement of a wide range of skills by the Department, both in-house and through its PSPs.

In the case of primary catchment H, some of these above-mentioned steps have been completed or started, i.e.

- The Breede Olifants Catchment Management Agency (BOCMA) was established and currently functioning
- Notice NO.2428 "Reserve determination for water resources of the Breede-Gouritz Water Management Area in terms of section 16(1) and (2) of the National Water Act, 1998 (act no. 36 of 1998)" was Gazetted on 26 August 2022.
- The V&V was largely done for the Breede River and some areas in the Overberg in 2015. BOCMA is currently doing work in the middle Breede River.
- Future water requirement scenarios were developed for the WCWSS Reconciliation Study area and are annually updated.

3.2 Primary Conceptual and Practical Considerations when Quantifying Allocable Water

This section outlines the conceptual and practical considerations that could be expected to determine the technical outcomes of the allocable water quantification process. Each of these considerations poses one or more water resource-related modelling specifications of a functional, process, scale or resolution nature. These conceptual considerations and the consequent modelling specifications have informed the ToR of the study mentioned above and will need to be accommodated in an appropriate way. (It should be noted that other modelling requirements might also arise during a specific water resource-related study, but they are regarded as secondary to the items outlined below.)

i) Partitioning of annual yield on a risk-reliability basis

This conventional risk-based approach to allocating water is focused on quantifying water availability during those years when unusually low streamflow was historically recorded over extensive periods, or is deterministically/stochastically modelled. The annual yield from a river-reservoir system is the maximum annual volume of streamflow (plus groundwater, if applicable) that can be provided by that system at a given annual reliability (assurance) of supply. Different user groups, or sectors, prefer or can tolerate different annual reliabilities of supply. The annual yield of the catchment or river-reservoir system is then partitioned among all qualifying users, either at some equivalent reliability of supply, or by judicious reconciliation of yield-reliability characteristics with the component user requirements. The

yield-partitioning concept underlies the water balances of the NWRS First Edition (DWA 2004), as well as most other approaches to water resource planning and scheme design thus far undertaken under DWS's auspices. Important (present) drawbacks of or challenges with this approach are (among others):

- the dilemma of disaggregating and operationalising the constant annual allocation value into shorter time increment values in the face of dynamic changes in streamflow (and groundwater) availability from day to day or month to month;
- meeting the ecological Reserve requirements in each unique catchment under all the current constraints;
- the undermining of overall water use efficiency, because users become locked in a “use-it-or-lose-it” mind-set, that tends to ignore the actual state of the water resource;
- no good understanding of how to provide for the potential impacts of climate change on the individual catchments, that each has a unique climatic state.

Note: *Because the yield partitioning concept is so well-entrenched and because of its role in the formulation of the NWRS, it will necessarily form the dominant approach to allocable water quantification in the Study.*

ii) *Curtailment of water supplies and operating rules*

In cases of significant reservoir storage capacity in a catchment, operating rules govern release/abstraction decisions in response to downstream ecological requirements and user requirements, or to deal with unfavourable conditions in the river system, such as low reservoir storage levels, or downstream water quality concerns. Operating rules can be employed to maximise or optimise yield from a system. However, when extended drought flow conditions threaten the reliability of supply, curtailment (also called “rationing”, or “restriction”) of the individual annual allocations to user groups or water user sectors is usually implemented. Curtailment reduces water delivery to different user groups by differing degrees, dependent on their respective required reliabilities of supply and ability to absorb shortages of water supply. Curtailment and partitioning of annual yield go hand-in-hand and curtailment therefore has similar operationalising drawbacks to partitioning.

iii) *Spatial scale of allocable water quantification*

Up till now, the question of what would be an appropriate spatial scale at which to perform water allocation exercises has not received exhaustive examination. This detail does however affect the design of an appropriate modelling approach to support allocable water quantification. A plausible response to that question is that the Water Allocation Plan for each WMA or major catchment must specify the spatial scale(s) that is relevant to that area.

The ToR for this study is grounded on the assumption that the quaternary catchment definitions currently in use in the RSA constitute the coarsest reasonable scale at which to quantify allocable water. Therefore, the Water Resources Yield Model (WRYM) needs to be

reconfigured to at least that scale, but in certain tributaries a finer water allocation scale may be necessary. The study must take appropriate scale requirements into account.

iv) *Spatial scale and temporal resolution of modelling*

A high degree of variability in the hydrological responsiveness and land- and water-use characteristics of a catchment might require that the spatial scale and temporal resolution of modelling should be fine, rather than coarse. The rainfall-runoff response times of the sub-catchment components of a river system, as well as the travel times of reservoir releases, might also influence the specifications of the required modelling approaches.

The Study Area displays a high degree of land-use variability in certain sub-catchments, which might necessitate fine-scaled and land-use sensitive modelling in those areas; for example such as that offered by the ACRU model. Furthermore, given the relatively small size of particular significant tributaries, a daily temporal resolution might be needed as part of the overall modelling approach.

v) *Regulated versus unregulated river reaches*

Stream flow in the river reaches downstream of large impoundments can be largely regulated through controlled releases and, therefore may be suitably modelled at a monthly time scale and with system network models such as the WRYM. However, upstream of such impoundments or in unregulated tributaries to the main river systems, daily modelling might be required.

This potential need must be examined in the Study.

vi) *Water quality modelling requirements*

Water quality can affect the water allocation process on three fronts: *firstly*, as an operating rule, when freshening releases from local impoundments or inter-catchment transfers are required to ameliorate downstream water quality concerns and impacts; *secondly*, if the Water Allocation Plan specifies that not only water quantity, but also water quality load, should be formally partitioned among user groups; and *thirdly*, if upstream practices impact on the water quality flowing into the storage facilities, impacting on the water quality supplied to the downstream users.

Water quality is defined in terms of a range of variables and constituents, therefore, the selection of modelling approaches should accommodate those variables that are of critical concern to specific water users. The following DWS documents provide guidance on the water quality component of the water allocation process: *A Guideline to the Water Quality Management Component of a Catchment Management Strategy*¹, and *A Guide to Conduct*

¹ Water Quality Management Series, Sub-Series No. MS 8.2, Edition 1, March 2003, DWAF, Pretoria.

Water Quality Catchment Assessment Studies: In Support of the Water Quality Management Component of a Catchment Management Strategy².

The ToR for this study is informed by the current perspective that water quality is a growing concern in the RSA and very specifically in the Study Area. The Study must examine the validity of this perspective and, if necessary, configure and calibrate suitable water quality system models such as WQT or WQSAM in support of the WRYM and WRPM to enable viable scenarios to be developed as to the future water quality that could be supplied from the different catchments in the Study Area.

vii) Conjunctive use of groundwater and the role of freshwater lakes

Groundwater forms an integral part of the allocable water quantification exercise and the approach to its quantification will depend on whether or not the groundwater resources manifest as non-riparian primary aquifers, or as fractured-rock (secondary) aquifers, or as alluvial riparian aquifers. Extensive groundwater exploitation to meet spatially distributed requirements can be expected to reduce streamflow in particular river reaches, as well as the behaviour of natural freshwater wetlands. On the other hand, during extended periods of low stream flow, groundwater could be used to reduce the risk of failure of supply from surface water resources, provided that bulk reticulation infrastructure allows for that. Both rainfall-runoff catchment modelling and river-reservoir system modelling should be able to accommodate these aspects of groundwater utilisation, where applicable.

In the Study Area, it is known that groundwater potential and the recharge dynamics of certain river reaches which are also water supply nodes, are inter-related. As aquifer boundaries may not follow surface water boundaries (quaternaries), such aquifer areas may extend beyond the Study Area. This needs to be quantified as far as possible.

Experience gained with groundwater modelling development for the Berg Water Availability Assessment Study (2011) must also be adapted to this area to ensure that the conjunctive use of surface and groundwater from the different aquifers is suitably understood, addressed and modelled.

viii) Operationalising the Ecological Reserve for streamflow modelling

Currently, for modelling purposes, the Ecological Reserve for streamflow is specified in the form of flow duration curves at the identified Ecological Water Requirement (EWR) sites, as well as particular season-linked flood flows. Modelled reservoir releases required for maintenance of the Ecological Reserve are “triggered” by flows at a so-called indicator site and are sized according to the relationship between the relevant flow duration curves. The following concerns about this operationalisation procedure have been raised and require further investigation:

² Water Quality Management Series, Sub-Series No. MS 8.3, Edition 1, March 2003, DWAF, Pretoria.

-
- a) Avoiding the danger of “double accounting” for required releases when irrigation requirements lie downstream of EWR sites.
 - b) Examining the implications of overriding the indicator site “trigger” when storage levels are low.
 - c) Avoiding “surplus” EWR flood flows in the middle to lower reaches, when upstream as well as downstream indicator sites are used with poorly co-ordinated “triggers”.
 - d) Refining the specification of “drought” EWR flows in relation to the Ecological Management Class.
 - e) Incorporating EWR releases that are effectively consumptive (in that they spill from the modelled system at its downstream boundary) in the Water Resources Planning Model (WRPM) is problematic.
 - f) Improving understanding, in general, of the challenges that arise when the Ecological Reserve is required to be operationalised on a daily basis, including the points raised under concerns (a) to (d) above.

Both the WRYM and WRPM needs to be set up, considering the requirements, concerns and constraints as set out above.

ix) Options regarding modelled irrigation abstractions

Irrigation is often the largest water consumer in a catchment and a significant component of the negotiations around allocable water can be expected to focus on irrigation allocations, *inter alia* whether they are legal, what assurances of supply they can handle, where in the System they occur, their impact on return flows and thus water quality and quantity. Therefore, the modelling approach needs to be particularly flexible regarding the extent of irrigation abstractions, reasonable options in this regard must be developed and the modelling procedures used for this purpose, both in the monthly and daily catchment modelling processes and in the WRYM needs to be realistic and acceptable to all stakeholders.

The Study must make suitable allowance for the use of optional/opportunistic irrigation requirements and abstraction quantification and modelling procedures in all modelling approaches proposed, as this is common practice in the Study Area.

x) Small farm dam irrigation-related influences

In general, much of the irrigation upstream of large impoundments, as well as in unregulated downstream tributary catchments, depends on storage in small farm dams. In sub-catchments where farm dams are concentrated in large numbers, they, with their corresponding irrigation abstractions, have a pronounced impact on surface water availability and must therefore play a role in allocable water quantification and licensing decisions. The discretisation of sub-catchments for modelling purposes (i.e. the fineness of modelling scale) should, *inter alia*, be informed by the concentration and location of such small farm dam-related irrigation impacts.

The Study must make suitable allowance for the influence of small farm dam impacts and their corresponding irrigation abstractions on all model configurations, a particular problem in the catchments of both the Kouga and the Churchill dams. The Study must examine the relative importance for allocable water quantities of different degrees of aggregation of such impacts.

xi) Estimating streamflow reductions (SFRs) due to commercial afforestation

On-going research in this domain in South Africa has yielded a series of tools and models for estimation of SFRs³ - some broad-based, others detailed and dynamic. Some inconsistencies in SFR estimation have resulted from this on-going process; therefore, the DWS developed a protocol for application of the latest tools in water resource management decision-making, while the WRC has completed a research project⁴ to further develop and enhance the existing tools and models.

Commercial afforestation is prevalent in particular sub-catchments of the Study Area and the appointed PSP for the Study will be expected to remain informed of progress on both fronts and to incorporate appropriate findings and improved tools from these studies and research in both the catchment and systems modelling approaches being applied.

xii) Estimating SFRs due to invasive alien plants (IAPs)

On-going research in this domain in South Africa has yielded a set of tools and models for estimation of SFRs due to IAPs⁵ - some broad-based, others detailed and dynamic. Some inconsistencies in SFR estimation have resulted from this on-going process; therefore, the WRC and the Working for Water Programme of the DEA have initiated various research projects to further develop the existing tools and models.

Extensive areas of IAPs are prevalent in particular sub-catchments of the Study Area and the appointed PSP for the Study will be expected to remain informed of progress on both fronts and to incorporate appropriate findings from these studies and research in both the catchment and systems modelling approaches being applied.

xiii) Water use efficiency and water demand management within sectors

The efficiency of water use varies across different user sectors and is determined by the combined outcome of conveyance, delivery, processing (industrial) and management approaches. Improvements to the efficiency of water use can translate into increased allocable water quantities in a catchment, or, at least, into a spatial re-distribution of existing allocable water quantities. This is an important component of water demand management

³ A.H.M Görgens, In search of a protocol for the quantification of streamflow reductions (SFRs) due to commercial afforestation in South Africa, *Proceedings, Eleventh South African National Hydrology Symposium*, September 2003, Port Elizabeth

⁴ *An investigation and formulation of methods and guidelines for the licensing of SFRAs with particular reference to low flows.* WRC Project K5/1428

undertakings. Modelling approaches used in the allocable water quantification process need to be able to accommodate realistic options for sub-efficiency settings that reflect alternative conveyance, delivery, processing and management approaches.

The Study must make suitable allowance for examination of the allocable water benefits of alternative water use efficiency settings in the WRYM reconfiguration for the Study Area and must produce a scoping report on practicably achievable efficiency improvements in all the significant water use sectors in the Study Area.

xiv) Climate Change

The potential effects and impacts of climate change on the rainfall and run-off in the different catchments need to be taken into account when setting up the models. These potential impacts should be treated as scenarios to determine its potential impact on the availability of water in future, to enable informed decisions on further water resource development to be taken timeously. Much work has been done to refine the climate change prediction models and the latest results must be obtained and incorporated into the WRPM scenarios.

xv) Inter-catchment support and integrated system analysis

The quantification of allocable water becomes complex when a number of inter-linked catchments with multiple large reservoirs are able to support each other during localised droughts, given that the group of catchments and their bulk storage and conveyance infrastructure together represent an integrated system and may need to be modelled as such. The Theewaterskloof Dam is operated as part of the WCWSS which is an integrated water supply system operated to optimise water availability and must be set up as such.

The Study must make suitable allowance for both existing and future potential transfer schemes, if any.

(xvi) Legal requirements for information provided in a water allocation schedule and the concomitant licences

The exact legal requirements for the water entitlement information that appears on a water allocation schedule, as well as on the concomitant licences, would influence the specification of modelling requirements, or, at least, of the tools used to interrogate model outputs. The higher the levels of detail legally required, the more demanding the specification of the modelling approach will need to be.

The PSP for the Study has an obligation to remain informed of progress on that front, obtain the latest verified information from the DWS entities and to incorporate relevant findings where appropriate.

(xvii) Stakeholder communication needs

Stakeholder understanding and acceptance of the fundamental aspects and the outcomes of the quantification process of the allocable water in a catchment is a primary water resource management goal. Given the highly technical and intensely numeric nature of the subject matter, computer-assisted communication tools have an important role to play in the consultative and participative processes that need to accompany water allocation. Illustrative graphics of water availability or shortfall frequencies, such as box-whisker plots, or exceedence/frequency curves, are but two simplistic examples of numerous technical communication tools that would be needed in this process. Although this does not add to modelling specifications *per se*, it is of high enough importance to warrant being listed as part of the primary considerations for an appropriate allocable water quantification approach.

Stakeholder and public participation tasks in the Study Area will be the responsibility of the PSP for the Study, who must also develop a set of specifications for basic communication tools required for participative consultation. The PSP for the Study must prepare the basic communication material and tools according to these specifications and must make suitable allowance for setting up and maintaining the information base for the communication tools, based on the technical information generated during the allocable water quantification process. These information tools must be tested for their applicability and implementation during the stakeholder consultation process in the Study Area.

The stakeholder databases developed for the Verification and Validation (V&V) and WCWSS Reconciliation Study studies should be sourced as a starting point.

(xviii) Model-related software modifications and the role of the Directorate: Water Resource Management Planning

To address some of the primary conceptual and practical considerations when providing support to water allocation quantification, as outlined above, model-related software modifications could be necessary.

In the Study, the models that could require modifications are: updating and calibrating the WRYM, current versions of the Pitman monthly rainfall-runoff catchment model, and current versions of the catchment modelling systems in which the Pitman model is imbedded (e.g. WRSM2000, and SPATSIM); improved SFRA tools; climate change modelling inputs; water quality modelling tools etc.

The maintenance of and on-going improvements to the WRYM is the responsibility of the DWS Sub-Directorate: Systems Analysis of the Directorate: Water Resources Management Planning. The PSP for the Study must liaise closely with the Sub-Directorate: Systems Analysis regarding any required WRYM and WRPM modifications implied in Sub-sections 3.3 (i) to (xvi) above, as well as the National Water Resource Infrastructure Management (Southern Operations) component of the DWS regarding the current operating rules and specific constraints that need to be incorporated into the models.

4. TECHNICAL SCOPE AND MANAGEMENT OF THE STUDY

The Study will run over three partially overlapping phases for a period of 36 months, as follows:

- Phase One is a relatively brief Inception Phase of three months that allows the appointed PSP to become fully informed about the available data, preceding and current water resource-related studies and research, and current concerns and issues in the Study Area. The Inception Phase must conclude with clear proposals on the scope and format of the rest of the Study and on the requisite modelling and allocable water quantification approaches.
- Phase Two deals with the reconfiguration of the existing models in the Study Area and the setting up of relevant information bases to allow quantification of allocable water, given the current situation in the Study Area.
- Phase Three encompasses the quantification of allocable water under alternative scenarios of classification and water use, as well as supporting the longer-term integrated water resource planning needs by DWS and/or the BOCMA in which the Study Area falls.

4.1 Use of the Document: Guidelines for Models to be Used for Water Resources Evaluation

The document⁶: *Guidelines for Models to be used for Water Resources Evaluation* was developed under the auspices of and for the then Directorate: National Water Resources Planning through an interactive process in which a range of modelling-related specialists and water resource managers participated. The *Guidelines* are updated and enhanced from time to time as required.

The primary objective of these *Guidelines* is to guide the water resource modelling that will be required to quantify the allocable water for the purposes of compulsory licensing. Typical water resource assessment situations experienced by South African practitioners were identified and the *Guidelines* prescribe the appropriate models and methodologies to be employed.

Successful PSPs are expected to study the latest available version of the *Guidelines* and to follow the model selection prescriptions, as well as other sound modelling procedures contained therein, during execution of their tasks.

4.1.1 Phase One – Inception

Tasks:

⁶ *Guidelines for Models to be used for Water Resources Evaluation*, Directorate: National Water Resource Planning Report No. P.RSA/00/2702, Version 2, November 2003, DWAF, Pretoria.

- i) Review the findings of relevant historical water resources evaluations and planning studies, as well as all relevant supporting studies in the Study Area. Make suitable inferences for the current study.
- ii) Review the details of relevant historical catchment and system model applications in the Study Area and determine whether or not the most recent calibration of the monthly Pitman catchment model in the Breede catchment is acceptable for the generation of up-to-date long-term monthly flow sequences for use in the WRYM model, or whether a re-calibration of the Pitman model is required in the light of expected improvements in information on historical water use.
- iii) Reach agreement with the Client on:
 - appropriate ways to address and implement those conceptual and practical considerations in Section 3.2 above;
 - the calibration status of the Pitman model in the Breede River catchments; and
 - any other priority considerations and issues in the Study Area, relevant to the quantification of allocable water, that need to/could be assessed by the appropriate modelling.

The *Guidelines for Models to be used for Water Resource Evaluation*⁷ should be used to provide further guidance in this regard.

Some engagement of key stakeholders will be necessary for this step, Central Breede River Water Users' Association (CBRWUA), BOCMA, any water boards and Water Services Authorities (WSA).

Deliverable:

- *Inception Report* - After appropriate consultations with DWS on the outcomes of the Inception Phase, the PSP must prepare an Inception Report, detailing the required approach, individual tasks, budget breakdown and final work programme;
- *Training Framework Report*

4.1.2 Phase Two – Provide Technical Modelling Support for the Evaluation of the Current Situation

Tasks:

- i) Obtain model configurations used in previous studies (from the relevant previous PSPs and DWS) which may be relevant for this Study.

⁷ See Footnote 11

- ii) **Ensure budget allocation in financial proposal for the purchasing of necessary rainfall data update task.**
- iii) Collect and review information on the primary physical characteristics of all existing and planned water resources-related schemes in the Study Area. Much of this information has been collated in DWS's WCWSS Reconciliation strategy study.
- iv) Obtain the following requirements or stipulations from the National Water Resource Strategy, or from other DWS processes and studies, as they apply to the Study Area: provisional water resource classifications; Ecological Reserve specifications.
- v) Incorporate in Tasks 4.1.2 (v) to (x) below all applicable conceptual and practical modelling considerations identified in Section 3.2.
- vi) Assemble records of historical and existing water use and abstractions from recent and current water use/requirement projection studies in the Study Area. The All Towns Reconciliation Strategies for the towns in the study area should provide some guidance. Use the latest updated version of these strategies. Also source information from the Western Cape Provincial Government water related studies.
- vii) Assemble suitable hydro-meteorological and physical input data sets for Pitman catchment model-based applications.
- viii) With the Pitman catchment model, generate naturalised long-term monthly flow sequences at quaternary catchment spatial scales or finer, except where otherwise agreed with the Client under Task 4.1.2 (iii) above.
- ix) Pending the outcomes of Task 4.1.2 (vii) above, configure the WRYM for the catchment of the Study Area and make suitable allowance for groundwater and the wetlands - as outlined in Section 3.2 above. Yield model configuration should be at least at quaternary catchment spatial scales or finer, except where otherwise agreed with the Client under Task 4.1.2 (iii) above.
- x) Generate suitable stochastic long-term monthly flow sequences and derive relevant yield-reliability characteristic curves, as well as a Firm Yield curve, for the Breede River catchment.
- xi) For the current provisional classifications of the components of the water resource and for current water use patterns, utilise the new configurations of the WRYM to evaluate the water requirements/availability water balance at suitable locations in the Study Area, according to yield-reliability criteria agreed with the Client. Incorporate groundwater availability in the water balance, as appropriate. The outcome of this step will be the baseline assessment of allocable water for current conditions.

Deliverables:

- *Land and water use requirements Report*
- *Rainfall, Evaporation and Streamflow Report*
- *Water Quality Report*
- *Report on updated hydrology for the catchment including the groundwater contribution and its interaction with surface water*
- *Climate Change Report*
- *A report on the reconfigured and updated WRYM*
- *A report on the WRPM setting out the methodology used*
- *A report on the incorporation of any applicable aspects of Section 3.2 of the ToR: "Primary Conceptual and Practical Considerations when Quantifying Allocable Water"*
- *Quarterly Progress and Final Technical Reports - on all Phase Three activities and outcomes.*

4.1.3 Phase Three – Provide Technical Modelling Support for the Evaluation of Alternative Future Scenarios

Tasks:

- i) Implement any model-related changes proposed during Phase Two.
- ii) Use the configured water resource-related models to provide modelling support to the relevant DWS components during iterative engagements with primary water user groups and other stakeholders. The Phase Three support to DWS under this ToR will include the use of the configured water resource-related models to perform iterative water resource evaluations for the range of development scenarios in the Study Area, agreed to between DWS, the primary user groups, and other key stakeholders. Allocable water should be quantified and evaluated under the following individual scenarios:
 - alternative future water requirement patterns for the current provisional classification of the water resource;
 - alternative water resource classifications, combined with either current or future water requirement scenarios; and
- iii) Ensure that the evaluation of allocable water under the above scenarios is aligned with the criteria and requirements contained in the Water Allocation Plan for the Study Area. (The development and gazetting of the Water Allocation Plan is required by the NWA

and will form a component of the establishment of a Catchment Management Strategy for the Study Area under a separately funded and managed process.)

- iv) Document the work in appropriate detail and prepare a free-standing Public Communiqué in a style and format suitable for informing a wide range of technical and non-technical stakeholders.

Deliverables:

- *Quarterly Progress and Final Technical Reports - on all Phase Three activities and outcomes.*
- *Configured WRYM and WRPM available for scenario analyses including the impact of implementation of the Environmental Water Requirements*
- *Capacity building and training to interns/graduate trainees/candidate engineers or any other relevant DWS and BOCMA staff on the application and use of the WRYM and WRPM, as well as any supporting rainfall-runoff catchment models and water quality simulation models as well as a final report setting out the training given.*

5. STUDY GOVERNANCE

The governance structure of the study will mainly consist of the committees discussed in the following sub items:

5.1 Study administration management (SAM)

The SAM comprises of the DWS Study Manager and the PSP Study team. The committee is responsible for the day-to-day administration and management of the study. The SAM meetings are to be held on a three-month basis throughout the duration of the Study, commencing with a Mobilisation Meeting and a meeting at the end of the Inception Phase. SAM meetings will normally be scheduled to coincide with Technical Support Group Meetings described in the following item.

5.2 Technical Support Group (TSG)

The TSG comprises of the DWS Study Manager, the PSP Team, DWS Technical Teams and other external technical teams that provide input into the first order detailed assessments and analysis of the strategy. As already mentioned in the item above, the TSG will hold meetings on a six monthly basis, commencing with a Mobilisation Meeting and a meeting at the end of the Inception Phase. A meeting of this committee will be held just before the Study Steering Committee (SSC) meeting in the form of a Dry Run to that specific SSC meeting.

5.3 Study Steering Committee (SSC)

The Study Steering Committee (SSC) is a forum for stakeholder consultation and public participation. The SSC, comprising of senior representatives of relevant DWS Directorates, the Western Cape Provincial Office, NWRIM Southern Operations, other relevant National and Provincial Government Departments, relevant district and local municipalities, the BOCMA, the relevant Irrigation Boards and Water User Associations and other interested

parties identified during the course of the study, will provide high-level direction and guidance with support of the SAM and TSG. It will monitor the progress with the Study, recommend adjustments to the Study when required and communicate to all stakeholders and the public about the progress with the implementation of the Study findings recommendations.

5.4 No. of Meetings/ Engagements for Bidding purposes are shown in the Table below.

Table 1: Status of governance structures for the study

Study Name	Governance Requirements			
	Study Initiation Meeting and Inception Meeting	Study administration (SAM)	Study Steering Committee (Study SC)	Technical Support Group (TSG)
Breede WAAS	2	Once every 3 months	Once every 6 Months	Yes, once every 6 months
Total Number of meetings	2	12	6	6

* The Study is for a three-year study period.

6. CAPACITY BUILDING AND TRAINING

The purpose of this task will be to provide training and technology transfer to Department officials and nominate individuals from the study areas. This is considered to be a key component of the assignment, not only because it will serve to develop the competence and expertise of the individuals in question, but also because it will establish a common understanding of technical aspects between the Study team and the Client (DWS) and thereby contribute to the overall success of the assignment and related activities.

Identified departmental staff members at various levels will be identified for training in consultation with the Client during the Inception Phase of the study. A proposal in this regard will be made at the first study management meeting for approval.

The training programme to be undertaken will involve two distinct components, namely:

- A formal 2-day training course will be held to provide attendees with a general background of the processes involved with developing and implementing a reconciliation strategy. The course will address issues such as the basic principles of water resources planning, use of water resources systems models, developing and monitoring water requirement projections, water balances and timing of future intervention measures and the practical implementation and monitoring of a reconciliation strategy (for in person attendance the number to be hosted may be a maximum of 20), for online the number can have as many participants as reasonably practicable.
- The PSP must present clear proposals on capacity building in line with the outline in this paragraph. This proposal should involve the actual participation of attendees in the practical aspects of the assignment and will involve the periodic short-term secondment of trainees to the offices of the PSP. This will focus on technical processes and the application of models. For this purpose, the following distinct instruction methods will be employed:
 - Discussions, where technical processes are discussed in a workshop environment;

- Demonstrations, where a specific process or model application is demonstrated by a specialist for the benefit of the trainee;
- Applications, where the trainee applies a model practically, under the supervision of a specialist.

The aspects which should be addressed as part of the training that is required for individuals are summarised in **Table 2**. The table also provides an indication of the instruction method which should be employed in each case, as well as the extent of participation required by the trainee. Specific dates are not scheduled and will depend on the progress of the assignment as well as the availability of the individuals involved.

Table 2: Guideline training schedule

Description	Instruction method	Period of participation (days)
Hydrological Analysis		
Data collection and sources	Discussion	½
Rainfall data preparation and checking	Application	1
Rainfall data classification, outlier detection and patching	Application	2
Streamflow data preparation and checking	Discussion, application	1
General groundwater modelling	Discussion	½
Land-use impacts	Discussion, application	2½
WRSM2012 modelling: <ul style="list-style-type: none"> ▪ Model configuration and testing; ▪ Model calibration; ▪ Generation of natural runoff sequences. 	Demonstration Application Demonstration	1 1 1
Stochastic streamflow hydrology: <ul style="list-style-type: none"> ▪ Generation of parameter file (PARAM.DAT); ▪ Checking generated streamflow sequences. 	Demonstration Demonstration	½ ½
Water Requirements and Return Flows		
Data sources	Discussion	½
Data manipulation and processing	Application	3
Water user reliability requirements, purpose and application	Discussion	½
Format and application of the ecological flow requirements	Discussion	½
Yield Analysis (WRYM)		
Configuration and testing of the WRYM	Demonstration	1
Historical system analysis	Application	½

Description	Instruction method	Period of participation (days)
Stochastic system analysis Long and short-term)	Application	1
Reconciliation analysis (annual water balance calculations)	Application	½
Result presentation and interpretation	Demonstration	½
Planning Analysis (WRPM)		
Background to WRPM	Discussion	1
Configuration and testing of the WRPM	Discussion, demonstration	5
Definition and analysis of planning scenarios	Discussion	½
Processing of WRPM output	Demonstration, application	1
Result presentation and interpretation	Demonstration	½

Annual progress reports on training given may be submitted to SCM for Contract performance evaluation.

The impact of the proposed training undertaken will be assessed based primarily on feedback obtained from a designated appropriately skilled Departmental representative on perceived benefits regarding the knowledge base, practical insight and/or work-related behaviour of trainees. Ideally, the representative in question will be a line-manager or senior colleague of trainees and will be selected in consultation with the Department.

Progress on the above training programme will be continually monitored and, upon conclusion, documented in a concise training report. The report will include details on the process of selecting trainees, attendance and feedback of the formal training course and a schedule and milestones of the *ad-hoc* instruction process. The report will also include conclusion on the success of the training based on the impact analysis described above, as well as recommendations on further training that may be required and also on the potential for improving similar training programmes in future.

7. REQUIREMENTS FROM THE PSP

7.1 Methodology

The PSP must provide a detailed methodology of how they intend to conduct the study.

7.2 Expertise or skills required

The PSP team must have the proven skills and capacity to undertake the assignment functions described in the previous sections. Some of the particular skills that would be required are:

- Experience in setting up and updating systems models.
- Experience in setting up and utilizing the Water Resource Yield Model (WRYM) and Water Resource Planning Model (WRPM).

- Experience in developing water requirement scenarios for municipalities, industries and irrigators.
- Experience and good understanding of water resources planning including hydrology, geohydrology, water quality and to assess their impact on the system yields.
- Good understanding of how to undertake assessments of the Reserve and to assess its effect on system yields.
- Good understating of the implications and effectiveness of implementing WC/WDM measures and its impacts on system yield.
- Experience in the determination of the environmental and social impacts of interventions, and in formulating mitigation measures.
- Ability to utilize selection processes to identify the most appropriate series of augmentation options to meet various water requirement scenarios within the system constraints.
- Ability to synthesize recommendations in a complex environment.
- Ability to interact with and successfully manage multidisciplinary teams.
- Ability to communicate and interact with senior government officials, decision makers and the public.
- Ability to manage public participation processes.
- Proven ability to do the required training on the different models and water resource planning aspects listed
- Support Stuff—the PSP should clearly indicate availability of the support stuff (GIS, admin, finance etc.)

7.3 Work plan and time schedule

7.3.1 Programme

The contract period for the assignment is estimated to be 36 months.

7.3.2 Study Management

Management of PSP activities will be performed by DWS's Directorate: Strategic Water Resource Planning (SWRP) (South Planning Area (SPA)). Management meetings will take place at appropriate intervals as specified by (**Section 5.4 Table 2: Status of governance structures for the study**) . It is envisaged that these would coincide or be integrated with the Technical Support Group meetings, which in turn will be determined by the programme of Study SC meetings. The extent of technical work stemming from Study SC requests for support and other instructions issued by the Study SC will also influence the need for Support Group and PSP management meetings.

It is envisaged that Study SC meetings will take place by-annually (two times a year), with Support Group/study management meetings at the same time as well as at least twice in between or more often as required.

7.4 Information to be provided in the proposal by the PSP

7.4.1 Extent of the Proposals

The text of the Proposal should be to the point and not longer than thirty (30) pages (A4), excluding CVs, at a font size of 11 and a line spacing of 1.5.

The Technical Proposal must give a detailed human resource (personnel) application breakdown specified in rates for each study Task. The Financial Proposal must give the same human resource application breakdown specified in rates and cost for each study Task, which would be part of the Study Cost Schedule.

Deliverables such as reports, presentations, analyses, letters and databases must be provided in Microsoft applications and in PDF-format (where applicable). Text for all documents shall be Arial 11-point font at 1.5 spacing, unless otherwise stated or agreed.

Provision must also be made to supply deliverables, such as reports and letters, in hard copy format. The standard and format of reports must be confirmed with DWS before drafting and submitting the required reports for this Study. Reports are typically submitted as first Draft, Draft Final and Final.

A table listing all the deliverables with the cost of each deliverable and the due date of the deliverable must be supplied, in order for this to be included in the contract between the DWS and the PSP. The PSP will be paid on receipt of each completed deliverable. It is recommended that provision be made for at least 30 deliverables. By nature, the execution of planning studies is guided by information gathered as the study progresses. However, **Table 3** provides a guideline of possible deliverables for this Study, in line with the tasks described under paragraph 3, but it is not limited to this.

Table 3: Guideline of possible deliverables for a water availability assessment

Item	Description
0	Inception Report
1	Training Framework Report
2	Land water use requirements Report
3	Rainfall, Evaporation and Streamflow Report
4	Water Quality Report
5	Climate Change Report
6	Report on updated hydrology for the catchment including the groundwater contribution and its interaction with surface water
7	A report on the reconfigured and updated WRYM

8	A report on the WRPM setting out the methodology used
9	A report on the incorporation of any applicable aspects of Section 3.2 of the ToR: "Primary Conceptual and Practical Considerations when Quantifying Allocable Water".
10	Final Water Availability Assessment Report
11	Training Reports
12	Newsletter(s)
13	Study Administration Meetings minutes
14	Study Technical Support Group meetings minutes
15	Study Steering Committee meetings minutes
16	Stakeholder Workshops
17	Quarterly progress reports

PSP must facilitate having a senior technical person available on request to give technical, scientific and management support to the CE: SWRP SPA as and when required, related to matters in support of this water availability assessment and modeling study for the Breeder River Catchment. That ad-hoc support to DWS Project Manager (this will have a financial implication in the Study Budget of R500,000) to be included in overall costing of Bid and will be managed through the Project Execution Plan (PEP) approved by the DWS project manager.

7.5 Intellectual Property

All deliverables and products produced for this assignment will be the sole property of the Department of Water and Sanitation. This stipulation will be included in the contract between the appointed PSP and DWS. If anyone or the PSPs wishes to use them or apply them elsewhere, they should do so only after receiving approval by the Department in writing. After Study completion all source documents, reports, model set up configurations, raw data, GIS Maps and all other relevant documents will be handed over to DWS as the owner of the information.

ADMINISTRATIVE COMPLIANCE

Bidders are required to comply with the following listed below:

No	Criteria	Yes	No
1.	Companies must be registered with National Treasury's Central Supplier Database. Provide proof of print out from CSD.		
2.	Tax compliant with SARS (to be verified through CSD).		
3.	Complete, sign and submit SBD 1, SBD 3.2, SBD 4 and SBD 6.1		
4.	General Conditions of Contract (GCC)		
5.	Active registration with Company Intellectual Property Commission (to be verified through CSD and CIPC) Attach copy of CIPC/CIPRO Certificate		

No	Criteria	Yes	No
6.	The service provider (and in the case of a consortium or joint venture – at least one member of such consortium or joint venture) should submit a notary agreement between the parties must clearly identify the lead partner (if applicable)		
7.	CERTIFICATE OF AUTHORITY FOR SIGNATORY (bidders to complete the relevant form.)		
8.	Copy of an Identity document of the authorised individual to represent the Service provider as per the CERTIFICATE OF AUTHORITY FOR SIGNATORY form		
9.	Non Compulsory Hybrid Briefing Session		

8. EVALUATION SYSTEM

Department of Water and Sanitation will evaluate all proposals in terms of the Preferential Procurement Regulations 2022. A copy of the Preferential Procurement Regulations 2022 can be downloaded from www.treasury.gov.za. In accordance with the Preferential Procurement Regulations 2022, submissions will be adjudicated on 80/20 points system and the evaluation criteria. A three phase evaluation criteria will be considered in evaluating the bid. On the receipt of the proposals, the evaluation criteria shown below will be used for the selection of the most suitable bidder to undertake the assignment.

Phase 1: Mandatory Compliance (if not complied with, bid will be disqualified)

Phase 2: Functional / Technical Evaluation

Phase 3: Points awarded for Price and Specific Goal (80/20 Preferential System)

8.1 PHASE 1: MANDATORY COMPLIANCE:

Please note that all bidders must comply with the following mandatory requirements- Failure to submit any of the documents listed below will render your bid non-responsive and will be disqualified.

Yes - list the relevant documents required on the table below

No	Criteria	Yes	No
1.	Attach Study Leader's Copy of Registration Certificate with (ECSA) or recognised institution according to the Washington Accord) or registered professional Scientist (SACNAPS)		

8.2 PHASE 2: FUNCTIONALITY (TECHNICAL) EVALUATION

The 80/20 point system will be used in evaluating all proposals. The criteria and guideline weighting points applicable are detailed in the following paragraphs.

Values: 1 Very Poor..... 2 Poor.....3 Average.....4 Good.... 5 Excellent

Table 5: Functionality Evaluation

Criteria		Points value	Weighting Points Awarded
Functionality	Past Experience of the company in Integrated Water Resource Planning and management projects		20
	Above 10 years	5	
	Above 6 to 10 years	4	
	Above 4 to 6 years	3	
	Above 2 to 4 years	2	
	0 to 2 years	1	
	Past Experience of the company in undertaking a water resource study in the relevant study area (5)		5
	Above 10 years	5	
	Above 6 to 10 years	4	
	Above 4 to 6 years	3	
	Above 2 to 4 years	2	
	0 to 2 years	1	
	Methodology: <ul style="list-style-type: none"> • Compliance with ToR; • Detailed method statement for each task within the study area; • Inclusion of Organogram; • Detailed programme showing clear sequence and time allocation and • Innovations in response to the ToR. 		35
	All 5 items addressed	5	
	4 items addressed	4	
	3 items addressed	3	
	2 items addressed	2	
	1 item addressed	1	

Criteria		Points value	Weighting Points Awarded
	Team Capability		30
	<ul style="list-style-type: none"> The Study Leader should be a registered Professional Engineer (with ECSA or recognised institution according to the Washington Accord) or registered professional Scientist (SACNASP) with relevant experience in similar projects with specialisation in the water resource planning/management field (the proof, as provided in abridged CV documents attached as part of the proposal). 		10 of 30
	With more than 10 years' experience	5	
	With above 8 to 10 years' experience	4	
	With above 6 to 8 years' experience	3	
	With above 4 to 6 years' experience	2	
	With less than 4 years' experience	1	
	<ul style="list-style-type: none"> The Deputy Study Leader should be a registered Professional Engineer (with ECSA or recognised institution according to the Washington Accord) or registered professional Scientist (SACNASP) with relevant experience in similar projects with specialisation in the water resource planning/management field (the proof, as provided in abridged CV documents attached as part of the proposal). 		5 of 30
	With more than 10 years' experience	5	
	With above 8 to 10 years' experience	4	

Criteria		Points value	Weighting Points Awarded
	With above 6 to 8 years' experience	3	
	With above 4 to 6 years' experience	2	
	With less than 4 years' years' experience	1	
	<ul style="list-style-type: none"> The criteria for scoring the Task Leaders is outlined as per the value system of 1 to 5 below: Team should have a range of specialists and experts in various fields (water resource engineer, hydrologist, geohydrologist, water quality specialist, environmentalist, stakeholder engagement specialist) 		15 of 30
	At least 50 % all task leaders have minimum 5 years experience in their areas of specialisation.	5	
	At least 50 % of all task leaders have minimum 4 years experience in their areas of specialisation..	4	
	At least 50 % of task leaders have minimum 3 years experience in their areas of specialisation.	3	
	At least 50 % of task leaders have minimum 2 years experience in their areas of specialisation.	2	
	At least 50 % of all task leaders have minimum years experience in their areas of specialisation...	1	
	Capacity building and training: <ul style="list-style-type: none"> Provide clear proposals on Capacity building and training of 10 DWS officials in technical aspects to be undertaken as part of this Study. 		10
	Shows innovation in ensuring successful transfer of skills to DWS staff	5	
	Provides detailed methodology of training and capacity building as per ToR	4	
	Provides some methodology but not all aspects	3	

Criteria		Points value	Weighting Points Awarded
	Training in a workshop format only including WRPM	2	
	Training in a workshop format only excluding WRPM	1	
Total			100

This study is highly technical, and will also include application of sophisticated models such as the Water Resources Yield Model and the Water Resources Planning Model. To demonstrate the ability to undertake this study successfully a bidder is required to offer a high degree of technical expertise and capability and present technically excellent study methodology.

For the above reason a bidder is expected to achieve a minimum threshold/required score for Functionality (Past Experience, Methodology, Team capability and Capacity Building and Training) of 70 (%) points. Only bidders who obtained at least 70% under the Functionality (Technical) Evaluation will be considered for further evaluation.

8.3 PHASE 3: PRICE AND SPECIFIC GOALS THE 80/20 POINTS AWARDED FOR PRICE AND SPECIFIC GOALS

The 80/20 Preferential Procurement System will be used in evaluating these bids:

Evaluation element	Weighting (Points)
SPECIFIC GOALS	20
PRICE	80
Total	100

Price

A maximum of 80 points are allocated for price on the following basis:

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where:

P_s = Points scored for comparative price of bid under consideration

P_t = Comparative price of bid under consideration

P_{\min} = Comparative price of lowest acceptable bid

Preference point system

SPECIFIC GOALS	NUMBER OF POINTS TO BE ALLOCATED
Women	5

People with disability	5
Youth (35 and below)	5
Location of enterprise (Province)	2
B-BBEE status level contributors from level 1 to 2 which are QSE or EME	3
Total points for SPECIFIC GOALS	20

Documents Requirement for verification of Points allocation: -

Procurement Requirement	Required Proof Documents
Women	Full CSD Report
Disability	Full CSD Report
Youth	Full CSD Report
B-BBEE status level contributors from level 1 to 2 which are QSE or EME	Full CSD Report Valid BBBEE certificate/sworn affidavit Consolidated BEE certificate in cases of Joint Venture

The definition and measurement of the goals above is as follows:

Women, disability, and youth:

This will be measured by calculating the pro-rata percentage of ownership of the bidding company which meets this criterion. E.g., Company A has five shareholders each of whom own 20% of the company. Three of the five shareholders meet the criterion, i.e. they are women/disability/youth. Therefore, this bidder will obtain 60% of the points allowable for this goal.

Location of enterprise

Local equals province. Where a project cuts across more than one province, the bidder may be located in any of the relevant provinces to obtain the points.

B-BBEE status level contributors from level 1 to 2 which are QSE or EME

Measured in terms of normal BBBEE requirements.

Note: Formula for calculating points for specific goals

Preference points for entities are calculated on their percentage shareholding in a business, provided that they are actively involved in and exercise control over the enterprise. The following formula is prescribed:

$$PC = \frac{Mpa \times P_{own}}{100}$$

Where

PC= Points awarded for specific goal

Mpa= The maximum number of points awarded for ownership in that specific category

P-own = The percentage of equity ownership by the enterprise or business

Special Conditions

- Bidders must submit a valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.
- Pricing must include Disbursement and Travelling Costs.
- It is advisable that the study team be firm and consistent for the duration of the contract. Should there be a need to change or replace principal study team members, such changes should be communicated to DWS for approval prior to any changes being effected. Any replacement should hold the same qualifications and experience or better of the replaced officials.
- Upon appointment, Bidders must comply with Unemployment Insurance Fund (UIF). The Department will periodically check the compliance and failure of which may result in termination of the contract.
- Bidders must also provide a valid Letter of good standing with the Compensation Commissioner in terms of the Compensation for Occupational Injuries and Diseases Act 130 of 1993 within 21 days of receiving an award letter.

9. ARRANGEMENTS FOR SUBMISSIONS OF PROPOSALS

9.1 *Format of Proposal Documentation and Contact Persons*

Service providers are required to submit their formal enquiries directly to the Project Manager and the SCM office at least 5 working days before the tender close.

Enquiries about any aspect of this Proposal invitation can be obtained from the following persons:

- Bidders are requested to provide a clear agreement regarding joint venture/consortia. The percentage involvement of each company in the joint venture agreement should be indicated.

For technical matters:

Ms J Pashkin

Tel: 012 336 8695

E-mail: pashkinj@dws.gov.za

Mr T Makombe

Tel: 012 336 8503

Cell: 083 662 1414

E-mail: makombet@dws.gov.za

Address: Private Bag X313 PRETORIA 0001

9.2 Deadline and Address for Submissions

Proposal documentation is to be submitted in accordance with form SBD 1. "Invitation to Tender".