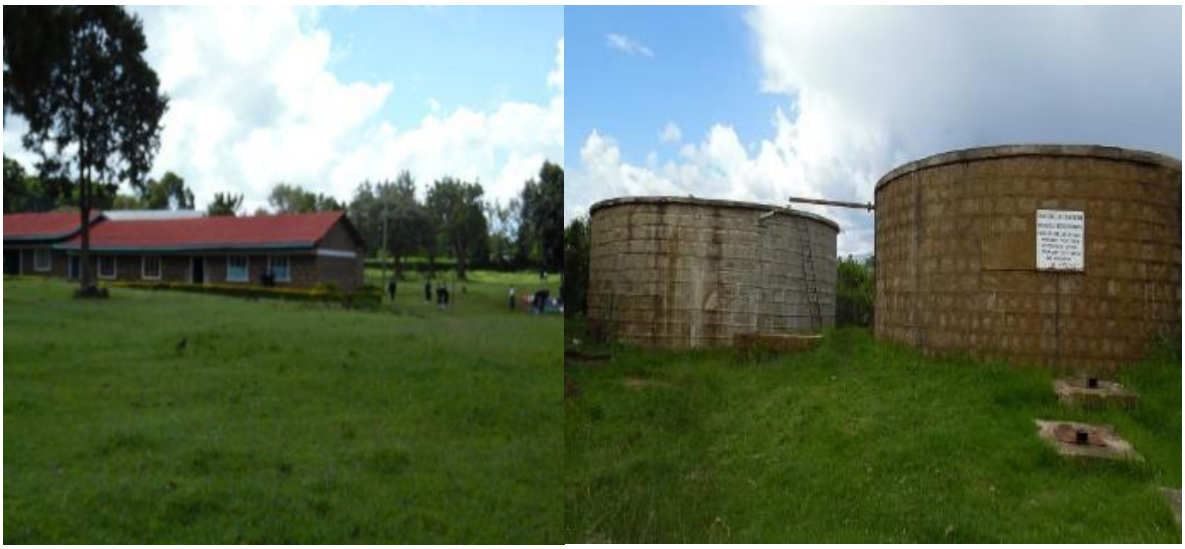
WATER AND SANITATION SERVICES IMPROVEMENT PROJECT ADDITIONAL FINANCING (WaSSIP AF)

RESETTLEMENT ACTION PLAN SCREENING REPORT FOR CONSTRUCTION OF BOREHOLES WITHIN TANA WATER SERVICES BOARD



September 2015

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1.0 INTRODUCTION

1.1 Background of the Project

The Government of Kenya with the support from the World Bank has been implementing the Water and Sanitation Service Improvement Project (WaSSIP). The Government has now secured further financing from the World Bank under the Water and Sanitation Service Improvement Project Additional Financing (WaSSIP AF) project that was made possible because of the satisfactory implementation of the 'original' WaSSIP and its contribution to water services improvement. In order to consolidate gains so far realized and to scale up improvement of water services, WaSSIP AF will focus development of new water sources, rehabilitation and expansion of water and sanitation (WSS) infrastructure including drought response activities and capacity building for water sector institutions supported by the Project.

The Project's development objectives are:

a) To increase access to water supply and sanitation services; and
b) To improve the water and wastewater services in the areas served by Athi Water Services Board, Lake Victoria North Water Services Board, and Coast Water Services Board.

Part 1 of the WASSIP AF Project involves Support to the Athi Water Services Board (AWSB). This component supports the rehabilitation and extension of water supply systems, the development of additional water sources for Nairobi, drought mitigation measures, and improvements in wastewater collection and treatment facilities in the jurisdiction of the Athi Water Services Board (AWSB). Technical assistance will also be provided to the AWSB and its water services providers, the Water Services Regulatory Board, and the Water Appeal Board.

In the implementation of the WaSSIP AF Project and other projects funded by Government of Kenya and other development partners, AWSB is currently drilling and equipping five (5 No.) boreholes within Tana Water Services Board (TWSB) area of jurisdiction. The boreholes are Anjaru-Kithuru, Gundua, Kajiampau, Naari Secondary School and Ndiriti-Aguthi boreholes.

1.2 Project Location

The five boreholes are spread within three (3) counties i.e. three boreholes (3) in Meru County and one borehole (1) each in Tharaka Nithi and Nyeri Counties. They are as shown in Table 1.1.

Table1.1 Location of the proposed boreholes

No	Borehole	Location
1.	Anjaru Kithuru Borehole	Anjari Kithuru area in Igembe North Sub County, Meru County.
2.	Gundua Borehole	The proposed borehole site is located about 6 kilometers North West of junction of Nanyuki Meru tarmac road at the former Imenti total petrol station within Gundua secondary school near Ex lewa/Kisima shopping center in Buuri District, Meru County.
3.	Kajiampau Area Borehole	The proposed borehole site is situated at Kajiampau area in Kathwana, Tharaka Nithi County.
4.	Naari Secondary School Borehole	The proposed borehole site is situated at Naari Secondary School in Buuri Sub-County in Meru County.
5.	Ndiriti Aguthi Borehole	The proposed borehole site is situated at Ndiriti sub location of Kieni East Sub County in Nyeri County.

1.3 Objectives of the RAP Screening Report

The main objective of this screening process is to identify and highlight the resettlement and social issues that need to be taken into account in the planning, design and drilling of the five boreholes in Meru, Tharaka Nithi and Nyeri Counties. This process will set the ground for further reports that may require to be done especially to ensure compliance with World Bank safeguards. Further, this screening will assist in determining if this project requires a full Resettlement Action Plan done before its implementation. The aim is to support the sustainable implementation of the planned borehole projects. The screening is carried out at an early stage of the project (i.e., pre-feasibility), in accordance with the requirement for World Bank financed projects.

2.0 PROJECT DESCRIPTION

The goal of the project is to improve access to portable water for the people of Meru, Tharaka Nithi and Nyeri Counties. With the completion of the project, the increased amount of water will lead to increased number of water connections to the community. Increased access to water is also expected to boost livestock production leading to improved livelihoods.

2.1 Project Implementation

The proposed project will involve construction/drilling and casing of the borehole, test pumping, water quality analysis and installation of pump set. It also involves construction of storage tanks and in some instances laying of water pipelines.

2.2 Borehole Drilling

Boreholes may be drilled with either percussion (cable-tool) or rotary plant: the former have the advantage of lower cost, but the disadvantages of longer time at site, less flexibility in borehole development, and the greater possibility that temporary casing will be needed to hold back heaving or unstable formations.

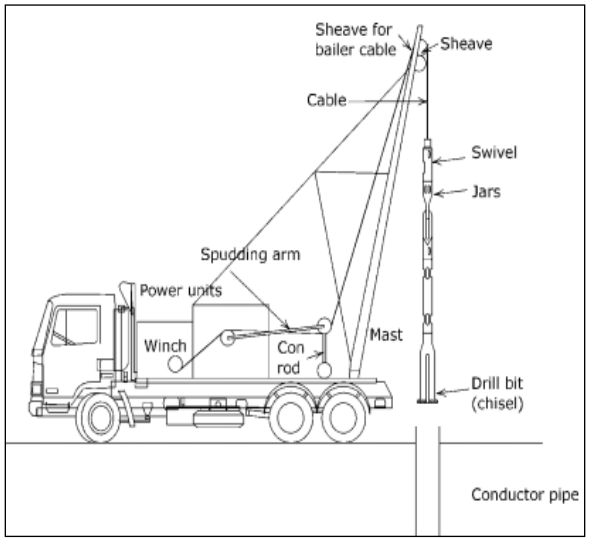

Figure 3.1a: *Percussion drilling rig*

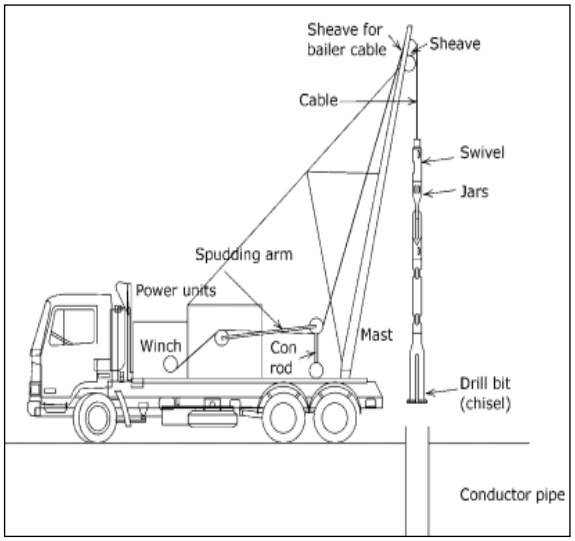

Figure 3.1b*: Rotary drilling rig*

In percussion drilling, a string of heavy cutting tools is suspended on a cable which passes over a sheave (pulley) mounted on a mast, beneath a sheave on the free end of a spudding arm (which

imparts the reciprocating motion to the tool string), over the sheave at the base of a spudding arm, and is then wound on a heavy duty winch. The cable is a non-performed, left-hand lay, steel-wire rope. The left-hand lay of the cable tends to impart a slight rotation to the tool string and to tighten the right hand threaded joints of the string. Power is normally supplied by a diesel engine. The whole rig can be mounted on a truck or trailer and is quite mobile.

Rotary plant is more expensive to use, but it is considerably faster. Rigs with a compressor and mud pump allow efficient development (i.e. jetting and air lifting), which percussion rigs cannot emulate. In addition, approximate yields may be estimated during drilling, from the air-blown volume of water and cuttings (when air rotary techniques are used).

UNICEF-WES, OXFAM and DEMOTECH deploy a PAT 301 rig for work in the northern Kenya. Despite its small size, this machine generally has enough capacity to drill boreholes of the depth and diameter being considered in this study. However, considering its limited capacity, this rig may have difficulties in penetrating fresh to nearly fresh basement rocks.

2.3 Testing

Once the borehole has been drilled, testing is done in order to:

(i) Confirm yield, efficiency and performance;

(ii) Investigate water quality;

(iii) Assess whether abstraction can be sustained in terms of yield and quality;

(iv) Identify potential impacts; and

(v) Characterize the aquifer properties such as transmissivity, hydraulic conductivity and storage.

2.4 Borehole Development and Cleaning

This shall be carried out upon completion of the drilling and installation of casing/screens until the water is completely free from fine particles. This will remove the native silts, clays and drilling fluid residues deposited on the borehole wall and adjacent portions of the aquifer during the drilling process. Cleaning shall be carried out by airlift pumping, surging, backwashing or jetting.

3.0 LEGAL AND REGULATORY FRAMEWORK

3.1 Legal Framework

One of the principles of the Resettlement Action Plan (RAP) is that resettlement planning should adhere to national policies and legislation, and international best practices. This section provides a brief overview of the Kenya laws and provisions related to land use, planning, acquisition, management and tenure, and more specifically the legislations related with land expropriation or acquisition, land valuation and land replacement. It also provides the World Bank Policy on resettlement. The legislative frameworks relevant to the project are discussed in Table 3-1 below:

Table 3.1 Legislative and Policy Framework

Kenyan Laws	
Legislation	**Relevance**
Land Act 2012	This Act gives effect to Article 68 of the Constitution, to revise, consolidate and rationalize land laws; to provide for the sustainable administration and management of land and land based resources, and for connected purposes.
Environmental Management and Co-ordination Act 1999 (EMCA)	Development in relation to the following provisions: • Environmental impact assessment; • Environmental Audit and Monitoring, Environmental Quality standards and environmental protection orders;
Environment and Land Court Act, Cap 19 of 2011	Covers arbitration on issues relating to the environment or to the use and occupation and title to land.
World Bank Policies	
Legislation	**Relevance**
Involuntary resettlement (Operational Policy, OP 4.12)	Related to land acquisition and resettlement in the event that private land will be required for the drilling of the boreholes.
Environmental Assessment: Operational Policy, OP 4.01	OP 4.01 covers impacts on the natural environment (air, water and land); human health and safety; physical cultural resources; and trans-boundary and global environment concerns.

3.2 Institutional Framework

During the RAP preparation process, a number of key institutions are critical to both preparation, and implementation of the RAP. This is summarized in Table 3.2 below.

Table 3.2 Statutory Institutions with Roles in the RAP process

Institution	Role
County Government of Meru, Tharaka Nithi and Nyeri	Has the responsibility of planning and enforcing policies to discourage encroachments on acquired land for public use.
WSPs	These are water service providers mandated to provide efficient and effective water and sewerage services within their areas of jurisdiction. They will run the project upon completion.
National Environment Management Authority (NEMA)	Approving and issuing EIA licenses for projects which have addressed environmental and social impacts
Water Resources Management Authority (WRMA)	Demarcation of the Government riparian reserve
AWSB/TWSB	Provision of counterpart funding – part of which is used to settle compensation claims by project affected persons (PAPs) and facilitation and implementation of the RAP.
Local Administration (chiefs/assistant chiefs etc)	Facilitation and mobilization of public meetings, dispute resolution at the local level, assisting in the identification and verification of PAPs.

4.0 POTENTIAL IMPACTS

This section outlines the potential negative impacts that are anticipated and will be associated with the drilling of the boreholes. The impacts will be related to activities carried out during construction, commissioning, operations, maintenance and decommissioning phases.

4.1 Land take

Most of the land under this project is publicly owned hence no land will be acquired for the drilling of the boreholes. A summary of ownership of the parcels where the boreholes will be drilled is as shown in Table 4.1.

Table 4.1 Summary of land ownership

No	Borehole	Details of each borehole		Comment/Mitigation Measure
1.	**Anjaru Kithuru Borehole**	**Parcel No**	Plot No. 10623	The owner of the land sold a portion to the community therefore, no impact is anticipated.
		Land ownership	Samuel Kiberia NB: The land has been sold to the community and title is being processed	
		Size of land acquired for the borehole	0.1 Acre	
		Land use at site	Vegetation cover	
		Location	0.29908°N, 037.94466°E	
2.	**Gundua Borehole**	**Land ownership**	Gundua Secondary School	This is a public land therefore no negative impact on livelihood is anticipated.
		Size of land acquired for the borehole	0.1 Acre	
		Land use at site	Vegetation cover	
		Location	00.120600N, 037.397050E	
3.	**Kajiampau Area Borehole**	**Land ownership**	Community Land donated by PCEA church	The general land is being used for cropping but the section where the borehole will be drilled has an existing shallow well which is not in use. Therefore, there will be no negative impact on livelihood
		Size of land acquired for the borehole	Borehole site will be drilled in a land set aside for polytechnic. (approx.. 15acres)	
		Land use at site	Cropping	
		Location	0.317720S, 037.847550E	

No	Borehole	Details of each borehole		Comment/Mitigation Measure
4.	**Naari Secondary School Borehole**	**Land ownership**	Naari secondary school	This is a public land therefore no negative impact on livelihood is anticipated.
		Size of land acquired for the borehole	0.5 Acre	
		Location	0.09556N, 037.59452°E	
5.	**Ndiriti Aguthi Borehole**	**Land ownership**	Ndiriti Aguthi water project	This land is owned by the local community and has dedicated it to water projects, therefore, there will be no negative impact on livelihood
		Size of land acquired for the borehole	0.5 Acre	
		Land use at site	Dedicated area for water tanks and tree nursery	
		Location	01.26985S, 036.80920°E	

4.2 Loss of Livelihoods

With the construction of the five (5) boreholes within TWSB, no negative impact on livelihood is expected. This is because four (4) of the boreholes are located on public land. The owner of the land where the fifth borehole will be drilled sold the land to the community and was paid for the same. The title deed is being processed to reflect the same.

4.3 Impacts on Public Health

Some of the public health issues related to construction works are HIV/AIDS and other communicable and sexually transmitted diseases (STDs). It has been observed that construction works and projects increase disease prevalence through sexual interactions between project staff and local communities. However, no camps will be put up that might attract concentration of prostitutes. The contractor will, as part of each workers initial orientation and on-going education, provide public education information about HIV/AIDS and prevention measures. Condoms will be made available to project workers at no cost. This impact is considered minimal.

4.4 Social Vices

Construction activities will attract an influx of people to the project area. This may lead to social vices like drug abuse, spread of diseases like HIV and may pose security concerns. Sensitization and awareness creation need to be done before and during the construction works.

5.0 RECOMMENDATIONS

Based on the above screening results, the project has no Project Affected Persons since the land needed for drilling all the five boreholes belongs to government institution or community land hence categorized as public land. This only requires consent from the respective institutions for the works to commence. This means therefore that there is ***no need of carrying out a detailed Resettlement Action Plan.***

Plate of Photographs

Proposed borehole site at Ndiriti Aguthi

Proposed borehole site at Naari Secondary School

Proposed Borehole Site at Kajiampu Area