



Document 901B PROGRAM IMPACT MONITORING REPORT

CHAPTER: **Oregon State University**
COUNTRY: **Kenya**
COMMUNITY: **Lela**

October 12, 2014

ENGINEERS WITHOUT BORDERS-USA
www.ewb-usa.org

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1.0 INTRODUCTION

1.1 Contact Information and Reporting History

Contact Information			
Current	Name	Email	Phone
PMEL Lead			
Project Leads			
Chapter President			
Professional Mentor			

Program Title	Lela Community Water Project
Community	Lela
Country	Kenya
Date of 502 Approval	2009
# of Months Since Last Site Visit	2 months
Date of Baseline Study Report (901)	N/A Program initiated before requirement of document 901
Date of This Program Impact Monitoring Report (901B)	October 12, 2014

1.2 Program Summary

The Engineers without Borders Oregon State University Student Chapter (EWB-OSU) adopted the Lela Community Water Project in 2009. The Lela Community Water Project seeks to bring safe and reliable drinking water to the residents of Lela, Kenya. Lela is a small agrarian village in southwestern Kenya home to approximately 2,000 individuals. After EWB-OSU members conducted household and water source surveys during assessment trips in 2009 and 2011, among other activities, two water wells and a rainwater catchment system (RWC) at the Lela Primary School were implemented in 2012 and 2013. The former well is referred to as Lela A and the latter as Lela B. In addition to local residents, Lela B also affects a number of Kenyans in the surrounding area who travel to Lela specifically to use the well. Those living in the regions surrounding the wells now also refer to themselves as living in “Lela A” or “Lela B,” respectively. There is a region of Lela in which residents have, within the past year, mobilized and refer to themselves as “Lela C” in hopes of a third “C” well being drilled in their region. Following the 2014 trip, another area of Lela has mobilized and is now referred to as “Lela D” in hopes of an additional well. The Lela Community Water Project is currently the only project under this program.

Weekly telephone calls are conducted by the Project Lead with both the village elder, Charles Olang'o, and EWB-OSU guide, Paul Olang'o. Reliability and responsiveness are good from both Charles and Paul. Charles represents the Lela Women's Water Committee (LWWC) as its

presiding Secretary. Travels teams in the past have been hosted by Charles, and he will most likely continue to provide this service.

The current Planning, Monitoring, Evaluation and Learning (PMEL) Lead—Judy Jiang—has received proper training from EWB-USA through the PMEL Program Introduction webinar and traveled with EWB-OSU on the 2014 Monitoring and Evaluating trip.

2.0 PROGRAM IMPACT MONITORING

2.1 Update on Current Community Context

- A local NGO, Evidence Action, installed chlorine dispensers at the two wells approximately two months prior to the 2014 Monitoring and Evaluation trip. Additional dispensers were placed besides a spring water source and a well just outside of Lela not associated with EWB-OSU. At least three members of the LWWC were trained as “promoters” of the Dispensers for Safe Water Program by Evidence Action to inform the community on proper use of the dispensers.
- The LWWC has identified potential sites for additional wells based on need and community politics, and has begun to raise funds specifically for these wells.
- Community members and Lela Primary School teachers have noted an improvement in public health since the water systems were installed.

2.2 Update on Community-Identified Problems to Address

- No year-round access to safe drinking water
 - Directly changed. In Lela, 79% now have access to safe and reliable drinking water drawn from the implemented wells.
- Time wasted on water collection
 - Directly changed. Out of all well users, 83% are within 30 minutes of an implemented well. Out of all households surveyed, 84% are within 1km of an implemented well. For these community members, time can now be better served for more economical activities such as farming or tending to livestock.
- Deforestation due to wood-fueled cooking fires
 - No change.

2.3 Update on Change Areas

Change Area	Update on Changes from Baseline Study or Last Program Impact Monitoring Report
Changes in public health	Daily hand washing has increased 32% since 2009. Soap is used with 95% of the community as opposed to 63% in 2009 and 73% of households have received health education from local ministry workshops as opposed to 49% in 2009.
	Supports testimony from community members on improved health.
	EWB-OSU has arranged for local ministries to conduct several health workshops over the years.
Changes in environment health	Community members have reported a decrease in the use of hand dug surface water pits.
	This may have contributed to a noted decrease in mosquitoes within Lela.
	The two wells implemented by EWB-OSU in 2012 and 2013 have replaced the surface water pits as community water sources.
Changes in behavior	Significant changes in behavior were not within this project's scope.
Changes in access to services	Chlorine dispensers were installed at the two wells, Lela A and B, a natural spring, and a well just outside of Lela.
	Users of these water sources now have free access to a reliable water purification method.
	The NGO Evidence Action is responsible for this change.
Changes in technical knowledge related to projects	After the 2014 trip, the well driller, Mr. Okello, visited Lela to train a community member on how to carry out simple repairs on the wells.
	Significant to the community and EWB-OSU in encouraging a sustainable future for the well systems after project close-out.
	Community wished to avoid future charges on well services and contacted Mr. Okello themselves.
Changes in community organizations	Mobilization of the region Lela D was evident by a representative who attended the last committee meeting and subsequent Lela

	D meetings after the travel team’s departure. Lela C also continued to show strong organizational skills in recruiting community members to show support for a well through attendance in meetings and fundraising.
	Significant to the community and to EWB-OSU in showing community enthusiasm and seriousness to drill more wells in Lela.
	Success of the wells Lela A and Lela B as drilled by EWB-OSU.
Changes in community self-advocacy	Significant changes in community self-advocacy were not within this project’s scope.

2.4 Previously Identified Barriers to Program Success

- Lack of funds in community bank account
 - While the low funds in the community’s bank account is cause of concern, the Lela B well needed repairs twice this year and the LWWC was able to hire a local fundi to fix the well.
- Lack of community credibility
 - During the implementation of the well Lela A in 2012, an agreed-upon cash contribution was not supplied by the community. However, EWB-OSU continued to support the project and funded the drilling of Lela B the next year. The lack of the community’s cash contribution is concerning in regards to the community’s dedication for the program. However, the community has shown ownership for the program in other ways, including the construction of fences around each of the wells.
 - In 2014, the newly mobilized regions of Lela C and D showed drive and desire to continue the program. People from Lela C were the majority in attendance during a community meeting and were represented by a local pastor who was highly involved with the travel team’s meetings and accompanied the team during some of the household surveys. People in Lela D have since held meetings of their own to fund a well for their region and have raised ~10,000KSH within the last month.

- Lack of knowledge transfer
 - The 2013 travel team observed incomplete operation and maintenance on the well and RWC systems implemented in 2012. The well was not gated which allowed livestock to access the area surrounding the well. The water tanks for the RWC were noted as unclean as well and were uncovered.
 - Knowledge transfer pertaining to the wells has since improved. In 2014, both wells were gated and were locked at night. Additionally, both wells are managed by a member of the LWWC who collects fees and oversees well operation every day. The LWWC has an improved understanding of the necessity of keeping funds for any future well repairs (or wells).
 - Knowledge transfer pertaining to the rainwater catchment system has been less improved. The school board modified the system in March 2014 after students had damaged the first flush pipes. This allowed the systems to be in continued use but hindered their functionality. Additionally, in 2014, wire mesh was absent from all tanks and the gutters were in disarray. Debris, rocks, food, and etc. littered the roof. In a meeting with the travel team, the new school headteacher showed an understanding of the necessity for cleaning and maintaining the systems. He spoke in great detail about the RWC system's use and how exactly the tanks are cleaned. The travel team did not observe such actions, but maintenance on the tanks/gutters was to be conducted when the students went on break.

2.5 Previously Identified Facilitators of Program Success

- Continued/improved management from the LWWC
 - The cooperation of the LWWC in relations to EWB-OSU and also to the rest of Lela in general has been satisfactory. Continued work on the committee's part will be necessary for EWB-OSU to receive relevant community data and feedback. In 2014, a meeting with the committee led to valuable community insight. Additionally, the continued management by the LWWC on the two wells will allow for fees to be collected to fund any future well repairs, and also facilitate community cooperation for all needs to be met. Their cooperation made the 2014 trip run smoothly and assisted in facilitating program success.
- Receptiveness of community members to act
 - While lack of knowledge transfer regarding the wells was seen in 2013 (lack of fencing), the community quickly acted on the technical advice given and constructed a fence. Fencing with barbed wire around both wells still stand to protect the well from livestock.

- Local fundi (handymen)
 - When any well repairs do occur, the LWWC will most likely call upon local fundi to service the wells. The cooperation of the local fundi will be crucial in maintaining the systems and have allowed past well repairs to be quickly carried out.

2.6 Potential Barriers to Program Success

- Lack of community funds
 - It will be important for the community to have the necessary funds for any unexpected repairs after EWB-OSU closes out the project. If the community fails to have acquired the necessary funds for any repairs, the wells would fall into disuse and the program's goals would have failed. The same can be said regarding school funds for the RWC.
- EWB-OSU funding
 - With the community unable to procure substantial funds for the wells on their own, the responsibility falls on EWB-OSU to contribute the majority of the funds for future implementations. Past implementation trips have incurred project expenses of ~\$50,000.

2.7 Potential Facilitators of Program Success

- Continued satisfactory work in community leadership
 - The sustained satisfactory work done by the LWWC will be necessary to facilitate program success. The committee is responsible for funding any future necessary repairs done on the systems; therefore, how they collect fees and manage the daily well operations will be important in facilitating success. Additionally, the leadership gives the program energy and drive to improve as the 2014 travel team noted significant community initiative.
- Community financial sustainability
 - For future success of the systems after close-out, increased community funds will be vital. So far, repairs have been inexpensive enough for the committee to properly address. The wells have been funded through the collected fees; however, school board funds in regards to managing the RWC are harder to come by. That system, though, is not as expensive to maintain.

- Alternative community contributions
 - Because of the lack of community cash contributions, alternative contributions are vital in establishing community ownership of the project. Alternative forms of contribution include the aforementioned leadership, management, and labor. These contributions, although not monetary, should still be considered and similar efforts—both sustained and in the future—will help facilitate program success. Collectively, these factors enable the wells to continue functioning.

2.8 Analysis of Current Results

Analysis Question	Current Results
To what extent is the program achieving and influencing the planned changes or stated community goals?	The program is achieving 50-75% of the community's stated goals. The two wells have directly addressed the community's need for safe and reliable drinking water, but are not accessible to all members of the community due to overcrowding and distance.
Where is the program failing to influence the planned changes or stated community goals, and why?	The program is failing to address the needs of the outer regions of Lela. Specifically, there are people in Lela C and D that still use contaminated surface water sources and experience difficulties using the wells in Lela A and Lela B because of distance and time.
Are there any negative and or unexpected changes that have resulted from the program implementation? If so, what are they and why did they happen?	The two wells have brought changes to village politics. Earlier this year, village elder Charles Olang'o and influential Lela C leader Pastor Sam suspended communication due to Pastor Sam's frustration of a lack of well in Lela C. It is important to note that the first well, Lela A, was drilled in close proximity to the Olang'o home. The falling out was eventually resolved through the assistance of Zach Dunn and Paul Olang'o. Zach was the Kenya Program's Project Leader on the 2012 implementation trip and was in Kenya for graduate research.
Considering all parties involved in the	Very significant. Planned changes have

<p>program, how would you describe your chapter's contribution to the planned/unexpected changes?</p>	<p>been addressed by EWB-OSU and the unexpected falling out of two of the village's leaders was a result of where the wells were drilled.</p>
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2.9 Learning from Current Results

Analysis Question	Current Results
<p>What can your team and EWB-USA headquarters learn from these findings?</p>	<p>Results from the monitoring and evaluating trip showed a marked improvement in community commitment. Community members were eager to initiate action and implement their own ideas. While this project may have started off slow in the beginning, roles are now more defined.</p>
<p>How should the program adapt as a result of the current findings?</p>	<p>The program should have clearly defined expectations for both the community and EWB-OSU.</p>



3.0 APPENDIX A – PROGRAM LOGICAL FRAMEWORK (Document 905)

Program summary	Objectively verifiable indicators	Means of verification	Assumptions
Community members hope to improve health and economy by acquiring a sustainable water supply for domestic use.	<ul style="list-style-type: none"> • Number of community members satisfied with the project • Time to collect water 	<ul style="list-style-type: none"> • Household survey • Water use fee records • Observation during monitoring trips 	<ul style="list-style-type: none"> • No major damage befalls the implemented water systems due to some natural disaster or vandalism
Year-round, clean water supply is accessible by all members of community.	<ul style="list-style-type: none"> • Quantity of water available to each household during dry and wet seasons • Quality of water at water point • Distance to water collection point 	<ul style="list-style-type: none"> • Weekly communication with community • Water quality testing • GPS Surveying to determine distance from each household to nearest water collection point 	<ul style="list-style-type: none"> • Water is used appropriately, i.e. transported in sanitized containers • Data gathered via household surveys and long-distance communication is accurate
Boreholes and rainwater catchment systems are implemented.	<ul style="list-style-type: none"> • Rate of flow at water point • Level of cleanliness of water storage tanks 	<ul style="list-style-type: none"> • Flow rate testing • Water quality testing 	<ul style="list-style-type: none"> • Funds are available for maintenance • All community members are allowed access
Agreements are reached with community, materials are purchased, community is educated on maintenance and proper use of systems.	<ul style="list-style-type: none"> • Cost of water for each user • Balance available in maintenance fund • Observed evidence of routine maintenance on the system done accurately without EWB-USA 	<ul style="list-style-type: none"> • Community members can demonstrate proper use and maintenance of systems unassisted • Community-generated funds are available for maintenance 	<ul style="list-style-type: none"> • Agreements are honored • Knowledge is transferred within community • Materials and labor are available • Direct, reliable communication is established between chapter and community • Strong leadership is present in community