

EOI Ref. no. NRW/BHT/WTP/11/2020-2021

Feasibility Study and Detailed Design of Water Treatment Plant in Bahati Sub-county

EXPRESSION OF INTEREST FOR CONSULTANCY SERVICES

EOI Document



Nakuru Rural Water and Sanitation Company Limited

April 2021

CONTENTS

1. NOTICE INVITING EXPRESSION OF INTEREST	3
3. Evaluation of Consultants EOI Application	7
4. Additional Information	10
6. Terms of Reference (TOR) for Feasibility Study and Detailed Design of Water treatment plant in Bahati sub-county in Nakuru county.	15



1. NOTICE INVITING EXPRESSION OF INTEREST

Nakuru Rural Water and Sanitation Company Limited (NARUWASCO) wishes to bridge the gap in Bahati region to ensure SDG target 6.1 as envisaged by 2030. By this time, we shall have achieved universal and equitable access to safe and affordable drinking water in every homestead within Bahati sub county. NARUWASCO has budgeted for feasibility study and detailed design of a water treatment plant in Bahati sub-county in Nakuru County.

Therefore, the NARUWASCO invites Expression of Interest (EOI) from the eligible national and Consultancy firms only for **Feasibility Study and Detailed Design of water treatment plant in Bahati Sub-county** as describe below:

S/No.	Description	Duration
1	Feasibility study and detailed design of a water treatment plant in Bahati sub-county in Nakuru County	3 Months

The interested firms may also submit joint venture proposal, if necessary and can hire individuals/experts as employee(s) if there is need of special inputs that are not available within the firm. However, the joint venture firm(s) and individuals/experts must be from Kenya only. In the case of EOI submitted by an existing or intended JV an undertaking signed by all parties (i) stating that all parties shall be jointly and severally liable, if so required. The firm shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution.

The EOI document can be downloaded free of cost from the NARUWASCO website at www.naruwasco.co.ke/downloads w.e.f. **23rd April 2021**.

The completed EOI document in a plain sealed envelope should be submitted to NARUWASCO in the office of the Managing Director, at the address below not later than **5:00 pm (EAT) on 7th May 2021**. and shall be opened the following day at 10:00AM in NARUWASCO boardroom. Should you require any clarification, you are requested to do so via electronic mail only. The official mail shall be info@naruwasco.co.ke .

The Plain sealed envelope containing EOI must be clearly marked as ***"EOI Application for short-listing Consultancy Services of Feasibility study and detailed design of a water treatment plant in Bahati sub-county in Nakuru County"***. EOIs submitted electronically shall not be accepted.

Feasibility Study and Detailed Design of Drinking Water treatment plant in Bahati sub-county, in Nakuru county

Address: **Managing Director,
Nakuru Rural Water and Sanitation Company Limited,
P.O. Box 386-20100,
Nakuru.**

The name and address of short-listed firms will be published in the NARUWASCO website. Only short-listed consultancy firms will be invited to submit the Technical and Financial proposals for the above-mentioned consultancy services.

Managing Director,
NARUWASCO

2. Instructions for submission of Expression of Interest

- a) **Purpose of this Expression of Interest:** The main purpose of this EOI is to shortlist the suitable consulting firms for inviting their technical and financial proposals, and to select a successful firm through QCBS selection method in accordance with the latest Public Procurement and asset Disposal Regulations 2020 and PPDA revised 2016. Only shortlisted firms shall be invited for RFP (Request for Proposal).
- b) Expression of Interest should be submitted by Kenyan firms only. The interested firms can submit Joint venture proposal and can hire individuals/experts as employee(s) if there is need of special inputs that are not available in the local market. The individuals / experts shall be from Kenya only.
- c) Expression of Interest shall contain the following information:
 - a) A cover letter addressed to the Managing Director, Nakuru Rural Water and Sanitation Company Limited (NARUWASCO) on the official letter head of the consulting firm duly signed by authorized signatory.
 - b) Applicants must provide complete information as described below in this EOI document:
 - i) **Eligibility Declaration (Annex-I)**
 - ii) **Table-1 & Table-2** under "**3. Evaluation of Consultants EOI Application**"

The evaluation will be carried out in two stages as follows:

- 1) **Stage-1- Prequalification Requirement.** The assessment for EOI applications will be based on the information provided under **3. Evaluation of Consultant's EOI Application under Table-1**. Failure to satisfy any of the mandatory documents from Sl. No. **1 to 6** will be disqualified and shall not consider for further evaluation. Only the successful consultants will be considered for Stage 2 evaluation.
 - 2) **Stage 2 – Evaluation Criteria.** This is the final evaluation and those who have qualified Stage 1 Prequalification requirement shall be considered for this Stage 2 evaluation. The evaluation under stage 2 shall be done based on the criteria against allocated score as per **3. Evaluation of Consultant's EOI Application under Table-2**. Therefore, all the applications must submit all the required information and supporting documents to support.
- d) Applicants are also required to submit additional information along with their application, but short listing will be based primarily on the evaluation of information provided under **3. Evaluation of Consultants EOI Application**. The additional information required are:
- a) Financial Strength

Feasibility Study and Detailed Design of Drinking Water treatment plant in Bahati sub-county, in Nakuru county

- b) Applicant's work in hand as per the format
- c) Applicant's information

- e) The Expression of Interest document must be duly completed and submitted on or before the date mentioned in the "***Notice Inviting Expression of Interest***" to the address below in sealed envelope and should clearly marked as "***EOI Application for short-listing Consultancy Services for Feasibility Study and Detailed Design of Drinking Water treatment plant in Bahati sub-county, in Nakuru county***". The envelope should also clearly indicate the name and address of the firm.

Address for submission: **Managing Director,
Nakuru Rural Water and Sanitation Company Limited,
P.O. Box 386-20100,
Nakuru.**

- f) In case the submission date falls on public holiday, the submission can be made on the next working day. Any EOI document received after the closing time for submission shall not be considered for evaluation.

- g) Note to firms interested in EOI:
 - a) If any of the firms fails to provide the right information during this pre-qualification process and at any time after the short listing if it is found that a firm failed to provide such information on purpose or without purpose, the particular bidder will be disqualified from participating further.
 - b) Any question or clarification with regard to this EOI process must be made in writing. The address for requesting clarifications is:

**Managing Director,
Nakuru Rural Water and Sanitation Company Limited,
P.O. Box 386-20100,
Nakuru.
Email: info@naruwasco.co.ke**

- h) NARUWASCO reserves the right to amend this EOI anytime and such amendments shall become an integral part of this document. Amendments if any will be posted to NARUWASCO website www.naruwasco.co.ke. Therefore, interested bidders are requested to visit this website regularly for amendment / notification / clarification / selection result etc.

3. Evaluation of Consultants EOI Application

- i) Stage-1- Prequalification Requirement: The applicants must submit the following mandatory documents to satisfy the requirements as per Table-1.

Table 1 – Pre-Qualification Requirements

S/No.	Requirements	Compliance (tick)	
		Yes	No
1	Valid business trade license and company registration certificate and valid license in consultancy services registration certificate issued in Kenya by a recognized professional body		
2	Valid tax compliance certificate		
3	Document evidence of academic qualifications and training certificates in the field of Engineering planning and design.		
4	Copy of dully certified commitment letter/undertaking from the expert(s) in case of firm(s) hiring individual(s) outside the firm		
5	Document evidence of capability and experience of similar consultancy services Must attach evidence like the completion certificate		
6	Eligibility declaration as per Annex-1		
<p>Note:</p> <ul style="list-style-type: none"> • Failure to fulfill the above requirement (1 to 6) will lead to disqualification and shall not be considered for further evaluation. • The original or attested copy of S/No. 5 must be submitted <i>later</i> during the submission of <i>technical proposal</i>. 			

- ii) Stage II: Detailed Evaluation: Only those Consultants who have met the *Stage I Post Qualification Requirements* shall be considered for this Stage II evaluation. The detail evaluation shall be carried out as per criteria set out in Table 2 below against allocated score to each criterion. **The minimum score required for short listing is 70 point.**

Table 2

S/No.	Criterion	Weighing (%)	
		Max. point	Scores
1	Capabilities of the Consultancy Firm	20	
2	Availability of appropriate skills among key staff (Attach evidence)	20	
3	Demonstrated capacity to handle the assignment in terms of resources	30	

Feasibility Study and Detailed Design of Drinking Water treatment plant in Bahati sub-county, in Nakuru county

4	Experience in similar assignment with concrete evidence	20	
5	Availability of appropriate equipments required for the assigned task	10	
Total		100	

1) Capabilities of the Consultancy Firm: Provide the firm's capacity and areas of expertise in the field of assignment. *(use separate sheet if necessary)*

2) Availability of appropriate skills among key staff: List down all the skills / expertise of key staff and their role and responsibility in this assignment based on draft TOR. *(Use separate sheet if necessary)*

- 3) Demonstrate the capacity to handle the assignment in terms of resources:** Referring to draft TOR, indicate the detail *qualification of key staff; Organization and staffing; and Understanding of the assignment. (Use separate sheet if necessary).*
- 4) Experience in similar task:** Explain the detail of Water treatment plant or similar assignments/works carried out for the last 5 years (*use separate sheet if necessary*).

- 5) Availability of appropriate equipments required for the field and design works:** List down all the available equipments that are required for field and desktop works such as survey equipments, design software etc). *(use separate sheet if necessary)*.

4. Additional Information:

- i. Financial Strength (Annual Turnover for the last 5 years) (use separate sheet if necessary).*

Fiscal Year	Annual Turnover in Kes
Total	

- ii. Work in hand details / Firm's on-going projects:* Briefly describe firm's current project(s) as per the format below. A list of all on-going projects shall be mentioned. If the Firms are shortlisted with numerous similar or non-similar works in hand, condition of selection will be outlined in the TOR enclosed in RFP document. *(use separate sheet if necessary)*.

Feasibility Study and Detailed Design of Drinking Water treatment plant in Bahati sub-county, in Nakuru county

S/No.	Type of consultancy services/work	Name of the agency	Date of commencement of the contract	Contract duration	Current status	Engagement of key staff in the existing project(s)
*Submit work plan & staffing schedule in the existing projects.						

Feasibility Study and Detailed Design of Drinking Water treatment plant in Bahati sub-county, in Nakuru county

iii. Application's Information [*Letterhead paper of the Firm must be used*]

1. Name of Firm / Company:

2. Type of Constitution:

(Partnership/Pvt Ltd./Public Ltd/Public Sector/Joint Venture/Others)

3. Date of Incorporation / Commencement of Business (please specify):

4. Place of Incorporation:

5. Details of Services Provided:

6. Registered Office / Place of Business (Physical address):

7. Telephone No; Fax No; email address:

Feasibility Study and Detailed Design of Drinking Water treatment plant in Bahati sub-county, in Nakuru county

8. Name of authorized contact person / Designation / Address/Telephone:

9. Consultant's Organization (*Insert organizational structure*):

Annex-I

5. Eligibility Declaration

[Letterhead paper of the Firm must be used]

Name of Project	Feasibility study and detailed design of drinking water treatment plant in Bahati sub-county in Nakuru county
EOI Reference Number	NRW/BHT/WTP/11/2020-2021

The Managing Director,
Nakuru Rural Water and Sanitation Company Limited,
P.o Box 386-20100,
Nakuru.

Sir,

We hereby declare that:

- (i) we acknowledge that we have read the advertisement, EOI document including the terms of reference (TOR) for this assignment.
- (ii) we have not been engaged to prepare such TOR as a firm and
- (iii) no full-time or part-time or contracted expert employed by our firm to prepare such TOR.
- (iv) we are not declared ineligible by PPRA or NARUWASCO while doing consulting business.

We further confirm that, if any of one or more of our experts is engaged to prepare TOR for any ensuing assignment as part of our work project under the assignment to which this advertisement relates, our firm and any such expert(s) will be disqualified from short-listing and/or participation in such follow-on assignment.

Firm	
Signed by:	
Position	

6. Terms of Reference (TOR) for Feasibility Study and Detailed Design of Water treatment plant in Bahati sub-county in Nakuru county.

1. Background

Bahati Sub-County has five wards: Dundori, Kabatini, Kiamaina, Lanet/Umoja and Bahati. The total area of Bahati Sub-County is 375.4 KM². The Sub-County has a total population of 162, 985.

The area and population of the five wards is as follows:

Ward	Area in KM²	POPULATION
1. Dundori	54.9	27,471
2. Kabatini	62.1	33,473
3. Kiamaina	52.1	35,412
4. Lanet/Umoja	50.2	31,646
5. Bahati	156.1	34,983
Total	375.4	162,985

Bahati Sub-County which is located within Nakuru County, Kenya (Fig. 1). It is made up of 5 wards of which 5 wards which include Dundori ward, Kabatini ward, Kiamaina ward and Bahati ward, and Lanet/Umoja which is not an agricultural area. The greater Nakuru County is in Rift valley province and occupies an area of 7,242.3km². It is located between longitudes 35°28' and 35° east and Latitude 0°13' and 10°10' South at an altitude of about 1912 meters above sea level. Bahati Sub-County has a population of 141,352 covering an area of 375.40km² (KNBS data 2009). Nakuru County has predictable weather patterns with temperatures ranging between 10°C during the cold months (July and August) and 20°C during the hot months (January to March). Bahati Sub-County receives between 700mm and 1200mm of rainfall annually, with average annual rainfall being an approximated 960mm. Nakuru County which covers Bahati Sub-County has two rainy seasons; March, April, May (long rains) and October, November, December (short rains). The soils are complex due to influence by variations

Feasibility Study and Detailed Design of Drinking Water treatment plant in Bahati sub-county, in Nakuru county

in relief, climate and underlying rock types. The major soils fall into three categories: Latosolic soils, Planosolic soils and Alluvial soils [3].

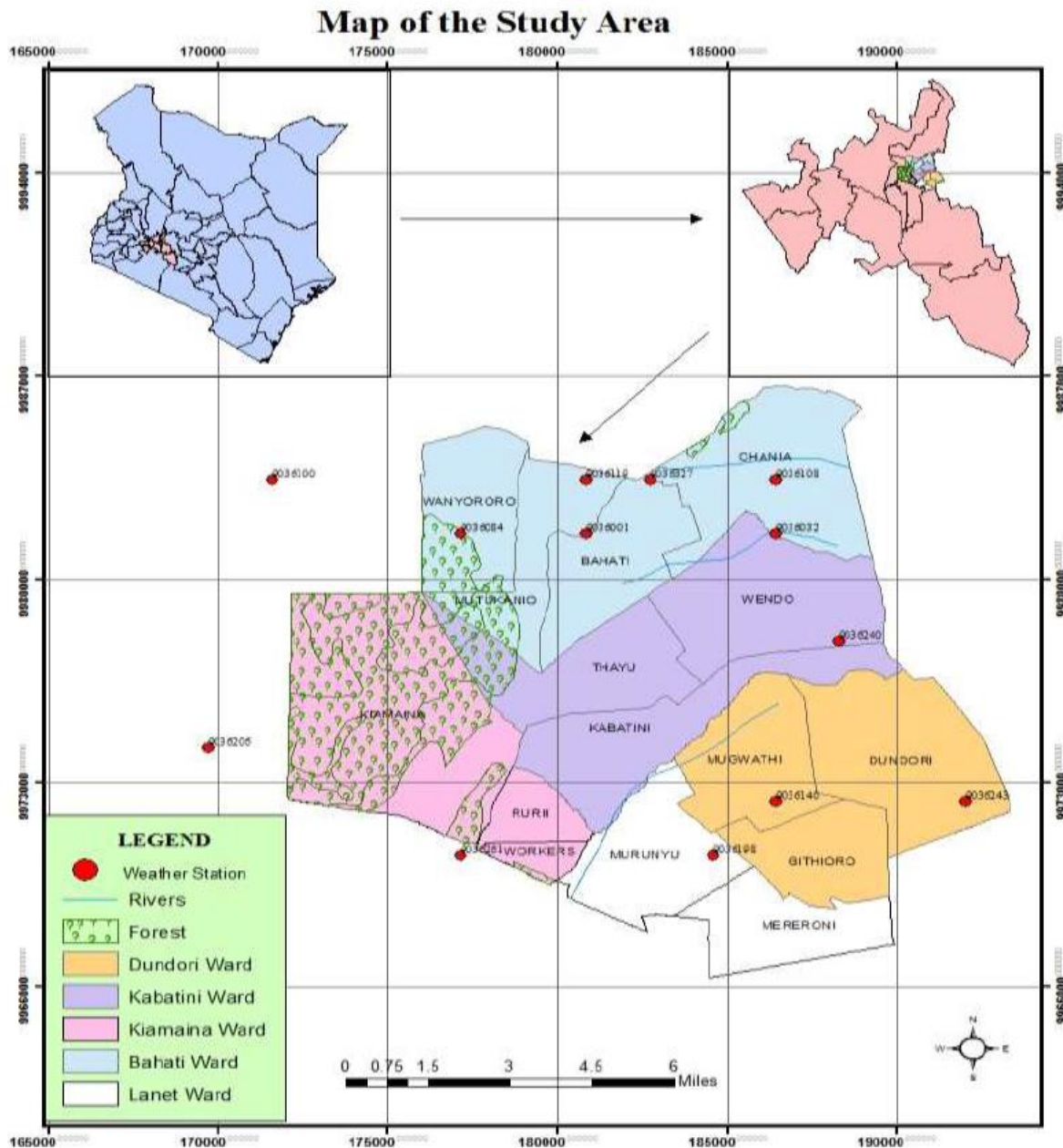


Figure 1: A map of Bahati sub-county

The strategic location with favourable climate, and reliability of water source is a huge potential for Bahati to become investment Hub. However, inadequacy of drinking water is the key issue for the development of WTP. Currently, Chania river is the main sources of water for Bahati sub county Apart from these sources, small seasonal spring water also exists across Bahati sub county.

Over the years, due to water shortage, water disputes have emerged between Bahati community as water tapped upstream leaves inadequate water downstream for agricultural purpose.

Consumption of water in Bahati has increased partly because of increased in the population and partly because of increase in per capita use of water. In the past, community used common kitchen, but now, majority of them (around 80%) are self-caterer.

Currently, Bahati sub county lack water supply system and the consultant must come up with the most reliable and economical system to cater for the projected population. The consultant should also explore best and appropriate solution to address the water shortage.

It is preferable to have gravity supply and consultant should also study other alternatives to tap water sources and propose the best option, which will be approved by the client.

2. Objectives

The objective is to conduct feasibility study and detailed design of the water treatment plant in Bahati sub-county in Nakuru county in order to facilitate supply of reliable, safe, and wholesome drinking water to the consumers. This shall include identification and selection of the most feasible source and prepare detailed designs and drawings, cost estimates, technical specifications, and bidding document for the water supply scheme.

3. Scope of Work

The scope of work basically includes feasibility study and detailed design of the water treatment plant in Bahati sub-county in Nakuru county from water source to distribution reservoirs. The breakdown of scope of works to be carried out by the consultant shall include but may not be limited to the following:

3.1. Current Situation

The consultant should study the current situation of water source system at Bahati including existing water infrastructures and explore the possibility to augment these facilities in the overall Water treatment plant proposal, if any. The current water sources and other potential sources should be studied also. All in all, the study should aim at providing adequate and reliable water supply to the population of the Bahati sub-county in most efficient and cost-effective manner without compromising on the 24 x 7 water supply.

3.2. Data collection and analysis

The available plans, reports and relevant information on the water sources, current and projected development and physical planning on the basis of the Bahati sub-county shall be acquired and reviewed if any. The stake holders must be consulted and conduct necessary field visit for assessment of the project site and the existing and other potential water sources/Locations to establish the suitability of water sources/locations. Subsequently, data gaps and further survey and investigation requirements shall be identified and be carried out accordingly as required. All relevant data including population, water demand, ongoing and planned developments, etc. shall be analysed in order to arrive at the projected estimates of water supply demand in Bahati over the ultimate design period.

3.3. Source selection

The probable sources could be gravity from Bahati forest from Bahati Chania river. Another possible source could be Suitable and well-located water wells within Bahati Sub county. The consultant should study the various options of water sources considering the reliability of the source, the water yield and demand, raw water characteristics (Biological, Chemical and Physical), treatment requirements, capital and O&M costs, water abstraction infrastructure required, etc. The flow measurement of each possible has to be carried out on a monthly basis at least two times during the contract period. The most economical option has to be selected on the basis of technical, environmental, social and sustainability aspects and present to the client for approval prior to their detailed design. However, the consultant is expected to study all the potential sources apart from those probable sources mentioned above.

3.4. Intake

After selecting the most reliable source(s), the appropriate and most economical intake structures should be designed or improved further. The deliverable shall include but not limited to the following

- Process design and drawings of Intake.
- Design and drawings of intake structures.
- Structural design and drawings of civil structures and ancillary buildings, if any.
- Any other site development works, to be required as suggested/recommended.

3.5. Design of Raw Water Main

The consultant should study and propose the best route option for alignment of the water main from source to the treatment plant and to the distribution reservoirs, if any. The appropriate technical tools shall be adopted to work out the best route options. The client must approve the proposed alignment prior to design proceedings. The detailed hydraulic and engineering design shall be carried out for the sizing of the raw water main. If pumping is required, the location for the bore wells, pumping station(s), etc. shall be identified and the pump capacity, electrical design for the pumps, etc. shall be designed. The analysis of alternatives for the water abstraction arrangement, its location, transmission main alignment and materials, etc. shall be carried out and the most economical shall be recommended. The consultant shall deliver the following deliverables but not limited to:

- i. Detailed topography map clearly showing the main conduit alignment.
- ii) Design and drawings of conduit size.
- iii) Design and drawings of necessary supports for pipe mains depending upon the topography and site condition.
- iv) Any other requirements if it is necessary.
- v) Detailed horizontal and vertical profiles of the pipelines.
- vi) Architectural impression of the water treatment plant.

3.6. Design of water treatment plant

The hydraulic and engineering design for different components of the water treatment plant shall be carried out. The various alternatives available to treat water has to be studied and the most appropriate system shall be recommended considering factors such as raw water and treated water characteristics, capital and O&M costs, use of chemicals and energy, need for management expertise, etc. The various alternatives for the pipe materials, flow measuring devices (water meters), type of storage structures, etc. shall be analysed and the most economic solution shall be recommended. The land requirement and location of the WTP must be appropriately identified taking into consideration the command areas.

The consultant shall deliver the following but may not be limited to:

- i) Process Design and Drawings for the Water Treatment Plant.
- ii) Structural Design and Drawings of Civil Structures and Ancillary Buildings.
- iii) Design and Drawings for Electro-mechanical components
- iv) Necessary Design, Drawings for Instrumentation and Supervisory Control and Data Acquisition (SCADA)
- v) Any other Design, Drawings and Diagrams that may be necessary for execution of the works.
- vi) Detailed layout of the Water Treatment Plant showing the location of the various units along with detailed layout of the Water Treatment Plant.

- vii) Architectural details of Buildings.
- viii) Storm water drainage system of the Treatment Plant Area
- ix) Drinking Water Supply system to individual buildings in the Treatment Plant area
- x) Wastewater treatment and disposal system for WTP and other buildings
- xi) Electrifications
- xii) Any other site development works, to be required as suggested / proposed.

3.7. Distribution Reservoirs

The suitable type of distribution reservoirs must be proposed by the consultant upon identifying the appropriate location of the distribution reservoirs depending upon the site condition and as per the settlement pattern and technical requirements. The land required for distribution reservoirs and their locations must be appropriately identified taking into consideration the existing and projected settlement trend. The gravity supply shall be preferred.

The following deliverables shall be submitted but not limited to the following:

- i) Process Design and Drawing of the Distribution Reservoirs
- ii) Structural design and drawings of civil structures and ancillary infrastructures.
- iii) Design and Drawings for Electro-mechanical components
- iv) Necessary Design, Drawings for Instrumentation
- v) Any other Design, Drawings and Diagrams that may be necessary for execution of the works
- vi) Detailed layout of the reservoirs showing the location of the various units along with detailed layout of the reservoirs.
- vii) Storm water drainage system of the distribution area.
- viii) Architectural details of Buildings if required.
- ix) Drinking Water Supply system to individual buildings in the reservoir area if any
- x) Electrifications
- xi) Any other site development works, to be required as suggested / proposed

3.8. Preparation of BoQ, specifications and bidding documents

The detail estimate for each component of the water treatment plant which primarily includes construction of intake/pump house and raw water main/pumping main, construction of water treatment plant and construction of storage reservoirs shall be prepared. The detailed estimate and costing shall be prepared using the latest building schedule rates (BSR) and for those items which are in the BSR, the cost analysis shall be carried out using realistic market rates. The BoQ and specifications for the materials and workmanship shall be developed for each component of

the water works and item wise. The bidding document conforming to the procurement rules and regulations and the standard bidding documents shall be prepared.

The Operation and Maintenance Manual for the whole Water treatment plant shall be prepared. The operation cost for the whole system which should include pumps and other mechanical equipments shall also be prepared.

Based on the tasks outlines above the consultant shall have the following activities completed for readiness to implement the project.

- i) Map showing the whole water treatment plant Scheme indicating location of each components of Water Supply Scheme.
- ii) Detailed design of all the components of the scheme using best practice and design criteria approved by the client;
- iii) Engineering and hydraulic drawings with adequate details;
- iv) Detailed cost estimates (capital and operating) for each component of the scheme;
- v) BoQ and specifications for the materials and workmanship;
- vi) Bidding documents conforming to the procurement rules and regulations and the standard bidding documents;
- vii) Operation and Maintenance Manual of the Scheme.

7. Qualification and Expertise

The consultancy firm shall offer a complete team of experts who are fluent in written and spoken English in order to carry out the required tasks in the most professional and competent manner. The team shall comprise at a minimum the required experts involved in the performance of the tasks. The team composition and roles, with credentials and qualification must be clearly presented in the proposal and an organization chart showing the hierarchy in the management structure and flow of instructions/information must be inserted. The consultancy firm shall be a reputable institution which has completed similar water supply projects. The team shall comprise at a minimum the following:

- 1 Team Leader (degree in civil engineering/water engineering/hydrology)

Feasibility Study and Detailed Design of Drinking Water treatment plant in Bahati sub-county, in Nakuru county

- 1 Structural engineer (degree in civil engineering/structural engineering)
- 1 Surveyor

Note: The detail requirements of experts will be detailed out in the TOR enclosed with RFP.

In addition, the expert team above shall be supported by the necessary technical and administrative support staff in order to deliver and complete the contract in a successful and timely manner and should be indicated in the proposal. The Team Leader will be the contact point for all correspondences and will be authorized to receive instructions/information from the Client.

8. Deliverables

The Consultant must submit the following deliverables:

- Concept design report – The report must have a draft schematic flow diagram with comprehensive justification of the scheme for the options on the source selected and the type of treatment.
- Feasibility Study report – The report will have the feasibility study report for the whole Water treatment plant covered under the scope of this contract.
- Draft design report – The draft report must include detailed engineering and hydraulic design and drawings of all the components of the scheme, detailed cost estimates and BoQ, specification of the materials and workmanship and bidding documents.
- Final design report including finalised engineering and hydraulic design and drawings of all the components of the scheme, detailed cost estimates and BoQ, specification of the materials and workmanship and bidding documents.
- Operation and Maintenance Manual for the whole system.

All reports must be in English and shall be subject to the client's approval. Where required, the reports should be delivered in three (3) hard copies and one electronic version (on flash disk, written in an application compatible with MS Office, PDF and AutoCAD for drawings).

9. Consultant Responsibilities

The consultant shall be expected to:

Feasibility Study and Detailed Design of Drinking Water treatment plant in Bahati sub-county, in Nakuru county

- i) Provide transport, accommodation and related allowances to its staff.
- ii) Provide the computers and related equipment to its staff.
- iii) Provide stationery and other related materials for producing reports for the assignment.
- iv) Make arrangements to carry out relevant surveys or any other studies deemed to be necessary.
- v) It is imperative that the consultant be on-site for the duration of the assignment.

10. Client Responsibilities

The client shall provide and make available to the Consultant, free of charge, the following facilities, services, documents and information as they are required by the Consultant to carry out the works specified in the contract in Bhutan.

- 1. Office space and facilitation of meetings, appointments etc.
- 2. Translation and interpretation services and communication facilities
- 3. Documents, data, statistics, information and maps at the disposal of the NARUWASCO.

11. Counterpart Staff

The consultant shall work very closely with the technical department to ensure smooth delivery of the assignment and transfer of skills for sustainability of the program.