Osiligi Charity Projects

Repair of broken hand pumps

in Kenya

FF 0559-44

2021 Final Report

For Fondation Eagle

Jan - Sept 2021

Contents

Summary

This report outlines the progress made from Jan – Sept 2021 by the Osiligi charity on the restoration of hand-pumps in the rural district regions of Kenya. Despite the continuing restrictions from Covid-19, in health, travel and an increase in material and travel costs, the Kenyan team of 7 RCP's (Regional Contact Person), contractors and local contacts have managed to repair/restore/recycle/replace and install a total of 206 handpumps. This has provided access to water to around 61849 people in the rural communities and 4811+ homesteads. This will include schools, health centres and dispensaries and was achieved with the funding donated by the Eagle Foundation. The 3 years of funding from the Eagle Foundation has allowed for 623 pumps to be repaired / restored giving water to around 181,000 people. The cost per person helped is less than £1 per person.

Introduction

This project was funded by a £45,000 donation made on the 9th December by Fondation Eagle. The aim of this project is to repair, restore and replace, in a sustainable manner, non-functional hand-pumps in order to provide access to ground water to a rural community. If a hand-pump fails in a rural community they then have to find an alternative.

If they cannot afford to purchase water, they will go to an open water source, a puddle, river, pond, a well or neighbouring hand pump closest to their village. This can run the risk of drowning when collecting water from a river, or being attacked by an animal en route to the source, especially for young girls. It also runs the risk of waterborne diseases, such as typhoid, cholera, dysentery and diarrhoea. This can cause death and be responsible for health problems in a community, rendering them unable to work. It is the women or young children, mainly young girls, who carry out this activity. So if the women are unable to work it will affect their income and the time taken to collect the water will mean that the children will miss out on their education and not be able to access the job market.

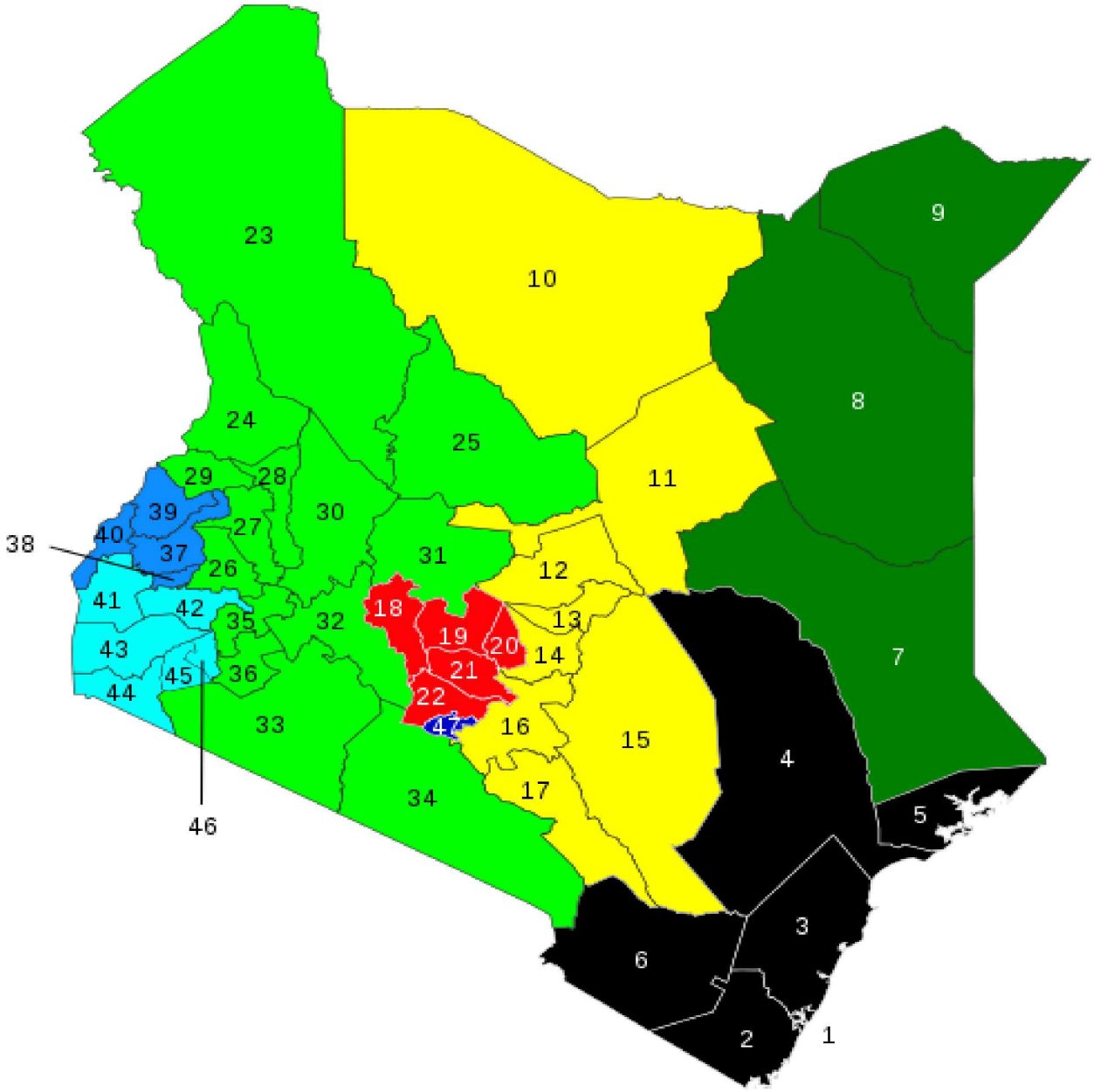
If they can afford it, they will have to purchase water from an alternative source. A neighbouring community hand-pump or bottled water may cost from 5 – 20Ksh for 20L weighing 20 Kg.

Hand pumps need basic but periodic maintenance to continue to pump ground water efficiently. The Osiligi charity offers to train the local community and get them involved in the restoration of their hand-pump.

The RWSN study from 2009 shows that from the then installed base of 12,000 hand pumps in Kenya, 3600 hand-pumps (30%) were broken. Many more hand pumps have been installed since 2009. Although the Osiligi charity has restored almost 1475 hand-pumps since 2015, there is still more work to do. We don’t know the exact number of hand pumps still broken but we suspect that it still runs into the thousands.

The locations of pumps repaired.

The figure below indicates the areas in Kenya where the Osiligi charity is restoring hand pumps; Siaya (number 41 on the map below), Kisumu (42), Homa Bay (43), Kitui (15), Makueni (17), Kajiado (34), Kwale (2), Kitui (15), Machakos (16), Narok (33), Mombasa (1).



1	Mombasa	13	Tharaka-Nithi	25	Samburu	37	Kakamega
2	Kwale	14	Embu	26	Trans Nzoia	38	Vihiga
3	Kilifi	15	Kitui	27	Uasin Gishu	39	Bungoma
4	Tana River	16	Machakos	28	Elgeyo-Marakwet	40	Busia
5	Lamu	17	Makueni	29	Nandi	41	Siaya
6	Taita-Taveta	18	Nyandarua	30	Baringo	42	Kisumu
7	Garissa	19	Nyeri	31	Laikipia	43	Homa Bay
8	Wajir	20	Kirinyaga	32	Nakuru	44	Migori
9	Mandera	21	Murang'a	33	Narok	45	Kisii
10	Marsabit	22	Kiambu	34	Kajiado	46	Nyamira
11	Isiolo	23	Turkana	35	Kericho	47	Nairobi
12	Meru	24	West Pokot	36	Bomet		

The Osiligi charity is not restricted to these regions and our repairers can and do work in neighbouring regions to assist in the restoration of a pump if required. The repairers work with local contacts, contractors, local authorities, MCA's, Chiefs, Leaders and the communities to identify the location of a pump, prioritise and then manage the restoration of the pumps. An acknowledgement of the other party's contributions are given at the end of this report.

Why and how do we repair a hand pump?

SDG Sustainable Development Goals. Goal 6 Clean water and sanitation.

While substantial progress has been made in increasing access to clean drinking water and sanitation, billions of people—mostly in rural areas—still lack these basic services. Worldwide, one in three people do not have access to safe drinking water, two out of five people do not have a basic hand-washing facility with soap and water, and more than 673 million people still practice open defecation.

Although 1473 hand pumps have been repaired by the Osiligi charity in Kenya since the start of the project, there are more than 2000 hand pumps (RWSN) still not functioning. To identify the location of a broken hand-pump we need the support from stakeholders, communities, local contacts and authorities to identify their location or to provide additional support such as supplying a tank or making repairs to the base or surrounding fences. Stakeholders combining their effort and resources will mean that the project becomes deliverable and more effective in the use of resources, holding down vested interests and in its future success and maintainability of the pump. At the end of the day, it is the community's hand pump so the more we can engage the local community, the more chance there is of long term success.

A Memorandum of Understanding (MOU)'s is used as an informal method to help manage expectations. To communicate by providing reports and engage in meetings to ensure that the project is on track, and we stay in regular contact.

The rural areas of Kenya have to rely on water from hand pumps or an open source such as a river or stagnant pond. A Kenyan team of RCP's (7+), volunteer to repair and restore these hand-pumps. To assist them, their local contacts and to support their families, we have put in place an education program to ensure that they and their children get the opportunity and access to an education.

How many people rely on a repaired pump?

Most villages do not know how many people live in the surrounding community, especially if you include children, and if you ask 2 people the same question you may get 2 different answers. Once a hand pump is restored it can then be used by a local school, they can then generate a water economy to support their local community and neighbouring villages that wish to share the resource.

A borehole may serve a community of between 5 to 100+ households, a (primary & secondary) school with 250 - 1000 pupils, or more. Each family household may have grandparents, parents, extended families and children. Up to 5 – 10+ people may live in a household. So the number of people served by a pump is from 50 - 1000 people. So a conservative estimate is around 250 people per pump. This year 206 pumps were repaired so an initial estimate of the number of people helped is 51,500 people. When we repair a pump, we ask the communities how many people use this pump. From these numbers, we estimate that the 206 repaired pumps supported

around 60,000 people in the rural communities of Kenya. These people now have access to water, thanks to the support and funding from the Eagle Foundation.

Water Quality

The source of water is a potential risk to the health of the community and represents a further challenge in requiring extra funding and resources, for sampling and laboratory facilities needed to support a local authority in monitoring the quality of water. The picture below is an example of collecting water from an open source. Would you drink from that source?

The alternative water source could be over 6 kilometres away. Taking both time and effort every day to carry 20Kg back and forth to the community. It is then an issue to transport the water from the pump to the home in a suitable container and then store it

Groundwater from a borehole is at least a better option. Wells are shallower but need to be protected and fenced off from animals.

Toilets and washing facilities need to be located away and downstream from the pump to prevent contamination.

The terrain is often not easy to access and can be very challenging for children.

Access to water

And sanitation.

A member of the team Shadrack Katua is trained in the installation of a ventilated toilet. He has installed one of them for the community at approx. cost of 50,000Ksh (£325).

The Challenges of 2021 Jan - Sept

Working with stakeholders in the community.

Covid has prevented the UK team from travelling to Kenya in 2021. However the Kenyan team has carried on restoring non-functioning pumps in the rural communities of Kenya.

There are many reasons why a hand pump can fail or be damaged. It can be through continued use in the dry season when the water level is low. It can be through poor or non-existent maintenance. This is why training is so important and in having access to spares.

A faulty foot valve can render a pump useless.

When a pump is restored, the whole community can benefit

.

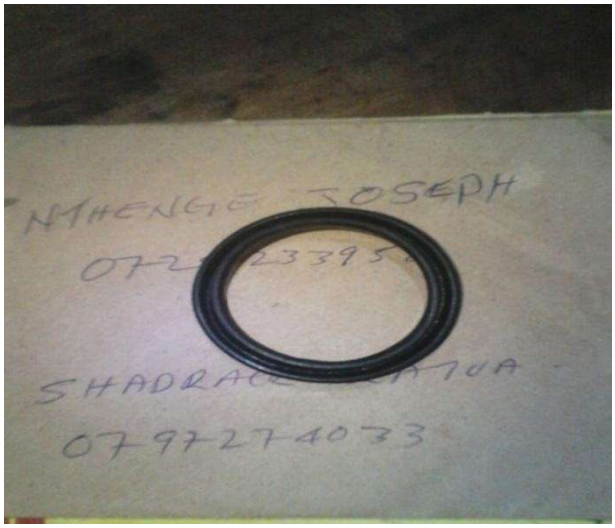
If you have access to water then you can build a toilet

February 2021

Replacing an obsolete pump with all the rods and risers missing

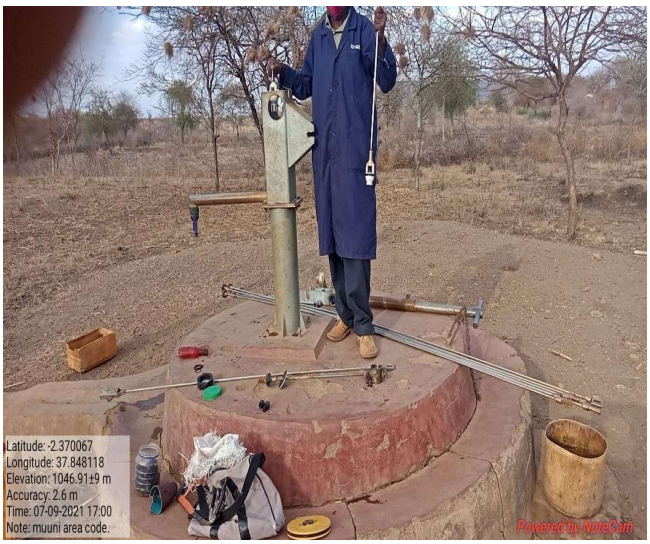
Kaluo Health Centre

Sometimes all that is needed to restore a handpump is to send an O-ring, seal or bobbin to the caretaker, or trained person who is responsible for the pump.



Even with a chlorine bottle I'm not sure you would still fancy that drink. Groundwater via a pump is still a better choice.

Risers & Rods all need replacing at some point



Lukongo Primary school serving a population of 1000 boys and girls, 12 teachers and 3 caretakers

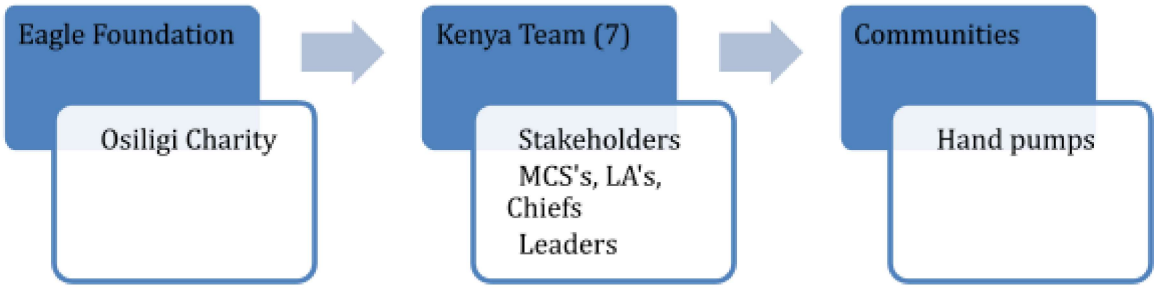
“In our rural community, water is a very precious commodity.

They appreciate the service provider who enables the communities to have access to clean and potable water from a hand pump”

Ongako community water project, serves 300, broken for 1 year

Budgeting for the cost of repairing a hand-pump

The Eagle Foundation fund is divided over a 9-month period and then distributed to each region managed by the RCP's

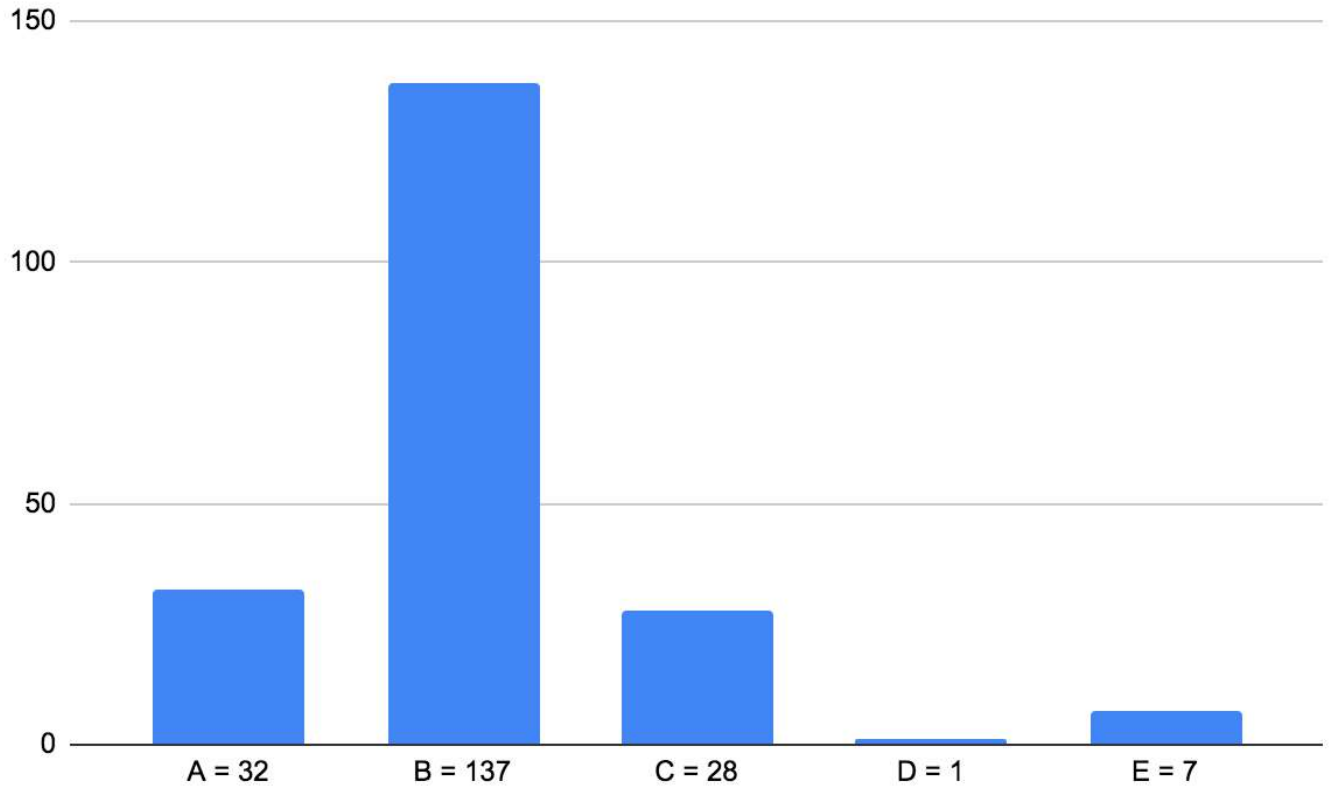


The team then liaises with the "interested" stakeholders to help resource the restoration of a community's hand-pump. The community may have already requested the Local Authority (LA) to restore the hand pump, but for whatever reason it hasn't happened. By involving the elected officials (MCA) and LA it may be possible to share resources and get the necessary information to restore the community's pump.

Involving the community chiefs and leaders is also very important from the point of view of permissions, acknowledgement and especially security.

A breakdown of the cost to repair 205 of the 206 pumps is shown below. They are split into 5 categories A to E. The costs are only the material costs and exclude getting the repairer to the pump, meals, accommodation etc:

A. (32 pumps), a simple repair where the parts (seals, bobbins, 0-rings) cost less than 5,000Ksh (£35).
B. (137 pumps) are more extensive repairs where broken or damaged parts (rods, bearings, centralisers) and cost between 5000Ksh and 25,000Ksh (£165). A & B repairs can be carried out by the community themselves and training is offered to the community caretaker of the pump.
C. (28 pumps) are more challenging repairs where the risers and cylinders have to be removed and can cost up to 50,000Ksh (£330). Often a broken pump has been unused for a long period of time, the pump may have been vandalised or worn out due to heavy usage or in a dry period of drought.
D. (1 pumps) is the installation of a new pump where the old one was beyond economic repair.
E. (7 pumps) these need more than just an extensive repair to the pump, such as having to employ a contractor to fish out broken pipes, or flush out a borehole if blocked or to do civil works. If a new pump is required, any old parts, if possible, are recycled.



Hand pump data

Summary Information on the 206 pumps repaired can be seen at the end of this report (page 21 onwards). Full information on the repaired pumps can accessed from the following link:

https://docs.google.com/spreadsheets/d/1Yg8Ed_h_H0xUKdozt2qbw1cXkCo0OOIP/edit#gid=132427438

Pump repair cost

The cost of repairing a pump and a breakdown of the expenditures is shown below. As you can see, the average cost per pump was 31,349Ksh and the average cost per person helped was 105 Ksh. At an average exchange rate of £1 = 144Ksh, these costs worked out at £218 per repaired pump and £0.73 per person helped.The amount spent to repair the 206 pumps was 6465706Ksh or £44,900.

Month	Budgets (B)	Pumps	Population	Cost/person
Jan	641158 Ksh	23	5475	117 Ksh
Feb	820954 Ksh	23	6895	119 Ksh
March	804087 Ksh	24	5684	141 Ksh
April	825434 Ksh	29	7886	105 Ksh
May	797415 Ksh	23	7759	103 Ksh
June	691365 Ksh	23	6922	100 Ksh
July	624868 Ksh	22	7686	81 Ksh
August	633429 Ksh	19	6141	103 Ksh
September	626996 Ksh	20	7401	85 Ksh
October				
November				
December				
Totals (B)	**6465706 Ksh**	**206**	**61849**	105 Ksh
Cost/pump	**31349 Ksh**	**£ 217.70**	**105 Ksh**	£ 0.73

During this 9 month period, the cost to repair the pumps were the following percentages:

Materials	47%
Contractors	36%
Transport	8%
Petty cash	6%
Accommodation	3%

Jan - Sept	Receipts (R)
Accommodation	218040 Ksh
Contractors	2342072 Ksh
Materials	3007935 Ksh
Petty Cash	389618 Ksh
Transport	468493 Ksh
Sub total	**6426157 Ksh**

Things can go wrong, and they do!

Sometimes the cost of a repair works out more than you thought.

This woman hired a bogus “Technician” to repair the community pump. He stripped it, charged her and left a wheelbarrow full of rubbish.

We can do more

An alternative drinking water in Karachuonyo constituency .

Database – Geo-Mapping

The location of the repaired pumps is noted through the village name or by the Lat/Long coordinates and we have started to map the repaired pumps onto a Google maps database so that it is easy to see the locations on a map.

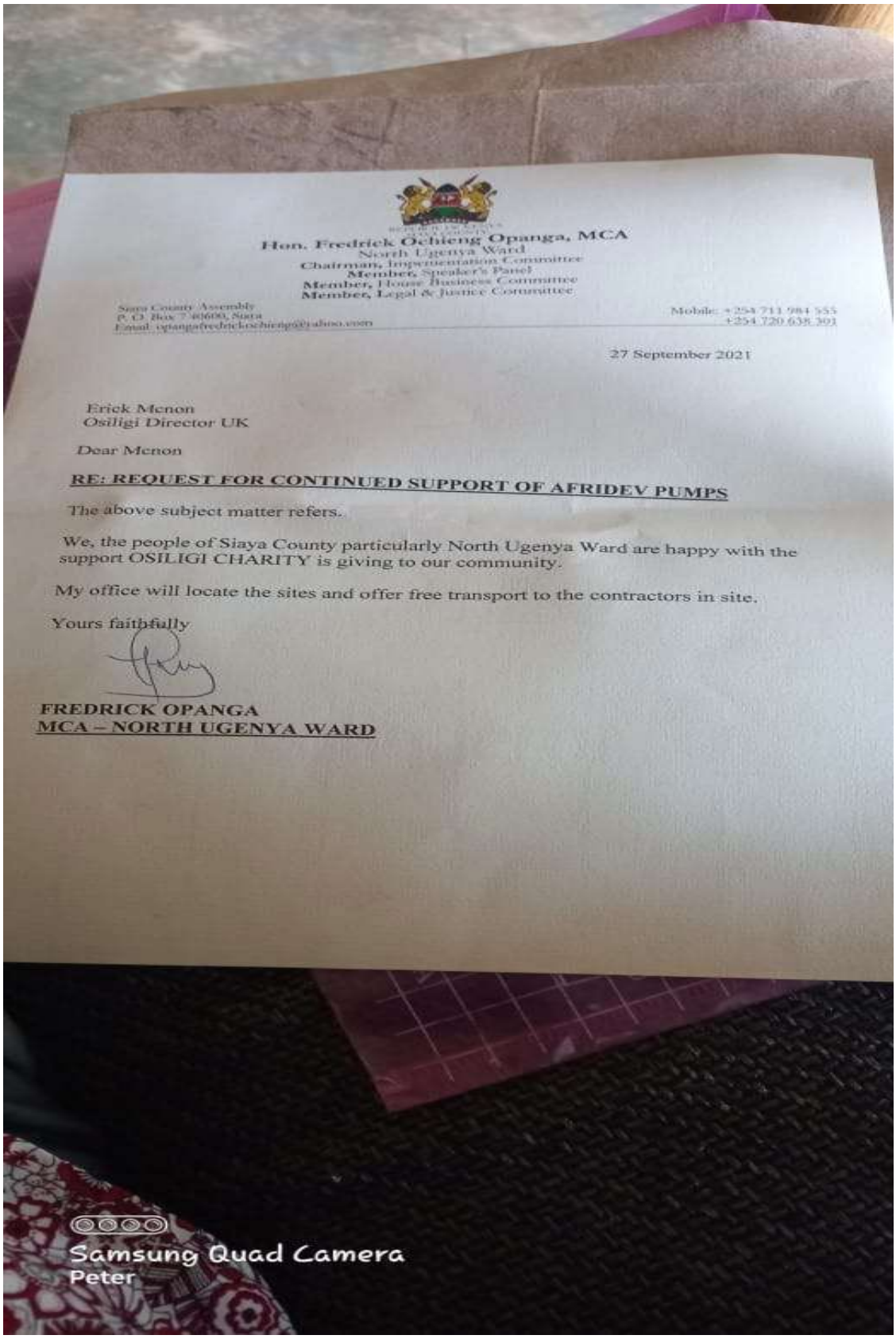
The following link / location shows the mapped database:

https://handpumps.osiligiobaya.com/2021/EF/

The mapping information provides the name, location for the pump and the number of users,

Requests for support

Team works



Hon. Fredrick Ochieng Opanga, MCA
North Ugenya Ward
Chairman, Implementation Committee
Member, Speaker's Panel
Member, House Business Committee
Member, Legal & Justice Committee

Siaya County Assembly
P. O. Box 7-40600, Siaya
Email: opangafredrickochieng@yahoo.com

Mobile: +254 711 984 555
+254 720 638 301

27 September 2021

Erick Menon
Osiligi Director UK

Dear Menon

RE: REQUEST FOR CONTINUED SUPPORT OF AFRIDEV PUMPS

The above subject matter refers.

We, the people of Siaya County particularly North Ugenya Ward are happy with the support OSILIGI CHARITY is giving to our community.

My office will locate the sites and offer free transport to the contractors in site.

Yours faithfully

FREDRICK OPANGA
MCA – NORTH UGENYA WARD

Samsung Quad Camera
Peter

Acknowledgements

Our work would not be possible without the support of the following people, departments and companies:

1. County Government of Homabay, Mr. Odundo.
2. County Government of Kisumu, Emmah Oginga & Anne Ombija.
3. Aquifer Engineering Ltd Mr. Daniel
4. Marende contractors Ltd Mr. Kenneth
5. Contractors contacts
6. James Orina
7. Daniel Juma
8. Stephen Otieno

MCA's contacts

9. Hon.Fredrick Opang'a. North Ugenya Ward
10. Hon.Oduor Odongo. West Ugenya Ward
11. Hon.Burser Oduor. Ukwala Ward

Artisans the RCP Dennis Njogu works with in Kitui East sub-county

Christine of Kyamatu location.

Kamolo of Mwitika location

Lucas of Endau location

Muema of Kaliku location

Sammy of Mutito location

Sammy of Zombe location

Chief kulale

Chief Peter Kanai

Mr Nixon Mwamburi LC - Mwatate

Mr IDDI Mwaropia LC - Kwale

MR Abdallah Shabaan LC - Kwale

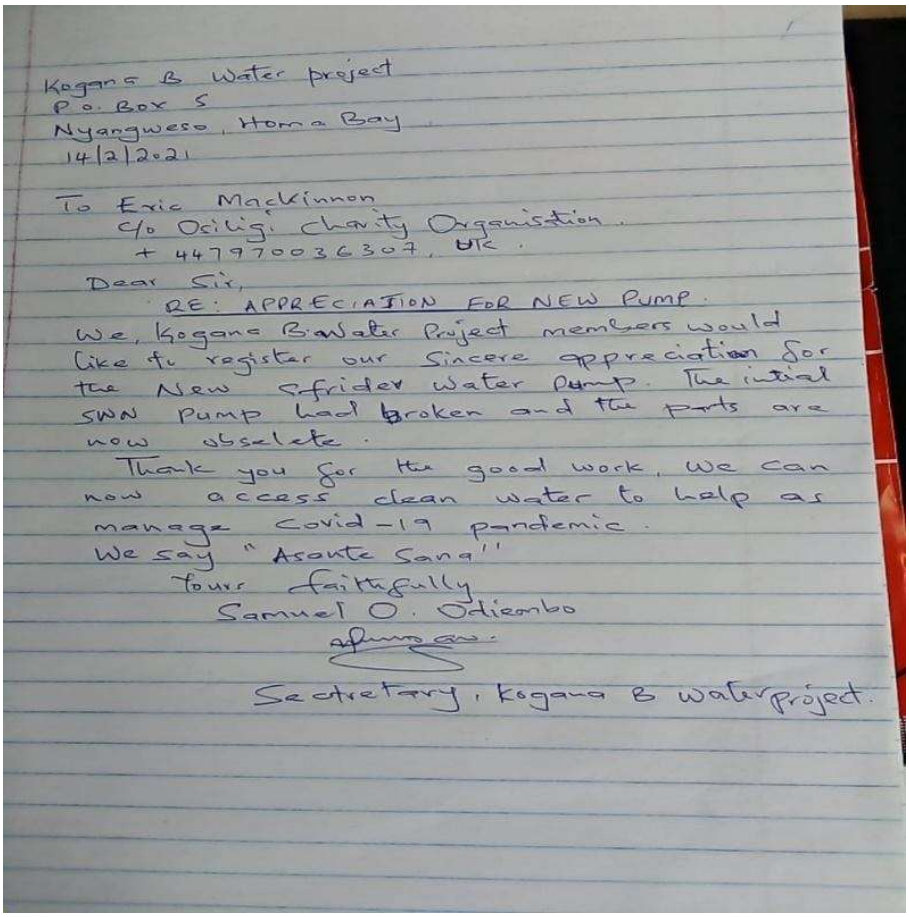
Mr Muli Kingoo LC - Kwale

Mr Hashim Mdzomba LCP kwale

Mr Bovu Said LCP kwale

Mr Edward Mwabili

Mwatate Sub County Water Officer



Kogana B Water project
P.O. Box 5
Nyangweso, Homa Bay
14/2/2021

To Eric MacKinnon
C/o Ocilig Charity Organisation.
+ 447970036307, UK.

Dear Sir,
RE: APPRECIATION FOR NEW PUMP.
We, Kogana B Water Project members would like to register our sincere appreciation for the New Afrider Water Pump. The initial SWN Pump had broken and the parts are now obselete.
Thank you for the good work, We can now access clean water to help as manage Covid-19 pandemic.
We say "Asante Sana"
Yours faithfully
Samuel O. Odiambo
Secretary, Kogana B water Project.

Details of the 206 pumps repaired

Repairer	Date (Day, Month, Year):	County	Pump Name:	Users	Type of Repair:
David Githae	04/01/2021	Kajiado	Oloyang Pump	220	
David Githae	04.02.2021	Kajiado	Musetu Pump	250	
David Githae	04.01.2021	Kajiado	Olesuku Pump	200	
David Githae	04.01.2021	Kajiado	Kisprin Pump	280	
Dennis njogu	5-Jan-2021	Kitui	Kwa mutua mwitika	300	Plunger,foot valve & u-seal
Dennis njogu	5-Jan-2021	Kitui	Kanyangi community pump	150	Two m/s rods
Dennis njogu	5-Jan-2021	Kitui	Kisasi community pump	200	M/s rod,plunger,foot valve &u-seal
Dennis njogu	5-Jan-2021	Kitui	Kalulu village pump	250	Foot valve, plunger,u-seal,m/s rod
Peter Okolla	21/1/2021	Siaya	Pundo	700	NEW INSTALLATION
Peter Okolla	21/01/2021	Siaya	Poye	300	new installation
Peter Okolla	21/01/2021	Siaya	Nyamboyo	370	foot valve u seal plastic bearings
Peter Okolla	21/01/2021	SIAYA	SAO Siradidi	200	Complete cylinder replacement
David Githae	29,01,2021	Kajiado	Munyula pump	300	Cylinder, bearings, hangrod, useal and c
David Githae	29,01,2021	Kajiado	Osenai Pump	150	
David Githae	29,01,2021	Kajiado	Olepolos	220	
David Githae	29,01,2021	Kajiado	Rombo Pump	250	
Emmanuel	10/01/2021	Kwale	Mwarutswa	300	rods replaced with stainless steel
Emmanuel	23-01-2021	KWALE	Shauriani	300	5 risers,2 stainless steel rods
Emmanuel	20/01/2021	Kwale	Wasaa	300	Rising mainn rapture, 2 rods replaced,2
Emmanuel	17/01/2021	Kwale	Mafupani	250	
Dennis Njogu	31-Jan-2021	Kitui	Kwa mutiso	200	Foot vavle,u-seal
Dennis Njogu	31-Jan-2021	Kitui	Chuluni well	350	Fulcrum,hanger pins
Dennis Njogu	31/1/2021	Kitui	Mulango community pump	250	Ms rod,cylinder plunger and u-seal
Dennis njogu	31/1/2021	Kitui	Kwa mutua	300	Foot valve,u-seal, plastic bearing set
Peter Okolla	21/2/2021	Siaya	Koreyo	360	Foot valve Leaking riser U seal

Peter Okolla	21/2/2021	Siaya	Kaya	270	Broken rod Plastic bushes Fulcrum pin
Peter Okolla	21/2/2021	Siaya	Kawuor	760	
Peter Okolla	21/2/2021	Siaya	Murumba	310	
Peter Okolla	21/2/2021	Siaya	Kaluo Health Centre	100	
Peter Okolla	23/2/2021	Siaya	Madara CBO	210	
Emmanuel	12/2/2021	Kwale	Bowa Primary School	500	Replacement of rods, u seal
Emmanuel	15/2/2021	Kwale	Lukore Community Handpump	450	Useal, Plunger and Footvalve,Bearings
Emmanuel	12/2/2021	Kwale	Kibuyuni Primary School	550	Plunger,u seal, risers
Emmanuel	20/2/2021	Kwale	Eshu Community Water Project	350	Leaking Riser
Shadrack	30/01/2021	Makindu	Ivoleni well	100	Worn out seal and 3 rod centrlisers
Dennis njogu	2-Mar-2021	Kitui	Kyamatu	200	Bearing sets,plunger,foot valve and u se
Dennis njogu	2-Mar-2021	Kitui	Kaliku 1	350	Two pipes two m/s rod
Dennis Njogu	2-Mar-2021	Kitui	Migwani	250	One m/s rod,plunger and u seal
Dennis Njogu	2-Mar-2021	Kitui	Tseikuru 1	300	Two r/m pipes,foot valve,bearing sets,u
Dennis Njogu	2-Mar-2021	Kitui	Mumoni 1	400	Two raising main two ms rod
DAVID GITHAE	04,03,2021	KAJIADO	LENGOYA PUMP	100	
DAVID GITHAE	04,03,2021	KAJIADO	KUKU PUMP	180	
DAVID GITHAE	04,03,2021	KAJIADO	MATA PUMP	450	
DAVID GITHAE	04,03,2021	KAJIADO	ISINET PUMP	200	
DAVID GITHAE	04,03,2021	KAJIADO	MAILUA PUMP	150	
PETER OKOLLA	27/3/2021	Siaya	Migingo	340	New cylinder Plastic bushes Support rope
Peter Okolla	27/3/2021	Siaya	Got	230	Broken rod fixed U seal Plastic bearings
Peter Okolla	27/3/2021	Siaya	Omoye	120	

Peter Okolla	27/3/2021	Siaya	St.Joseph	230	Risers Cylinder complete Support rope
Emmanuel	16/03/2021	Kwale	Ng'ombeni Vidziweni	100	5 rods replacement to stainless steel, U
Emmanuel	18/03/2021	Kwale	Kidian Community Pump	300	10 rods, Plunger,Useal, rod centralises
Emmanuel	18/03/2021	KWALE	Mivumoni	150	Rods replacement, U seal,
Emmanuel	20/03/2021	Kwale	Kidongo	120	U seal replacement, rod centralizer
Emmanuel	23/03/2021	Kwale	Nguluku Nduani Water Pump	150	Rods,Riser ,Cylinder
Dennis njogu	28/02/2021	Kitui	Matinyani community well	250	Two fulcrum and hanger pins replaced.c replaced
Dennis njogu	20/03/2021	Kitui	Kithimani selfhelp	350	Four raising main pipes replaced
Dennis njogu	28/03/2021	Kitui	Ikombe community pump	250	Three m/rods replaced plunger and u se
Dennis njogu	28/03/2021	Kitui	Matuu community pump	400	Two broken pipes replaced ,plastic bear
DAVID GITHAE	28,03,2021	KAJIADO	ILIKISONKO	200	
DAVID GITHAE	28,3,2021	KAJIADO	MEMERUSH	250	
DAVID GITHAE	28,3,2021	KAJIADO	MAKUTANO	300	
DAVID GITHAE	28,3,2021	KAJIADO	KIMANA	120	
DAVID GITHAE	28,3,2021	KAJIADO	ILLASIT	200	
Victor	21,1,21	Homabay	Kulo gwen well	250	
Victor	22,1,21	Homabay	Bongu SDA church	200	
Peter Okolla	14/4/2021		Sigweng'	400	Leaking riser Hanger pin 2 pairs of bushes U seal
Peter Okolla	16/4/2021		Nyadhi kanisa	260	New cylinder replaced 1 riser
Peter Okolla	14/4/2021		Karuoth	300	Hanger pin replaced Hanger housing U seal Foot valve

Peter Okolla	20/4/2021		Murumba	400	
Shadrack	3,4,21		Miluluini well	100	
Shadrack	8,4,21		Aron primary school	750	
Shadrack	18,4,21		Kanthuini well	200	
David Githae	25,4,2021		Teule Pump	250	
David Githae	25,4,2021		Tawi pump	120	
David Githae	25,4,2021		Selenkay	220	
David Githae	25,4,2021		Yaaku pump	150	
David Githae	25,4,2021		Kibini pump	300	
David Githae	25,4,2021		Makutano pump	200	
Dennis njogu	25/04/2021		Mataka	250	Change of two broken rods and useal ch
Dennis njogu	25/04/2021		Ithookwe c.pump	200	Foot valve and u seal replaced,cleaning two raising main pipes
Dennis njogu	25/04/2021		Muambani	150	Plunger rod footvalve and u seal replace
Dennis njogu	25/04/2021		Kyanika c.pump	300	Two pipes and two rods replaced
Dennis njogu	25/04/2021		Kwa nduku	150	Fulcrum and hanger pin replaced footva replaced
Emmanuel	10/04/2021		Majoreni Aleni	350	Replaced bottom rods with stainless ste
Emmanuel	11/04/2021		Majoreni Mlachake	250	3 rods replaced. 2 risers ,1 footvalve
Emmanuel	15/04/2021		Kiwegu Community Pump	250	
Emmanuel	14/04/2021		Simanya Handpump	150	
Shadrack.	3monday May2021.		Aron primary school.	750	Cylinder assembly.
Emmanuel	10/05/2021		Kidimu Water Pump	500	Replaced rods with stainless steel rods
Emmanuel	14/05/2021		Kichaka Mkwaju	300	Replaced a leeking riser and rods. U se
Emmanuel	15/05/2021		Mwananyamala Cumminity Water Project	300	U seal, rods replaced
Emmanuel	24/05/2021		Kikoneni	250	bobins, useal, rods replaced .
Dennis njogu	1 6 2021		Kwamboya pump	200	Two rods and two rising main pumps ch
Dennis njogu	1 /6 /2021		Kyululu pump	250	Change of three broken rods
Dennis njogu	1/06/2021		Mwitika	300	U seal,two mild steel rods and two raisir
Dennis njogu	01/06/2021		Mbaya pump	250	Fulcrum and hanger pin changed
Dennis njogu	1/6/2021		Mbusyani community pump	200	1 U seal ,1 footvalve 1 plunger rod chan
Esther Okode	3,6,21		Otok secondary water project	3500	

DAVID GITHAE	05,06,2021		SOINE PUMP	120	
DAVID GITHAE	05,06,2021		MAILUA PUMP	240	
DAVID GITHAE	05,06,2021		LIANAI PUMP	320	
DAVID GITHAE	05,06,2021		NGATATAEK PUMP	180	
DAVID GITHAE	05,06,2021		LIPATIMMRO PUMP	200	
DAVID GITHAE	05,06,2021		KISAPUK PUMP	300	
DAVID GITHAE	05,06,2021		BARTIMARO PUMP	100	
Shadrack	08,06,2021		Nthiani Well	150	
Peter Okolla	19/6/2021		Koile Ogoma	275	Replacement of cylinder Bushes Fulcrum pin
Peter Okolla	19/6/2021		Ondondo	250	Broken foot valve U seal Bearings
Peter Okolla	19/6/2021		Ligega	230	Cylinder replacement
Peter Okolla	19/6/2021		Mbeji	275	U seal Bushes Fulcrum pin
Victor	18,6,21		Jikaze Women group	250	
Victor	18,6,21		Kamolo women group	250	
Victor	19,6,21		Kanyamanda Women group	300	
Victor	19,6,21		Zebra Smart widow group	250	
Victor	20,6,21		Kobanda Women group	300	
Victor	20,6,21		Ogwodo school	800	
Peter Okolla	22/6/2021		Murwa	800	U seal Bobbin Plastic bushes
Peter Okolla	22/6/2021		Murwa	800	U seal Bobbin

					Plastic bushes
Peter Okolla	22/6/2021		Ojalo	350	Broken pipe Usual
David Githae	25,06,2021		Soine Pump	120	
David Githae	25,6,2021		Mailua Pump	240	
David Githae	25,06,2021		Lianai Pump	320	
Dennis njogu	26/6/2021		Mutongoni community pump	300	Changed three m/s rods and a foot valv
Dennis njogu	6/26/2021		Kwa vonza pump 4	350	Plunger rod with footvalve changed,u se replaced due to wear and tear
Dennis njogu	26/6/2021		Kwa mwikali	400	Two pipes and two rods were replaced c
Dennis njogu	26/6/2021		Zombe	200	Fulcrum pin changed ,plunger rod ,footv replaced
Dennis njogu	26/6/2021		Malatani town pump	300	Three raising main pipes replaced
Dennis njogu	26/6/21		Nzangathi community pump	250	Rope ,3 m/s rods and 3pipes footvalve a
Shadrack	23,6,21		Amboseli' water pump	700	
Shadrack	18,6,21		Mathayoni well	500	
Shadrack	16,06,21		Kyeteeni water pump	250	
Emmanuel Muthoka	11/06/2021		Tiwi Mwaachema	300	Replaced Rods with 5 Stainless steel ro
Emmanuel	12/06/2021		Shirazi Center	300	1Plunger, 6 stainless steel rods, 6 rod c
Emmanuel	16/06/2021		Majoreni C. Water Pump	250	3 risers replaces, 1 cylinder ,1 hanger pi stainless steel
Emmanuel Muthoka	20/06/2021		Mwachande Primary School	600	U seal replaced, hanger pin
Emmanuel	20/06/2021		Mwamanga Bongo	300	2 risers replaces, 7 pump rods restored
Emmanuel	13/07/2021		Tiwi Handpump	150	Replaced rods with s/s (3 rods) and har
Emmanuel	12/07/2021		REnjeni Community Water Pump	250	Riser replaced, u seals , and 5 rods rest
Emmanuel	16/07/2021		Tiwi Duga	250	repleced plunder
Emmanuel	18/07/2021		Mwashipwi Borehole Project	250	
Emmanuel	20/07/2021		Kirima Pump	300	REplaced risers (5 pieces) and 3 rods s
Emmanuel	20/07/2021		Mteza Pump	250	
Shadrack.	26 Mon July 2021.		Katulani well.	300	Changing of Ajay seal to Afridevpump s
Shadrack.	26 monday July 2021		Kwa Rose.	250	Changing of nylon rope,useal, and addi

Shadrack.	26monday July 2021.		NTHIA.	200	Additional of pipe and 1rod.
Dennis njogu	14/07/2021		Kyululu primary	140	Change of plunger rod,footvalve and u-s
Dennis njogu	26/07/2021		Kwamboya community pump	160	Three ms rod changed due to breakage pipes changed
Kakuyuni	26/07/2021		Kakuyuni	200	Plunger rod ,footvalve and u seal chang
Dennis njogu	26/07/2021		Mwitika community pump	150	Fulcrum pin ,hanger pin and footvalve c
Dennis njogu	26/07/2021		Katulani	100	Change of foot valve ,u seal and plunge
Peter Okolla	29,7,2021		Siginga B	349	Broken pipes U seal Plastic bushes
Peter Okolla	29,7,2021		Mudundo	400	Broken rod Worn out foot valve U seal Plastic bushes
Peter Okolla	29,7,2021		K'nyango	480	Worn out Fulcrum pin replaced Leaking pipe repaired Plastic bushes replaced
Shadrack.	29 Thursday July 2021.		NTHIA well.	200	Additional of pipe and rod.
Shadrack.	29 Thursday July 2021.		Kwa Rose.	250	Changing of safety line rope, Additional U-seal.
Shadrack	29 Thursday July 2021		Katulani well.	300	Changing of Ajay seal to Afridev seal.
Victor	21,7,21		Konguko community pump	300	
Victor	20,7,21		Kouno borehole water pump	300	
Victor	16,7,21		Bugo community water point	300	
David Githae	1,08,2021		Rombo pump	250	
David Githae	01,08,2021		Munyula	300	
David Githae	01,08,2021		Lengoya	100	
David Githae	01,08,2021		Isinet pump	200	
David Githae	01,08,2021		Ilkisonko	200	
Peter Okolla	23/8/2021		Ka Mumbo	160	Cylinder replacement
Peter Okolla	23/8/2021		Hafumbre Primary	1000	Rod centralizer Cylinder replacement

Emmanuel	10/08/2021		Mangawani (Mwaleni)	250	6 rods replaced, 1 cylinder, 4 risers ,2 pi
Emmanuel	12/08/2021		Mivumoni-Chidziweni	300	1 cylinder assembly, 3 rods, 2 risers, 1 r
Emmanuel	15/08/2021		Magombani-Shamu	250	3 rods replaced,1 useal, rod centraliser
Dennis Njogu	29/8/2021		Nuu community pump	300	2 rod replacement,useql and footvalve c
Emmanuel	18/08/2021		Mwaroro	250	risers replaced, plunger, u seal and rod
Emmanuel	20/08/2021		Ngumanayende	300	u-seal, riser main pipes - 3 , 2 rods repla
Dennis njogu	29/08/2021		Thaana community pump	200	2 broken rods changed,new plastic bear
Emmanuel	20/08/2021		200	200	u-seal, rod centaliser
Dennis njogu	29/08/2021		Kivou community pump	350	Two broken pipes replaced,one u seal a
Dennis njogu	29/08/2021		Mui community pump	300	2 broken rods and a worn out u seal rep
Dennis njogu	29/08/2021		Kanziko community pump	200	One foot valve ,two rods ,1 u seal and tv replaced
Shadrack.	29sunday8 2021.		Kwa Matheka..	150	Changing of U-seal.
VICTOR	25,8,21		Omieri women group	300	
Victor	25,8,21		Kambaria women group	200	
Shadrack.	31Tuesday8 2021.		Matheka well.	150	Changing of the U-seal.
David Githae	25,9,2021		Mata Pump	250	
David Githae	25,9,2021		Samai	300	Replaced cylinder and bearings
David Githae	25,9,2021		Rongena	200	Replaced broken foot valve, useal, bear patched risers
David Githae	25,9,2021		Olchoro	300	Replaced hangerpin, useal, bearings, 2r centralizers
David Githae	25,9,2021		Oloolopon	200	
Peter Okolla	26/9/2021		Kondiek	200	Leaking cylinder Bushes replacement
Peter Okolla	26/9/2021		Nyasi	350	U seal Broken riser
Peter Okolla	26-9-2021		Tande	300	Replaced rods 5 riser pipes
Peter Okolla	26/9/2021		Handiga	150	Bushes replacement Fulcrum pin replaced U seal
Shadrack.	26 Sunday September 2021.		Kwa Ndulu.	200	Changing of U-seal,Orin,3missing rod c
Shadrack Katua Nzioka.	26 Sunday September 2021.		Kwa Kamami.	200	Changing of U-seal, Orin.

Shadrack.	26 Sunday September 2021.		Kwa Mutungi.	250	Changing of U-seal,Orin& bobbins.
Shadrack Katua.	26 Sunday September 2021.		Kwa Nyangi.	500	Changing of cylinder assembly,5pipes,3 centrallisers.
Dennis njogu	26/9/2021		Kanziko community pump	250	Two broken rods replaced,u seal change installed
Dennis njogu	26/9/2021		Kyangwithya pump 117	300	Two broken pipes and two broken rods r foot valve replaced
Dennis njogu	26/9/2021		Tungutu self help pump	350	U seal and footvalved replaced with new rope installed
Dennis njogu	26/9/2021		Kwa mutiso pump	200	Cleaning of the raising main U seal ,foot valve and plunger changed 2 broken ms rods changed Nylon supporting rope installed
Dennis njogu	26/9/2021		Kwa musyoki pump	300	Fulcrum and hanger pin changed 2 bent rods changed.
Emmanuel	14/09/2021		Kidian Water Project	350	15 risers,7 pumprods,1 cylinder
Emmanuel	14/09/2021		Mivumoni Kidiani	350	10 risers,5 rods s/s . 3 u-seal,1 plunger,
Emmanuel	16/09/2021		Kingwede	250	3 pump rods,3 risers ,u seal and rod cer
Emmanuel	16/09/2021		Mwandeo Water Project	300	1 plunger. 3 risers ,1 foot valve
Victor	1,10,21		Kosira primary	300	
Victor	1,10,21		Onduru community water pump	350	
Victor	1,10,21		Oduma community water pump	850	