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# Lebanon Water and Wastewater Sector Support

QUARTERLY REPORT: APRIL 2012 — JUNE 2012

July, 2012

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# LEBANON WATER AND WASTEWATER SECTOR SUPPORT

**QUARTERLY REPORT: APRIL 2012—JUNE 2012**

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The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

## ACRONYMS

ACWUA	Arab Countries Water Utilities Association	HPIP	High Priority Intervention Program
ADSL	Asymmetrical digital subscriber line	HR	Human Resources
AFD	French Development Agency	H&S	Health and Safety
AWP	Annual Work Plan	IAR	Initial Assessment Report
APP	Annual Work Plan	IEE	Initial Environmental Evaluation
ATP	Annual Training Plan	IFI	International Financial Institution
BMLWE	Beirut-Mount Lebanon Water Establishment	IRG	International Resource Group
BOQ	Bill of Quantities	IRM	Information Resources Management
BWE	Beka'a Water Establishment	IT	Information Technology
CAS	Central Administration of Statistics	IWRM	Integrated Water Resource Management
CCN	Cooperating Country National	KPI	Key Performance Indicator
CDG	Chairman and Director General	LWWSS	Lebanon Water and Wastewater Sector Support
CDM	Camp, Dresser and McKee Engineering	MIS	Management Information System
CDR	Council for Development and Reconstruction	MMS	Maintenance Management System
CRM	Customer Relations Management	MOEW	Ministry of Energy and Water
CIP	Capital Improvement Plan	MOF	Ministry of Finance
CO	USAID Contract Office	MOTGE	Mise en place des Outils Techniques de Gestion de l'Eau
COA	Chart of Accounts	NLWE	North Lebanon Water Establishment
CQCP	Construction Quality Control Plan	NRW	Non Revenue Water
CSR	Customer Service Representative	NWSS	National Water Sector Strategy
COP	Chief of Party	O&M	Operations and Maintenance
COTR	Contract Officer Technical Representative	PMP	Performance Monitoring Plan
DG	Director General	PSP	Private Sector Participation
DAI	Development Alternatives Inc.	PPM	Parts per million
DCOP	Deputy Chief of Party	PPP	Public Private Partnership
EIB	European Investment Bank	SCADA	System Control and Data Acquisition
EU	European Union	SLWE	South Lebanon Water Establishment
EA	Environmental Assessment	SMP	Subcontractor Management Plan
EDL	Electricite du Liban (National Electricity Provider)	SOW	Scope of Work
EMMP	Environmental Monitoring and Mitigation Plan	STTA	Short-Term Technical Assistance
ERP	Enterprise Resource Planning	TBC	To be confirmed
EOI	Expression of Interest	TOR	Terms of Reference
FAS	Financial & Accounting System	USAID	United States Agency for International Development
GA	Geographical Area	USG	United States Government
GIS	Geographical Information System	WE	Water Establishment
GIZ	Gezellshaft fur Internationale Zusammenarbeit	WPS	Water Pumping Stations
GNSS	Global Navigational Satellite System	WWTP	Wastewater Treatment Plant
GOL	Government of Lebanon		
GTZ	German Technical Assistance		
HDSL	High-bit-rate digital subscriber line		

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## **LWWSS Counterparts and Primary Contacts**

**Beirut-Mount Lebanon Water Establishment (BMLWE)**

**Beka'a Valley Water Establishment (BWE)**

**North Lebanon Water Establishment (NLWE)**

**South Lebanon Water Establishment (SLWE)**

**Ministry of Energy and Water**

**MOEW Advisor to Minister (Water)**

**MOEW Advisor to Minister (Wastewater)**

**Joseph Nseir**

**Maroun Msallem**

**Jamal Krayem**

**Ahmed Nizzam**

**Ghassan Beydoun**

**Abdo Tayar**

**Randa Nemer**

## A. INTRODUCTION

The Lebanon Water and Wastewater Sector Support (LWWSS) Program is a \$34 million, 67-month (October 2009 - April 2015) program funded by USAID and implemented by Development Alternatives, Inc. (DAI). LWWSS provides technical assistance and related services to impact USAID/Lebanon's Assistance Objective (AO) 4 - "Improved water services for all in Lebanon" - and the corresponding Intermediate Results (IRs) - more efficient management of water resources, improved water infrastructure, and enhanced water governance.

LWWSS works in cooperation with the Ministry of Energy and Water (MOEW) to assist Lebanon's four Water Establishments (WEs) in strengthening their capacity to deliver high-quality and sustainable services. Ultimately, the LWWSS program aims to help the Water WEs advance towards financial and operational sustainability and overcome the many challenges they face, including staff shortages and an aging workforce, poor customer relations, low tariffs that fail to recover operating costs, lack of metering, excessive non-revenue water, and underinvestment in the water and wastewater infrastructure.

The areas of focus that LWWSS targets in working with the WEs include:

- Building management capacity within the WEs;
- Increasing financial management capacity and financial systems integration;
- Procuring equipment to complement technical assistance and capacity building;
- Business planning to increase capital planning and benchmarking capacity;
- Funding urgent infrastructure works to enhance delivery or access and coverage;
- Developing a corporate culture, customer service orientation and public outreach programs.

Based on the initial LWWSS program objectives of building on previous USAID and other donor program progress and as a result of lessons learned during the first two years of the program, LWWSS has focused on implementing its Year-Three Work Plan within specific areas of Water Establishment (WE) operations. The LWWSS program has therefore tailored the individual WE work plans to apply the information gathered on each WE and to leverage the successes accomplished to date.

This Quarterly Report covers the period from April 2012 – June 2012 and provides quarterly highlights, component updates that provide technical perspective, and then details progress of project activities broken down by each Water Establishment and then further by each component, as per the Year-Three Work Plan. Each component consists of several activities, and progress of each is depicted in the accompanying Gantt charts (with mention of the percentage of completion as of the end of June) and detailed in the narrative.

## B. QUARTERLY ACTIVITY HIGHLIGHTS

### ***USAID Inaugurates Customer Service Center in the Bekaa***



*Bekaa Water Establishment's new customer service center in the heart of Zahle*



*The Minister of Water and Energy, the Director General of the Bekaa Water Establishment, and the USAID Mission Director cutting the ribbon at the inauguration of the center*



*Bekaa Water Establishment employee Najwa Zarzour explains the services available during a tour of the new center*

Over the past year, LWWSS has worked with the BWE on rehabilitating an antique stone building, previously used as a warehouse, and transforming it into the first customer service center in the Bekaa.

Previously, customers were required to apply for service and pay their bills at the BWE headquarters in Zahle, which was not equipped to handle the customer base, and complaints, recorded manually in a register, were frequently lost. This barrier to service effectiveness contributed to incomplete applications, illegal connections, low bill payment and collection, and a general degradation of service, which affected the served population and the WE's operational capacity. It also deterred potential new customers from connecting to the water network and subscribing at the BWE.

Customers can now pay their water bills, report service disruptions and leaks, ask questions, address complaints, and new customers can subscribe for water service, all in the same place. LWWSS also trained 23 personnel on critical customer service skills, many of whom will be working at the new center.

Simultaneously, the BWE is benefitting from a new computerized system for finance and customer service management that will result in standardized processes and much faster processing of applications, requests, and better tracking of complaints.

The center, the personnel trained, and the new computerized management system will enable the BWE to serve the population more promptly and effectively, increase the number of subscribers, collect revenues, and address complaints and report service break-downs. This improvement will enhance the BWE's financial and operational performance and sustainability, which ultimately serves to increase the number of people who are served with drinking water.

The center was inaugurated on June 29, 2012 at a ceremony attended by the Minister of Water and Energy Gebran Bassil and the USAID Mission Director Jim Barnhart.

## **Enterprise Resource Planning Platform Implementation Underway in Beirut-Mount Lebanon and Bekaa Water Establishments**

*This new system will completely modernize the Water Establishment increasing efficiency and facilitating our day to day tasks.*

*— Dareen Arabieh, Assistant to Bekaa Water Establishment's Director General*



*Beirut-Mt. Lebanon purchasing department during an ERP training session in April 2012*



*BWE IT Manager Carla Bechwaty and BWE Assistant to the Director General Dareen Arabieh learn the ins and outs of the ERP in May 2012*



*BWE purchasing, finance and IT personnel during an ERP training session in May 2012*

Lebanon's largest water utilities are suffering from outdated financial systems and processes, and a lack of computerization of their operations. Data is manually entered and frequently lost among departments, and financial reports are difficult and time-consuming to produce. This condition results in increased customer complaints, and a lack of efficiency and financial transparency.

To help modernize the Beirut-Mount Lebanon Water Establishment (BMLWE) and the Bekaa Water Establishments, LWWSS just completed the implementation of a project that delivers sweeping reforms by integrating and computerizing all administrative and financial operations into a modern, user friendly system. The system will substantially increase efficiency, control, and compliance at the water establishments.

After more than a year of planning and preparation, LWWSS has commenced training the personnel of the BMLWE in the modules that comprise the Enterprise Resource Planning (ERP) platform.

The BMLWE and BWE launched their systems in May and June 2012 respectively, after a year of planning and preparation, followed by extensive testing of the system and many weeks of user training. Successful adoption of the system is promising, and it lays the ground for the further modules to be launched this summer, namely the customer complaints and billing modules.

At every stage of the deployment, LWWSS's teams received positive feedback from users at the water establishments:

*This new program will modernize the BWE by allowing all of the data to be computerized and information from all departments to be consolidated in one place.*  
- BWE's IT Manager Carla Bechwaty

*The system provides an enormous benefit to BWE as it will significantly improve our productivity and efficiency.*  
- Hala Jedeon, BWE's Coordinator of Finance,

*This is a good first step, but in order to ensure sustainability of this new system, trainings and support must continue.* - Dareen Arabieh, the Assistant to BWE's Director General.

Indeed, the LWWSS team will continue to assist the WE's personnel for one year in transitioning their operations to the new system.



## **C. OVERVIEW OF PROGRESS THIS QUARTER**

### ***Progress Summary***

#### ***Infrastructure Work***

##### ***NLWE-Beit Mellat***

After receiving the NLWE priority list of villages for the Beit Mellat project, the LWWSS engineering and procurement teams worked closely with the NLWE senior management to develop an RFP for consulting engineering services for the project. The RFP was advertised, and 12 companies have requested the details of the RFP. Responses are due in July of next quarter with the selection and approvals process completed by the end of August or early September. The design work, specification and tendering documents are anticipated to take approximately eight months (for a more detailed calendar, please see p. 41 below). This activity is on track with the estimated timeline presented under the detailed discussion below, pp.38-41.

##### ***BWE-Network Rehabilitation***

During this quarter RFP and advertisements for the consulting engineering work were carried out and a consulting engineering firm selected. World and Engineering Technology (WET) was selected as the lowest qualified bidder. Data collection, design work and specifications will be started in July, 2012. This activity is in track with the estimated timeline presented on p. 21 below.

##### ***SLWE-Pump Station Rehabilitation***

In this quarter CDM Smith selected Design Engineering Partners (DEP) as the local consulting engineering firm to carry out the data collection, well testing, design and development of specifications and tender package for the rehabilitation of up to five pump stations. As a practical matter LWWSS has determined with rough estimates from CDM Smith that the project will most likely have funds to complete three of the five pump stations originally anticipated. This early indication will be born out by the detailed estimate to be developed by DEP and confirmed by CDM Smith. Although this program activity had a slow start as described in earlier quarterly reports, LWWSS is confident that the project will be completed by January, 2015.

#### ***Equipment Procurement and Technical Assistance***

Please refer to the detailed descriptions of equipment and technical assistance provided to each water establishment below.

## **D. PROJECT PROGRESS BY WATER ESTABLISHMENT AND COMPONENT**

Project activities are broken down by each Water Establishment and then further by each LWWSS component, as per the Year Three Work Plan. Each component consists of several activities, and a timeline of each activity is depicted in the Gantt charts and detailed in the narrative.

# 1. Beka'a Valley Water Establishment (BWE)

## Component 2: Capacity Building for Managerial, Technical and Operational Efficiency

### Work Plan Activities

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
<b>2.2</b>	<b>Building the WEs' Water Quality Management Capacity</b>			
2.2.1	Conduct water quality baseline survey based on seasonal sampling of all sources, with on-the-job staff training	AUB	Activity Completed. Assessment issued to BWE	May, 2012
2.2.2	Establish a region-specific and Libnor-compatible testing protocols and methodology	AUB	Activity Completed. Assessment issued to BWE	Sept. 2012
2.2.3	Plan and conduct a comprehensive user training on all aspects of lab operation	AUB	Activity planned.	Sept. 2012
<b>2.3</b>	<b>Build Pump Stations Operators Capacity in Operation and Maintenance</b>			
2.3.1	Pump station operators basic O&M and H&S training (70+ staff)	CDM (BG, GT), LWWSS (MK) Kredo	Activity completed in Year Two. Will be repeated in BWE to cover new staff.	Sept. 2012

BG-Bassem Ghayda; MK-May Koleilat; GT-Gulnard Ters

#### Activity 2.2 - Building the BWEs' Water Quality Management Capacity

The water quality assessment and management plan activity with the American University of Beirut (AUB) is on-track. During the third quarter, AUB finalized the baseline dry season's water quality survey of sources feeding distribution networks and piped water supply and issued the findings to DAI for review. The wet season sampling is nearly complete, despite the numerous challenges that AUB faced in terms of access to site, power cuts (preventing the water samples from being collected) and the risks due to some sites being located close to the Syrian border. AUB had reported numerous challenges in terms of access to some sources where political and security issues may put their staff at risk. AUB and LWWSS met with the BWE chairman and discussed these issues in May, and it was agreed that AUB will exclude sample collection from these sites. As of the end of the third quarter, the testing and production of test results for the wet season sampling is ongoing at the AUB laboratories and is expected early next quarter.

The laboratory location and equipment plan was also delivered to LWWSS and is being reviewed for comments to be sent back to AUB for incorporation and issuance of the final report. Once the report is completed, LWWSS will proceed with procurement of essential laboratory equipment and implementation of comprehensive training.

The survey by AUB's team is completed in the BWE region in terms of sampling and collection. Laboratory analysis is nearly complete. The issuance of the full survey report (wet and dry seasons) will take place in September 2012.

The AUB contract for this activity started on October 1, 2011 and ends on April 30, 2013.

### Activity Timeline

	10/1/2011 to 3/30/2012	4/1/2012 to 9/30/2012	10/1/2012 to 3/30/2013	4/1/2013 to 9/30/2013
BWE Water Quality Testing, Baseline, Protocol Guide and Training				
1. Conduct the wet and dry season water baseline testing	████████████████████			
2. Analysis of baseline water tests		████████████████████		
4. Conduct a laboratory operations assessment and submit recommendations		████████████████████		
5. Merge the wet and dry season analyses into a combined report with recommendations			████████████████████	
6. Provide an overall water quality testing management plan and training				████████████████████

Activity 2.3. – Building Operators’ Capacity in Operation and Maintenance of Pump Station Equipment

**Follow-Up Pump Station Operators Training**

LWWSS Capacity Building Specialist May Koleilat met with LWWSS subcontractor Kredo and BWE Head of Stations Mr. Khalil Azar to discuss the target audience, content, and venue for the follow-up pump station training. Mr. Azar noted that it would be more useful to have a training course for new operators rather than a follow-up training course for operators who were trained but have demonstrated a lack of application of last year’s training. He also recommended a more “hands-on” training, focusing on the operation of the new Shamseen station.

The specific training will be determined early in the fourth quarter. Ms. Koleilat will then continue to plan the training throughout the fourth quarter. Training is expected to take place in September, 2012 and will continue into the first quarter of year four.

**Activity Timeline**

	10/1/2011 to 3/30/2012	4/1/2012 to 9/30/2012	10/1/2012 to 3/30/2013	4/1/2013 to 9/30/2013
BWE Pump Station Advanced Operator Training				
1. Development of training materials for the advanced course			■	
2. Agreement on selection of participants after interviews; selection of place and time for training			■	
3. Provision of Training			■	
4. Follow up site visits to assess application of the training; on-site remedial training if needed				■
5. Completion of training report				■

**Component 3: Increase Financial and Commercial Viability of Water Establishments**

**Work Plan Activities**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
<b>3.1</b>	<b>Upgrade Finance and Accounting Standards and Methods</b>			
3.1.1	Build the WE capacity in consolidating and issuing end of year financial reports	EMC (MC), LWWSS (AS) ABA	Information collected Reports produced	March, 2012
3.1.2	Training in Public Accounting, Finance, Procurement, Auditing	EMC (MC), LWWSS (MK)	Training completed Follow-up in place	Feb., 2012
3.1.3	Define cost centers, create/update chart of accounts, and accounting coding procedures	EMC (MC), LWWSS (AS) ABA	Information collected New COAs and procedures defined	March, 2012
3.1.4	Develop procedures for asset and inventory identification, coding and valuation	EMC (MC), LWWSS (AS) ABA	Procedures defined with the WE	March, 2012
<b>3.2</b>	<b>Integrate the WEs Financial, Accounting, Customer Service and Business Process Systems</b>			

3.2.2	Implement software platform including Finance and Accounting System and Customer Relationship Management solution	EMC (MC, NA), LWWSS (AS), ABA EDM	Implementation completed and approved	Aug., 2012
3.2.3	Implement intranet system enabling web-browser based e-training, communication and business process tools	EMC (MC, NA), LWWSS (AS), ABA EDM	Implementation completed and approved	Aug., 2012
3.2.4	Conduct training, assist in transition phase and provide one to two years of on-site support	EMC (MC, NA), LWWSS (AS), ABA EDM	Training started	Sept., 2012
3.2.5	Supply and install time attendance machine and implement administrative and HR measures to increase HR efficiency	EMC (MC, NA), LWWSS (AS) EDM	Core equipment installed with training in Year Two. Two sets of equipment planned for Year Three.	Sept., 2012
<b>3.3</b>	<b>Pilot Stakeholder Exercise to Sustain O&amp;M of USAID WWTP</b>	DAI (SC, BJ)	Assessment report	September, 2012

MC-Mike Chalah; NA-Nada Akl; AS-Ahmad Siddiq; SC-Sam Coxson; BJ-Bassam Jaber

### Activity 3.1 - Upgrading Finance and Accounting Standards and Methods

#### ***Accounting Training and Financial Procedures Revised Schedule***

These activities are on-going, some as prerequisites and others in parallel to implementation of the ERP platform (see activity 3.2), which was kicked off at the end of May, 2012. LWWSS' Financial Specialist Mike Chalah is assisting with these tasks, and while most details are finalized and LWWSS' assistance activities are thus essentially completed under activity 3.1, Mr. Chalah is still awaiting final data from the BWE and final analysis of data before these tasks can be considered completed.

Finalizing the above tasks was not as urgent as the implementation of the ERP, but Mr. Chalah will return to these tasks in the fourth quarter in order to complete them as efficiently as possible. The summary of activities during the months of the third quarter is presented below, along with a revised timeline of these activities that is reflected in the Gantt chart:

- Mr. Chalah continued his assistance to BWE staff in consolidating end of year financial reports by continuing to analyze the data with BWE's financial department. Mr. Chalah will focus on this task early in the fourth quarter and will finalize the financial reports by early August.
- Mr. Chalah finalized cost centers and the chart of accounts with the BWE, and now the financial department at BWE is employing the chart of accounts and cost centers in their work.
- While the procedures for inventory coding are finalized, Mr. Chalah is still awaiting the final fixed assets inventory from BWE before he can complete his assistance on this task. Once this data is received, he will then work on reconciliation with the existing inventory data available. This task should be finished by the end of July.

#### **Activity Timeline**

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012	
Build the WE capacity in consolidating and issuing end of year financial reports	90%												
Training in Public Accounting, Finance, Procurement, Auditing	100%												
Define cost centers, create/update chart of accounts, and accounting coding procedures	100%												
Develop procedures for asset and inventory identification, coding and valuation	90%												

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012
  Revised schedule (see Second Quarterly Report and April and May 2012 monthly reports for details)

**Activity 3.2 - Integrating the WE's Financial, Accounting, Customer Service and Business Process Systems**

**Enterprise Resource Planning System Progress**

LWWSS IT Specialist, Ahmad Siddik, Financial Specialist, Mike Chalah, and Outreach and Customer Service Specialist, Nada AKI, continued the ERP preparations and implementation:

- Mr. Siddik continued coordination of the IT equipment installation (Activity 5.6), while also managing the entire ERP planning and implementation process.
- Mr. Chalah continued his work finalizing the analysis of the purchasing, cash management, human resources and billing and collection sub-modules of the FAS.
- Ms. Akl, continued her CRM portion of the ERP work. The trial period for the customer service request forms continued in April (see Activity 7.3) and the finalized forms will be incorporated into the ERP customer relations management module.

The training sessions with 27 personnel in the finance (12 personnel), budgeting (4 personnel), purchasing (3 personnel), and warehouse (8 personnel) departments began on May 21 and finished on May 31. During the training each group was given full details about their cycle, ERP features, and a detailed description on how to use the system. Each person who participated in the training practiced and tested each task relative to their position responsibilities. The ERP "go live" for these modules was on June 4, and the LWWSS team continued to monitor, coach and retrain staff having problems with their specific ERP module.

Other progress during the third quarter is summarized below:

- The payroll and human resources management modules of the ERP were tested in June, followed by the training and "go live." Some modifications need to be made to the system and will take place and be tested in early July.
- CRM testing sessions and billing and collection testing sessions started in June. Work on these modules will be ongoing during the next quarter and into year four.

Five modules of the ERP are fully functional (purchasing, budgeting, financial, warehouse, payroll and HR), and the CRM, SharePoint, and billing and collection modules will be fully functional by November 2012, after which follow up sessions on all the implemented modules will be conducted through September 2013.

- To make sure that the users are following the right processes;
- Employees are using the new implemented ERP;
- To solve issues might users encounter while using the new ERP; and
- To modify requested changes and produce required reports.

***Time Attendance Machine Installation in Branch Offices***

Time Attendance Machines (inclusive of hand punch, cameras, DVR, and UPS) were installed and configured in the Zahle branch and the Baalbeck branch in April. This installation is critical to modernizing the human resource and financial operations in the WE by obtaining automatic logging of hours and by providing the senior management with tools to enforce staff attendance.

### Activity Timeline

	10/1/2010 to 3/30/2011	4/1/2011 to 9/30/2011	10/1/2011 to 3/30/2012	4/1/2012 to 9/30/2012	10/1/2012 to 3/30/2013	4/1/2013 to 9/30/2013
<b>BWE-ERP Timeline</b>						
1. Assessment of BWE IT System	█					
2. Process Mapping and Specification Development	█	█				
3. MIS Procurement			█			
4. MIS (ERP) System Implementation			█	█	█	
	Initial Timeline from yr-2 and yr-3 Work Plans					
<b>BWE Enterprise Resource Planning System Installation</b>						
1. On site Assessment of information software needs	█					
2. Development of software system specifications		█				
3. Bidding and approval of procurement			█			
4. Initial software vendor and LWWSS meetings with WE Staff to determine specific processes needed			█			
5. Specific tailoring of the ERP system to meet WE senior management and staff needs			█	█		
6. Training on the ERP system for WE staff				█		
7. Entry of data to the new system and testing				█		
8. Coaching WE staff in use of the new system; providing remedial training where needed				█	█	
9. "Go Live" with the ERP system using its various modules					█	
10. Working on bugs in the system and monitoring staff to assist when needed					█	
11. On site technical assistance by Subcontractor EDM					█	█
	Current Time Line As Evolved With Project					



**Activity 3.3 – Developing Pilot Stakeholder Exercise to Sustain O&M of USAID Wastewater Treatment Plants**

During May, USAID COTRs Rami Wehbeh and Sana Saliba met with MOEW’s Advisor to the Minister for Wastewater, Randa Nemmer, to discuss the MOEW’s possible assumption of operation of the three USAID-funded wastewater treatment plants. The advisor to the minister responded relatively positively in the discussion of MOEW’s possible assumption of operation of the USAID-funded wastewater treatment plants. LWWSS has decided to continue on its pilot effort to establish a service agreement between a municipality and the BWE as a possible partial solution to the problem of financial and operational sustainability of the USAID-funded wastewater treatment plants.

In June, LWWSS COP Sam Coxson and LWWSS Senior Advisor Bassam Jaber developed a presentation outlining the service agreement for the mayors of three municipalities that received USAID-funded wastewater treatment plants in Ablah, Fursol and Aitenit. The presentation explains the purpose of the service agreement that would allow the WE and municipality to define their roles in the sharing of costs and responsibilities for operation and maintenance of the collection, transmission, treatment and disposition of wastewater. The municipality of Aitenit wastewater treatment plant is operated by the Union of Lake Municipals (ULM). Mr. Khalil Sharaneq is the President of the Union and manages the operations and maintenance of the Aitenit WWTP. Although the Mayor of Ablah stated his interest in looking into the possibility of a take-over of the Ablah WWTP by the BWE, the ULM President, Mr. Sharaneq, stated that there was no interest in having the WE take over operations of the Aitenit WWTP. The ULM President went on to relate past experiences with the BWE and stated that he felt the BWE could not sustainably perform the services it has in its mandate.

Mr. Coxson and Mr. Jaber have additional meetings scheduled in July with the Mayors of Ablah and Foursol to further discuss their participation in a service agreement. Additionally, during July, the LWWSS team (Coxson and Jaber) will meet with the Director General of the BWE, Mr. Maroun Msallem, to explore next steps in establishing a service agreement with Ablah and Foursol. The initial meeting was to present the general concept and the follow up meetings will be more specific as to how the process works and to determine whether there is interest in pursuing the service agreement by those two communities. After the meetings with the Director General and the mayors, the LWWSS team will meet with MOEW officials to gauge the receptiveness of financial support of the BWE in taking over the WWTP operations in at least Foursol and Ablah.

**Activity Timeline**

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Draft assessment report	100%											
Discuss, amend and issue to USAID						40%						

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012

**Component 4: Capital Investment Planning and Program/Project Management**

**Work Plan Activity**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
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<b>4.4</b>	<b>Master planning</b>			
4.4.1	Water Supply and Sewerage Master plan	Local subcontractor (TBC) Valuadd	Activity SOW defined. Services procured Planning started	Sept, 2012

Activity 4.4 - Developing Water Supply and Sewerage Master plan

In April LWWSS launched the expression of interest (EOI) to local consulting engineering firms for the development of a water supply and wastewater master plan covering the Bekaa region. The advertisement was published in local newspapers, and the EOI was then issued to sixteen companies for submitting an EOI by the deadline of April 27, 2012. Ten companies submitted their company profiles by the deadline.

The evaluation committee held its first meeting on May 3, 2012 to start the evaluation of the received EOI proposals and profiles of the applicants. Following a thorough review of the firms' profiles and proposals submitted, the evaluation committee concluded the evaluation of the EOI of the applicants on May 10, 2012, and five consulting engineering companies were short-listed.

The Request for Proposal (RFP) was then finalized in mid-June and was issued to five short-listed consulting firms on June 21. The deadline for submitting proposals is July 18. After the evaluation of the bids and selection of a firm, a request for consent to subcontract will be prepared. It is expected that the award will be made in October, 2012, and all of the deliverables shall be completed no later than 16 months from the date of contract signing.

**Activity Timeline**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	
1		10/1/2011 to 3/28/2012				4/1/2012 to 9/30/2012				10/1/2012 to 3/28/2013				4/1/2013 to 9/30/2013												
2	BWE Master Plan For Water and Wastewater																									
3	1. Draft specifications for solicitation of an EOI																									
4	2. Short-list responses for full RFP response																									
5	3. Evaluate bids and select winning bid																									
6	4. Collect data and write up draft water and sewer master plan																									
7	5. Review master plan with BWE and draft final master plan																									
8																										
9																										
10																										
11																										
12																										
13																										
14																										
15																										

**Component 5: Procurement of Technical Equipment to Strengthen WEs**

**Work Plan Activities**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
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<b>5.4</b>	<b>Upgrading the Water Analysis Laboratories</b>			
5.4.1	Upgrade the water testing laboratories with infrastructure and equipment	AUB Local suppliers	Laboratory procurement scheme planned and agreed with BWE	Sept, 2012
5.4.2	Establish service agreements, and conduct user training programs for the above activities	AUB LWWSS (MK)*	Activity planned	Sept, 2012
<b>5.5</b>	<b>Water Treatment and O&amp;M Training</b>			
5.5.1	Install up to 20 UNICEF-supplied chlorinator units; Supply and install safety equipment and gas detection systems	CDM (BG, GT, EH) Sanabel	Installation complete	Completed
5.5.2	Training course for operators and year-long service and supply of consumables	CDM (BG, GT, EH), LWWSS (MK) Sanabel	Training conducted (done) 1 year service agreement, consumables	Sept, 2012
<b>5.6</b>	<b>Increase IT Infrastructure Efficiency</b>			
5.6.1	Assess and design IT infrastructure for WE headquarters and connectivity to branches	LWWSS (AS)	Report issued and adopted by SLWE	Completed
5.6.2	Upgrade server installation and power supply infrastructure at head office and selected branches	LWWSS (AS) Local subcontractor (MDS + TBD)	Scope defined Procurement and implementation started	Sept, 2012
<b>5.8</b>	<b>Establishing Direct Customer Interface</b>			
5.8.1	Design branch office and customer service center in WE's premises in Zahle	EMC (NA)*, LWWSS (AS) Boudy Esta Architects	Design complete and approved by WE	Completed
5.8.2	Implement interior works and furnish the new customer service center; connect IT systems to head office	Boudy Esta Architects, LWWSS, EMC Al Handassa Constructors	Implementation complete Project handed over to WE	May, 2012
5.8.3	Assist WE in reaching customers and building staff capacity in customer service	EMC (NA) Local subcontractor (TBD)	Activity planned	Sept, 2012

BG-Bassen Ghayda; GT-Gulnard Ters; EH-Elie Hreiz; MK-May Koleilat; NA-Nada Akl; AS-Ahmad Siddik

#### Activity 5.4 – Upgrading Water Analysis Laboratories

As part of AUB's water quality assessment and management plan (see Activity 2.2), LWWSS will further upgrade the laboratories after AUB provides specifications and recommendations. The draft AUB report was issued at the

end of the third quarter, and DAI has conducted a detailed review of the report. The final submission from AUB is expected in July, 2012 which will trigger the agreement with BWE on equipment needed (based on AUB's recommendations) and the commencement of the procurement stage for the equipment.

**Activity Timeline**

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Based on water quality mapping, investigate and plan laboratory equipment needs								70%				
Start procurement										0%		→
Establish service agreements, and conduct user training programs for the above activities										0%		→

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012 (0% indicates that the activity has not yet started) → Activity continues in Year Four

Activity 5.5 – Water Treatment and O&M Training

**Chlorination Equipment Follow Up**

The service and maintenance phase of this activity is ongoing with weekly site inspection visits by LWWSS engineers and the supplier Sanabel to the 14 stations where chlorinators were installed to follow up on the operations and maintenance of the systems.

During these site visits, LWWSS engineers routinely check on the following:

- System function
- System pressure gauges (suction and injection pipe lines)
- Chlorine gas cylinders pressure

In addition, they test the following:

- Leak detection alarm system and ventilation exhaust fans system
- Emergency shower
- Flow switch
- Change over
- Flow meter
- Measurement of the free chlorine (ppm) in the distribution line
- Other tests required as per the O&M manuals

The LWWSS engineers also continuously encourage the operators and assist them in their daily operations, though this is subject to operator availability.

The service and maintenance phase will finish in September 2012 at which point Sanabel and LWWSS will hand over the activity to the BWE.

Challenges are detailed in Section H.

**Activity Timeline**

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Ongoing training and follow-up with operators						70%						
Provide consumables						70%						

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012

Activity 5.6 - Increasing IT Infrastructure Efficiency

As a prerequisite to the ERP platform, LWSS is upgrading the IT infrastructure at BWE. This upgrade includes hardware and a robust internet connection that establishes permanent connectivity between the branch offices and the servers at the head office.

All of the equipment was installed during the third quarter, except for a final task that will take place in July - the ADSL (asymmetrical digital subscriber line) will need to be replaced by HDSL (high-bit-rate digital subscriber line) for the Exchange in order to use fixed IP address and activate the email system.

**Activity Timeline**

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Complete procurement of IT equipment required		100%										
Equipment delivery on site					100%							
Install and launch equipment, ahead of programming the ERP platform							90%					

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012

Revised schedule (see narrative for details)

Activity 5.8 – Establishing Direct Customer Contact

**Customer Service Center Progress**

Contractual work at the Zahle site was completed on time in mid-April, and a soft handover took place from the Contractor to DAI on April 21. Remarks and additional comments were noted and taken care of throughout that same week. Additionally, procurement and appointment for external works at the Zahle branch began in May. The work included plastering the ceiling of facade, bollards at the sidewalk’s end, and steel covers for the A/C compressors. Work started during the week of May 21 and was completed in time for the inauguration ceremony on June 29, 2012. See “Quarterly Activity Highlights” on page 4 for more details.

## Activity Timeline

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Commence interior works associated with the branch	100%											
Commence procurement of furniture and other associated packages			100%									
Finalize and handover branch to WE ahead of launching								100%				
Provide specialist customer service training to staff										0%		

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012 (0% indicates that the activity has not yet started)

## Component 6: Small- to Medium-Scale Rehabilitation/Upgrade/Extension Water and Wastewater Works within WEs

### Workplan Activities

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
6.1	<b>Decreasing Water Losses and Upgrading Existing Networks</b>			
6.1.1	Design network upgrades in Zahle: rehabilitating the water supply network of the region of Mar Elias	LWWSS (Infrastructure PM) Local Engineering Firm (TBD)	Engineering consultant appointed Design complete	Sept, 2012
6.1.2	Implement network upgrades in Zahle: rehabilitating the water supply network of the region of Mar Elias	Local Engineering Firm (TBD) Local subcontractor (TBD)	Preparation for procurement started	Sept, 2012
6.1.3	Design network upgrades in Zahle: rehabilitating five branch networks in Haouche el Oumara, Maalaka, Rassieh, Karak-Forzol and Midan	LWWSS (Infrastructure PM) Local Engineering Firm (TBD)	Engineering consultant appointed Design complete	Sept, 2012
6.1.4	Implement network upgrades in Zahle: rehabilitating five branch networks in Haouche el Oumara, Maalaka, Rassieh, Karak-Forzol and Midan	Local Engineering Firm (TBD) Local subcontractor (TBD)	Preparation for procurement started	Sept, 2012

Activity 6.1 - Decreasing Water Losses and Upgrading Existing Networks

The Request For Proposal (RFP) for the design and supervision of the construction of a water supply network in Zahle was prepared during April, 2012. On April 23, 2012 an Invitation to Bid was sent to nine Lebanese consulting firms to take part in the aforementioned RFP, selected among the best Lebanese consultants dealing with water projects. The nine selected consulting firms responded to the invitation of DAI and picked up the RFP from the DAI/LWWSS office. The deadline for submission of technical and financial proposals was May 18, 2012. In response to the RFP for the Design and Supervision for the Construction of a Water Supply Network in Zahle, six consulting firms out of nine solicited submitted their technical and financial proposals by the deadline of May 18, 2012.

The evaluation committee held its opening session on May 21, 2012. During this session the technical proposals were opened, reviewed and scored according to the criteria set in the RFP. On May 22, 2012 the evaluation committee held its second session. During this session the financial proposals were opened, reviewed and scored according to the criteria set in the RFP. After having completed the technical and financial scoring of the proposals and issuing the final ranking of the consulting firms based on the sum of points awarded according to the RFP, the evaluation committee recommended the selection of World Engineering and Technology (W.E.T.) because their proposal, while being the lowest in cost, was in compliance with the technical requirements specified in the RFP, which includes company profile, capacity, skill and resources. As of the end of the third quarter, the contract is being drafted and it will be signed in early July.

As of the end of the end of the third quarter the estimated timeline for this project is below:

Stage	Description	Completed By
Services Appointment	Appointment of consulting engineer.	Completed by June 2012
Investigation, Preliminary and Detailed Design, Tender Package	- Stage 1: field investigation and preliminary design. - Stages 2: Final design and construction cost estimate. - Stage 3: Bid documents: Following approval of the design package and the construction cost estimate by BWE and DAI, production of bid package for DAI to procure the construction works.	4 months – Completed by October 2012
Procurement of Works	Launching of bid for works. Proposals received, evaluated and infrastructure subcontractor appointed.	3 months – Completed by January 2013
Construction, Completion and Commissioning	Implementation of works until completion, commissioning and taking over.	8 months – Completed by September 2013





alternate bid approach, LWWSS will add the additional work should the bid and alternate bid with the additional construction work added in, come in within the available funds.

The estimate of construction time is much less than the original proposal. This was determined only after LWWSS hired personnel who could spend more time refining the actual pipe replacement items of the proposed project. Hence, the initial delay in progress (hiring additional staff) is more than made up by the refined estimate of time for the pipe replacement.

**Component 7: Corporate Culture, Customer Service Orientation, and Public Outreach**

**Work Plan Activities**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
<b>7.2</b>	<b>Customer Service Management Capacity Building</b>			
7.2.1	Customer service training aiming at enhancing service effectiveness and increasing customer satisfaction	EMC (NA) LWWSS (MK)	Training provided Follow-up in place	March, 2012
<b>7.3</b>	<b>Develop Tools and Support WEs in Adopting Corporate Communication</b>	EMC (NA) Local subcontractor (TBD)	Activity completed	March, 2012
7.3.3	Develop and Adopt Customer Service Application Forms	EMC (NA) Local subcontractor (TBD)	Activity completed	March, 2012

Activity 7.2 - Customer Service Management Capacity Building

This activity was completed during the second quarter of year three.

Activity 7.3 - Develop tools and Support WEs in Adopting Corporate Communication

**Customer Service Application Forms**

LWWSS Outreach and Customer Service Specialist, Nada Akl, held a number of meetings with the BWE management. The meetings addressed several minor comments on the customer service forms and resulted in the agreement that the finalized forms will be incorporated into the ERP CRM module and no of printing forms is needed.

**Activity Timeline**

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Course preparation for customer service training			100%									
Customer service training course provision.				100%								
Finalize design, obtain WE approval and deploy forms as pilot in branches.			100%									
Obtain final feedback and issue formally, then arrange for printing.						100%						

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012

## 2. Beirut-Mount Lebanon Water Establishment (BMLWE)

### *Component 2: Capacity Building for Managerial, Technical and Operational Efficiency*

There are no component two activities with BMLWE in the year three work plan.

### *Component 3: Increase Financial and Commercial Viability of Water Establishments*

#### Work Plan Activities

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
3.1	<b>Upgrade Finance and Accounting Standards and Methods</b>			
3.1.1	Build the WE capacity in consolidating and issuing end of year financial reports	EMC (MC), LWWSS (AS) ABA	Information collected Reports produced	March, 2012
3.1.3	Define cost centers, create/update chart of accounts, and accounting coding procedures	EMC (MC), LWWSS (AS) ABA	Information collected New COAs and procedures defined	March, 2012
3.1.4	Develop procedures for asset and inventory identification, coding and valuation	EMC (MC), LWWSS (AS) ABA	Procedures defined with the WE	March, 2012
3.2	<b>Integrate the WEs Financial, Accounting, Customer Service and Business Process Systems</b>			

3.2.2	Implement software platform including Finance and Accounting System and Customer Relationship Management solution	EMC (MC, NA), LWWSS (AS), ABA EDM	Implementation completed and approved	Aug, 2012
3.2.3	Implement intranet system enabling web-browser based e-training, communication and business process tools	EMC (MC, NA), LWWSS (AS), ABA EDM	Implementation completed and approved	Aug, 2012
3.2.4	Conduct training, assist in transition phase and provide one/two year on site support	EMC (MC, NA), LWWSS (AS), ABA EDM	Training started	Sept, 2012

MC-Mike Chalah, AS-Ahmad Siddik, NA-Nada Akl; ABA-Allied Business Advisors

### Activity 3.1 - Upgrading Finance and Accounting Standards and Methods

These activities are on-going, some as prerequisites and others in parallel to implementation of the ERP platform (see activity 3.2), application of which began in early April. LWWSS' Financial Specialist, Mike Chalah, is assisting with these tasks, and while most details are finalized and LWWSS' assistance activities are thus essentially completed under activity 3.1, Mr. Chalah is still awaiting final analysis of data with the BMLWE financial department and the insertion of final data into the coding system before these tasks can be considered completed.

Finalizing these tasks was not as urgent as the implementation of the ERP, but Mr. Chalah will return to these tasks in the fourth quarter in order to complete them by the end of July or early August, 2012.

The summary of activities that took place during the third quarter is below, along with a revised timeline of these activities reflected in the Gantt chart:

- Mr. Chalah continued his assistance to BMLWE staff in consolidating end of year financial reports by continuing to analyze the data with BMLWE's financial department. Mr. Chalah will focus on this task in the fourth quarter and this will be finalized by early August
- Mr. Chalah had already finalized a new coding and inventory identification system for BMLWE, but BMLWE requested that Mr. Chalah link the existing coding to the new coding, so Mr. Chalah continues to work on this and will complete this task by the end of July.

### **Activity Timeline**

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Build the WE capacity in consolidating and issuing end of year financial reports						90%						
Training in Public Accounting, Finance, Procurement, Auditing			100%									
Define cost centers, create/update chart of accounts, and accounting coding procedures					100%							
Develop procedures for asset and inventory identification, coding and valuation						90%						

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012
  Revised schedule (see narrative for details)

Activity 3.2 - Integrating the WE's Financial, Accounting, Customer Service and Business Process Systems

**Enterprise Resource Planning System Progress**

Trainings for the ERP commenced on April 2 for the finance, budgeting, purchasing, and warehouse departments. During every training and at the end of each session, the LWWSS team received immediate feedback on training structure, content, difficulties in the system, and on trainee understanding of the system. All trainees' comments on the system were discussed with them during the training, and then the subcontractor EDM modified the system accordingly and presented the new modifications to the trainees to get their approval. Most of the trainees gave LWWSS very good feedback on both the training and the system.

LWWSS IT and Systems Specialist Mr. Siddik and LWWSS Finance Specialist Mr. Chalah, along with subcontractors ABA and EDM, were testing the modules throughout the training sessions. Several rounds of additional testing will take place even after the "go live" period to insure the system is functioning properly as per the BMLWE needs. The training for these departments continued until May 9, at which point the ERP platform went live and has been functioning well.

The warehouse module is not functioning yet as the BMLWE IT department did not provide the equipment needed (PCs, cables, keyboard and), even though they committed to this critical purchase. The BMLWE IT department also did not deliver the new servers to install the ERP for better performance. Letters detailing all of these issues were addressed to the BMLWE Director General Mr. Joseph Nseir in May.

Further ERP progress during the third quarter is summarized below:

- The LWWSS team worked closely with the procurement, budgeting, and finance and accounting departments as follow up to the ERP "go live" in early May
- The payroll and HR modules were tested
- The CRM testing sessions started
- The Hazmiyeh warehouse was connected to the Badaro head office

There is a slight delay in the SharePoint implementation, which will not take place until September or October 2012. This delay in the Sharepoint platform is based on discussions and agreement between LWWSS and the BMLWE to enable a better sequencing of deployment of the ERP modules to avoid overloading the WE with

simultaneous modules. The training of IT personnel is also delayed, due to a decision made between LWWSS' IT and Systems Specialist and BMLWE personnel to postpone the training until all of the ERP modules have been implemented in the first quarter of year four. This decision was made because the IT training is a one-year online course, and LWWSS and BMLWE personnel decided that it would be prudent to wait until the ERP was fully functional until the IT personnel begin the training. This training is therefore postponed until year four and it will last for one year.

Challenges associated with this activity are detailed in Section H.

If the ERP progresses according to schedule, the ERP system at BMLWE will be fully functioning by November 2012, after which follow up sessions on all the implemented modules will be conducted through September 2013:

- To make sure that the users are following the right processes;
- Employees are using the new implemented ERP;
- To solve issues might users encounter while using the new ERP; and
- To modify requested changes and produce required reports.

### Activity Timeline

	10/1/2010 to 3/30/2011	4/1/2011 to 9/30/2011	10/1/2011 to 3/30/2012	4/1/2012 to 9/30/2012	10/1/2012 to 3/30/2013	4/1/2013 to 9/30/2013
<b>BMLWE-ERP Timeline</b>						
1. Assessment of BMLWE IT System	█					
2. Process Mapping and Specification Development	█	█				
3. MIS Procurement			█			
4. MIS (ERP) System Implementation			█	█		
	<b>Initial Timeline from yr-2 and yr-3 Work Plans</b>					
<b>BWE Enterprise Resource Planning System Installation</b>						
1. On site Assessment of information software needs	█					
2. Development of software system specifications		█				
3. Bidding and approval of procurement			█			
4. Initial software vendor and LWWSS meetings with WE Staff to determine specific processes needed			█			
5. Specific tailoring of the ERP system to meet WE senior management and staff needs			█			
6. Training on the ERP system for WE staff			█	█		
7. Entry of data to the new system and testing				█		
8. Coaching WE staff in use of the new system; providing remedial training where needed				█		
9. "Go Live" with the ERP system using its various modules					█	
10. Working on bugs in the system and monitoring staff to assist when needed					█	
11. On site technical assistance by Subcontractor EDM					█	█
	<b>Current Time Line As Evolved With Project</b>					

**Component 4: Capital Investment Planning and Program/Project Management**

There are no component four activities with BMLWE in the year three work plan.

**Component 5: Procurement of Technical Equipment to Strengthen WEs**

**Work Plan Activities**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
5.2	<b>Upgrading Pumping and Energy Efficiency</b>			
5.2.1	Jeita Pump Station: Design equipment replacement and sand removal unit solution	CDM (BG, GT, EH)	Design produced and approved by BMLWE	Completed
5.2.2	Jeita Pump Station: Supply 18 pumps and motors (US made), associated valves, fittings and electrical panel boards	CDM (BG, GT, EH) NPC and other US manufacturers	Equipment delivered to BMLWE	June, 2012
5.2.7	Establish service agreements, and conduct user training programs for the above activities	- CDM (BG, GT, EH), DAI (MK) - Local subcontractor (TBD)	Activity planned	September, 2012

BG-Bassem Ghayda; GT-Gulnard Ters; EH-Elie Hreiz

Activity 5.2 - Upgrading Pumping and Energy Efficiency

**Jeita Pump Station Equipment Replacement**

**1. Pumps and Motors**

The manufacturing of the pumps and motors by NPC was completed during the third quarter, including the mandatory factory-certified testing results that were reviewed and approved by CDM, after which the pumps and motors were ready for shipment. The shipment of the pumps and motors will take five weeks. They will be shipped from the factory on July 10 and will arrive in Beirut on August 14.

There have been many delays encountered with this procurement, delaying the shipment of the pumps and motors by almost six weeks. A summary of delays is highlighted below:

- Delay by NPC in producing the shop drawings for approval by CDM;
- Delay in completing the “non-witness“ factory test by the manufacturer NPC;
- Delay in the provision by NPC of the certified tests to CDM for final approval; and
- It was determined very late in the procurement process that mechanical vibration switches (which must be installed on the motors) were left out of NPC’s bid, even though they were originally included in the RFP. USAID was notified of this in May, and since then, the procurement team at DAI headquarters have been working on accelerating this procurement, because the motors should not be installed without these switches. A sole source justification to purchase these switches from NPC is being drafted as of the end of this quarter.

**2. Motor Control Centers**

CDM sent comments to Contracom on the shop drawings of the Motor Control Centers (MCCs) at the end of April. Contracom then submitted their revised shop drawings at the end of May and these were

approved by CDM in early June. Contracom started the assembly of the MCCs and delivery is expected at the end of July.

There have been a few delays with this procurement, mostly due to clarifications requested on Contracom's shop drawings, which took three weeks to be finalized.

### **3. Valves and Fittings Procurement**

The valves were manufactured at the end of June by the vendor Geobaca. CDM evaluated three bids submitted for the fittings and flanges in early May, and the COTR approved the request to purchase in mid-June. The valves, including the fittings, will be delivered to BMLWE by mid-July.



### Activity Timeline

	10/1/2010 to 3/30/2011	4/1/2011 to 9/30/2011	10/1/2011 to 3/30/2012	4/1/2012 to 9/30/2012	10/1/2012 to 3/30/2013	4/1/2013 to 9/30/2013
<b>BMLWE Jeita Timeline</b>						
1. Survey, Data Gathering, and Design	█					
2. Bidding Specifications and Documents	█					
3. Procurement Advertised						
4. Complete Procurement		█				
5. Manufacture and delivery of pumps and motors		█	█	█		
6. Procurement of Valves and Fittings			█	█		
7. Procurement and manufacturing of Motor Control Centers			█	█		
8. Installation Begins					█	
9. Installation Complete and Commissioning					█	
	<b>Initial Time Line</b>					
<b>BMLWE Jeita Timeline</b>						
1. Survey, Data Gathering, and Design	█					
2. Bidding Specifications and Documents		█				
3. Procurement Advertised		█	█			
4. Complete Procurement			█			
5. Manufacture and delivery of pumps and motors			█	█		
6. Procurement of Valves and Fittings			█	█		
7. Procurement and manufacturing of Motor Control Centers			█	█		
8. Installation Begins					█	
9. Installation Complete and Commissioning					█	
	<b>Current Time Line As Evolved With Project</b>					

**Component 6: Small- to Medium-Scale Rehabilitation/Upgrade/Extension Water and Wastewater Works within WEs**

There are no component six activities with BMLWE in the year-three work plan.

**Component 7: Corporate Culture, Customer Service Orientation, and Public Outreach**

**Work Plan Activity**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
7.2	<b>Customer Service Management Capacity Building</b>			
7.2.1	Customer service training aiming at enhancing service effectiveness and increasing customer satisfaction	EMC (NA) LWWSS (MK)	Training provided Follow-up in place	July, 2012

NA-Nada Akl; MK-May Koleilat

7.2 - Customer Service Management Capacity Building

LWWSS Communications and Outreach Specialist Nada Akl prepared a training program for BMLWE staff on customer complaint handling and in managing the customer relation process to improve overall customer relations. A memo was sent to the BMLWE Director General in mid-May proposing the customer service training, names of the participants, and the subject modules. July 3, 2012 was suggested as a tentative date for the training, though as of the end of the third quarter, this training has been postponed due to scheduling conflicts. The training date is still to be confirmed, but will likely take place at the end of July 2012.

**Activity Timeline**

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Course preparation for customer service training							60%					
Customer service training course provision.									0%			

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012 (0% indicates that the activity has not yet started)

Revised schedule (see narrative for details)

**3. North Lebanon Water Establishment (NLWE)**

**Component 2: Capacity Building for Managerial, Technical and Operational Efficiency**

**Work Plan Activity**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable
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		Completion	
2.3	<b>Build Pump Stations Operators Capacity in Operation and Maintenance</b>		
2.3.2	Pump station operators advanced training in O&M	- DAI (MK) - Kredo	- Activity started Sept, 2012

MK-May Koleilat

Activity 2.3 – Building Operators’ Capacity in Operation and Maintenance of Pump Station Equipment

**Advanced Pump Station Operators Training**

LWWSS Capacity Building Specialist and LWWSS subcontractor Kredo are currently preparing a follow-on O&M training for pump station operators. Ms. Koleilat held a meeting with NLWE Senior Engineer Gaby Nasr, NLWE Communications Specialist Hala Habbouchi, and Kredo representative Engineer Kamil Mghabghab and the following details were solidified: selection and grouping of trainings (two groups of 13 participants) and the duration of the trainings and sessions (two sessions per week and each session will be six hours/day). Further preparation will continue in July and August, and the preliminary start date is in mid-August and the trainings will continue through October 2012.

**Activity Timeline**

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Staff interviews, training needs assessment						100%						
Course preparation							65%					
Training implementation started												0%

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012 (0% indicates that the activity has not yet started)

**Component 3: Increase Financial and Commercial Viability of Water Establishments**

**Work Plan Activities**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
3.1	<b>Upgrade Finance and Accounting Standards and Methods</b>			
3.1.2	Training in Public Accounting, Finance, Procurement, Auditing	EMC (MC)*, LWWSS (MK)	Training completed Follow-up in place	Sept, 2012
3.1.3	Define cost centers, create/update chart of accounts, and accounting	EMC (MC), LWWSS (AS) ABA	Information collected New COAs and	Sept, 2012

	coding procedures		procedures defined	
3.1.4	Develop procedures for asset and inventory identification, coding and valuation	EMC (MC), LWWSS (AS) ABA	Procedures defined with the WE	Sept, 2012

MC-Mike Chalah; MK-May Kolielat; AS-Ahmad Siddik; ABA-Allied Business Advisors

### Activity 3.1 - Upgrading Finance and Accounting Standards and Methods

During the third quarter, LWWSS Financial Specialist Mike Chalah, LWWSS IT and Systems Specialist Ahmad Siddik, and subcontractor ABA worked with NLWE's Head of the Finance Mr. Maher Tahsildar and his team on the following tasks:

- Preparation of an RFP for fixed assets valuation, which will be presented at a workshop in early July.
- Preparation of the international chart of account and development of rules in defining cost centers to improve NLWE's ability to issue all analytical reports, which will also be presented at the workshop in early July.

After the workshop, NLWE will decide on whether it will finance the valuation (using the RFP drafted by LWWSS and ABA) or if it will find a donor to finance the valuation. NLWE will also decide when and how to implement the new Chart of Accounts and Cost Centers, and the LWWSS team will also plan training in public accounting, finance, procurement, and auditing. Mr. Chalah is ready to conduct the training, as all of the content is ready (he has already conducted similar training in BMLWE and BWE), but during the third quarter he was very busy with the BMLWE and BWE ERP training. He will discuss the content of the training with Mr. Tahsildar during July and August, and will begin the training in year four.

### Activity Timeline

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Training in Public Accounting, Finance, Procurement, Auditing								0%				
Define cost centers, create/update chart of accounts, and accounting coding procedures								50%				
Develop procedures for asset and inventory identification, coding and valuation (RFP)								75%				

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012 (0% indicates that the activity has not yet started)

### **Component 4: Capital Investment Planning and Program/Project Management**

There are no component four activities with the NLWE in the year-three work plan.

**Component 5: Procurement of Technical Equipment to Strengthen WEs**

**Work Plan Activities**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
<b>5.2</b>	<b>Upgrading Pumping and Energy Efficiency</b>			
5.2.1	NLWE: Test and design the replacement up to 20 submersible pumps, motors and other works in up to 15 stations	CDM (BG, GT, EH) Local subcontractor (TBD)	Procurement started	Sept., 2012
5.2.2	NLWE: Supply and install the replacement of up to 20 submersible pumps, motors and other works in up to 15 stations	CDM (BG, GT, EH) Local subcontractor (TBD)	Activity planned	Sept., 2012
5.2.7	Establish service agreements, and conduct user training programs for the above activities	CDM (BG, GT, EH), DAI (MK) Local subcontractor (TBD)	Activity planned	Sept., 2012
<b>5.3</b>	<b>Increasing Supply Hours to Areas Facing Supply Shortage</b>			
5.3.1	Supply and install up to 9 back-up generators for key NLWE stations	CDM (BG, GT, EH) Local subcontractor (TBD)	Procurement complete Manufacturing complete	Sept., 2012
5.3.2	Establish service agreements and conduct user training program for these generators	CDM (BG, GT, EH), LWWSS (MK) Local subcontractor (TBD)	Activity planned	Sept., 2012

Activity 5.2 - Upgrading Pumping and Energy Efficiency

Pump station rehabilitation has been delayed because of the long time it took for the NLWE to select which stations it would prioritize for rehabilitation. The NLWE proposed that four locations requiring nine pumps was its priority. The four locations are:

- Trippoli            Two pumps and motors
- Halba                Four pumps and motors
- Batroun            Two pumps and motors
- Qoubayat          One pump and motor

The challenge for LWWSS was to not only get the NLWE to select and prioritize pump stations to be rehabilitated, but to also ensure that sufficient engineering data were available to carry out the pump and motor design. Upon closer inspection, LWWSS learned that the engineering data needed to proceed with pump and motor design was not adequate for the Halba station and that well tests would need to be done for the Al Ayoun wells feeding the

Halba station. Bids for the well tests will be advertised for the well test data.<sup>1</sup> This is anticipated to be carried out in the next quarter. For those stations that do not need well tests, the design of the pumps and motors has been started by CDM.

LWWSS mitigation measures are avoiding further delays on this activity and to acquire the needed design information through well tests rather than rely on the NLWE to obtain it. Unfortunately, the initial delay of nearly six months may not be made up in year four of the project. This activity was originally intended to be completed before the end of project year four (the original end-date for the project). However, due to the very lengthy selection and prioritization process used by the NLWE and the need to generate appropriate design data through well tests, the program will not be completed until the second quarter of year five. Since the end of the project has been extended until the end of April, 2015, the delay poses no completion date problems.

Secondly, LWWSS through its engineering sub-consultant, CDM, will fast-track the design of the remaining pumps and motors based on the data generated from the well tests. LWWSS plans to purchase the nine sets of pumps and motors rather than break up the bid in order to keep the cost of the procurement as low as possible.

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<sup>1</sup> Well tests typically entail a closed cable TV inspection of the entire well casing then a 24 hour pumping test to determine the flow maximum and drawdown of the well.

**Activity Timeline**

	10/1/2011 to 3/30/2012	4/1/2012 to 9/30/2012	10/1/2012 to 3/30/2013	4/1/2013 to 9/30/2013	10/1/2013 to 3/30/2014
NLWE Pump Station Rehabilitation Time Line					
1. Survey, Data Gathering, and Design	█				
2. Bidding Specifications and Documents		█			
3. Procurement Advertisement and Approvals		█			
4. Selection of Bidder and Procurement Approval		█			
5. Manufacture and delivery of pumps			█		
6. Installation of pumps and commissioning				█	
<b>Initial Time Line</b>					
NLWE Pump Station Rehabilitation Time Line					
1. Selection and Prioritization of PS by NLWE	█				
2. Survey, Data Gathering, and Design		█			
3. Bidding Specifications and Documents			█		
4. Procurement Advertisement and Approvals				█	
5. Manufacture and delivery of pumps				█	
6. Site preparation, Installation and commissioning					█

Activity 5.3 - Increasing Supply Hours to Areas Facing Supply Shortage

**Back-up Generators for Key Stations**

A lengthy delay in selection of backup generation equipment has been encountered because the NLWE not only was slow in selecting the priority sites but also because it wanted the Board of Directors (BOD) to approve the prioritized locations. The back and forth with the BOD also added time to the procurement process. The total delay is three months. The eight locations that NLWE chose and LWSS concurred are as follows:

- Hab One 800 KVA Generator
- Ayrounieh One 400 KVA Generator
- Nakhle One 100 KVA Generator
- Berkacha One 400 KVA Generator
- Bechmezzine One 200 KVA Generator
- Qobayyet One 200 KVA Generator
- Kfartoun One 455 KVA Generator
- Rahbeh One 320 KVA Generator

LWSS is mitigating this delay by focusing on expediting the design and bid process. LWSS anticipates CO approval to procure in August and will proceed with the procurement as soon as possible. The delay is not expected to affect the final completion (installation and commissioning) target of September, 2013.

**Activity Timeline**

	10/1/2011 to 3/30/2012	4/1/2012 to 9/30/2012	10/1/2012 to 3/30/2013	4/1/2013 to 9/30/2013
NLWE Generator Procurement Time Line				
1. Survey, Data Gathering, and Design	█			
2. Bidding Specifications and Documents		█		
3. Procurement Advertisement and Approvals		█		
4. Selection of Bidder and Procurement Approval			█	
5. Manufacture and delivery of pumps			█	
6. Installation of pumps and commissioning				█
	Initial Time Line			
NLWE Generator Procurement Time Line				
1. Selection and Prioritization of PS by NLWE	█			
2. Survey, Data Gathering, and Design		█		
3. Bidding Specifications and Documents			█	
4. Procurement Advertisement and Approvals				█
5. Selection of Bidder and Procurement Approval				█
6. Manufacture and delivery of pumps				█
7. Installation of pumps and commissioning				█
	Current Time Line			

**Component 6: Small- to Medium-Scale Rehabilitation/Upgrade/Extension Water and Wastewater Works within WEs**

**Work Plan Activities**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
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6.2	Expanding Service Provision to Non-Served Areas			
6.2.1	Beit Mellat, Akkar, North Lebanon: Design metered house connections to up to 18 villages	LWWSS (Infrastructure PM) Local Engineering Firm (TBD)	Scope defined, consultant appointed Engineering services started.	Sept, 2012
6.2.2	Beit Mellat, Akkar, North Lebanon: Implement house connections to up to 18 villages	Local Engineering Firm (TBD) Local subcontractor (TBD)	Preparation for procurement started	Sept, 2012
6.2.3	Beit Mellat, Akkar, North Lebanon: Build WE capacity in increasing customer base and implementing consumer metering	Local Engineering Firm (TBD) LWWSS (infrastructure PM)	Activity planned	Sept, 2012

#### Activity 6.1 - Decreasing Water Losses and Upgrading Existing Networks

Since the Infrastructure Project Manager Walid Abouzeid began in March, the Beit Mellat activity planning has been running smoothly. Additionally, the Construction Manager was hired in May and has been assisting Mr. Abouzeid in the planning and implementation of this activity.

The selection of the villages where LWWSS will fund services and work was a key step in the definition and advancement of the project. In this regard, more than seven meetings were held during April and May between DAI/LWWSS, CDR, GIZ (German Technical Assistant to NLWE), GETI (Supervisor engineer of the Beit Mellat project) and NLWE in order to clarify the current situation of the water supply network in the Beit Mellat project area and to set the selection criteria. This step, based on a detailed investigation stage conducted by NLWE, has led to the scoring and selection of those villages that are to be included. The specific scoring criteria adopted by LWWSS and NLWE was (1) the most urgent based on site visits already conducted by NLWE and (2) economic impact on the WE based on NLWE payment records. This latter criterion (2) also entails added sustainability by working with those communities that have a more proactive customer base in paying their water bills. Of the initial 23 villages, LWWSS has estimated that program resources will allow LWWSS to work in 12 villages.

#### Initial Prioritized List

Priority	Village
1	Bebnine
2	Hakour
3	Bqerzla
4	Dahr Nassar
5	Rahbeh
6	Ilet
7	Edbel
8	Gebrayel
9	Beit Mellat
10	Dahr Ellaysineh
11	Hekr Cheikh Taba
12	Bergayel
13	Zouk Hosniyeh
14	Wadi Jamous
15	Zouk Hbalsa
16	Jdaidet el Qaitaa
17	Qarkaf

Priority	Village
18	Zouk Hadara –Zouk el Moukacherine
19	Mar Touma
20	Haizouq
21	Beit el Hawch
22	Mazraaet el Baldeh
23	Ouyoun el Ghezlen

The revised list based on the urgency of needed water service hookup and the estimated economic impact to the WE based on NLWE's earlier analysis is presented below.

**DAI's List of Villages:**

Priority	Village
1	Bebnine
2	Hakour
3	Bqerzla
4	Dahr Nassar
5	Rahbeh
6	Ilet
7	Edbel
8	Gebrayel
9	Beit Mellat
10	Dahr Ellaysineh
11	Hekr Cheikh Taba
12	Berqayel

Twelve engineering consulting firms picked up the RFP for the design and supervision of the project. The RFP was advertised in June for the Beit Mellat work. DAI is in the process of responding to inquiries by the consulting engineering firms and sending out responses to all the firms. Final proposals are due in mid-July, unless extensions are granted.

As of the end of the third quarter, the project timeline is below:

Stage	Description	Completed By
RFP – Design and Supervision	Posting the advertisement in newspapers and launching of the RFP	June 2012
Proposals	Deadline for submission by bidders of the proposals	July 27, 2012
Services Appointment	Appointment of consulting engineer. Environmental assessment and approvals.	3 months – Completed by October, 2012
Investigation, Preliminary and Detailed Design, Tender Package	Stage 1: Research, field investigation, assessment and detailed project definition stage. Project strategy defined and agreed. Stages 2 and 3: Preliminary and detailed design stage, detailed costing and programming and phasing. Final design and scope parameters agreed and coordinated with NLWE; Production of a complete design package for review and approval by DAI and NLWE. Stage 4: Following approval of the design package, production of tender drawings and preparation of a	8 months – Completed by June, 2013

	complete bid package for DAI to procure the construction works.	
Procurement of Works	Stage 5: Launching of Bid for works. Proposals received, evaluated and infrastructure subcontractor appointed.	3 months – Completed by September, 2013
Construction, Completion and Commissioning	Stage 6: Implementation of works until completion, commissioning and taking over. In parallel: Capacity building to NLWE staff and outreach and community involvement activities, conducted by DAI and NLWE, to maximize the impact of the project.	16 months – Completed by January, 2015



**Component 7: Corporate Culture, Customer Service Orientation, and Public Outreach**

**Work Plan Activities**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
<b>7.3</b>	<b>Develop Tools and Support WEs in Adopting Corporate Communication</b>			
7.3.2	Design and Implement WE Corporate Website	EMC (NA), Local subcontractor (TBD)	Activity completed	Sept, 2012
<b>7.6</b>	<b>Consumer-Targeted Awareness Programs: World Water Day, Water Quality, Conservation</b>			
7.6.2	Water awareness campaigns on 2012 World Water Day	EMC (NA) Local subcontractor (TBD)	Activity completed	April, 2012

Activity 7.3 –Designing and Implementing WE Corporate Website

**Brand Identity Guidelines**

The Brand Identity Guidelines were printed and sent to the NLWE officially in April. A presentation and workshop to present the brand identity guidelines officially to NLWE personnel was scheduled twice to take place in May at the NLWE. However, both of these events were postponed for security reasons until June 29. The participation was excellent and NLWE appreciated the mugs and notepads. .



NLWE's Communications Manager Hala Habbouchi presenting the corporate identity guidelines



32 NLWE personnel attended the brand identity guidelines presentation and workshop, including the NLWE Director General Jamal Krayem

### **Corporate Website**

The initial meeting with NLWE's IT specialist to discuss the IT requirements and foundation for the website was cancelled in May due to security reasons, and another meeting has not yet been scheduled due to ERP obligations in BMLWE and BWE. The meeting will likely take place at the end of July or early August.

### **Activity Timeline**

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Obtain approval on corporate guidelines, thereby enabling website design to start.						100%						
Start preparation to enable activity commencement, and to facilitate appointment of web design subcontractor									0%			

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012 (0% indicates that the activity has not yet started)

### Activity 7.6 - Implementing Consumer-Targeted Awareness Programs: World Water Day, Water Quality, Conservation


LWSS' Communications and Customer Service Specialist Nada Akl continued her implementation of the World Water Day outreach campaign in coordination with NLWE's Communications Manager Hala Habbouchi:


- April 3 at the International School of Chouweifat (Koura) for 158 students;
- April 25 at Orthodox Secondary School for 51 students.

-May 2 with Sainte Famille Maronite School in Tripoli for 64 students.

### Activity Timeline

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Identify target audience, prepare awareness material and brief all stakeholders.				100%								
Conduct interactive activity, record impacts and report to USAID.						100%						

 Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012

 Revised schedule (details in May 2012 monthly report)

## 4. South Lebanon Water Establishment (SLWE)

### **Component 2: Capacity Building for Managerial, Technical and Operational Efficiency**

Activity 2.1 – *Establishing and Building the Capacity of Metering Teams* - has been postponed until year four. This activity will commence when field progress has been achieved on the source metering procurement activity (activity 5.1). This sequencing is necessary given that this activity is a follow-up to activity 5.1. The establishing and training of metering teams is closely associated with the ongoing meter installation given that the drafting of a metering strategy, the assignment of teams and their training must be related to the actual metering infrastructure that awaits installation. As such, this activity will commence in the first half of Year Four. The year three work plan was updated to reflect this amendment.

### **Component 3: Increase Financial and Commercial Viability of Water Establishments**

Activity 3.2 - *Integrate the WE's Financial, Accounting, Customer Service and Business Process Systems* - has been deleted from the SLWE Year Three Work Plan because progress and findings over the first half of Year Three led LWWSS to the conclusion that activity 3.2 must be suspended.

Research over the first months of Year Three found that the current service provider for JD-Edwards in Lebanon (iTech) has exclusive rights to the maintenance, repair and upgrade of the JD-Edwards systems, and that iTech is the owner of the programming script used in JD-Edwards in SLWE. As such, no other organization has the rights or knowledge to address the enhancements required for JD-Edwards in SLWE.

Therefore, LWWSS' plans to identify service providers who can compete for enhancing the platform in SLWE cannot be achieved. Further, LWWSS found that SLWE and iTech are currently in the process of resolving contractual matters which prevents LWWSS from committing to undertaking any immediate enhancements through iTech in SLWE. LWWSS is trying to mitigate and assist with the conflict resolution between the two institutions, but is unable to guarantee that these matters will be resolved during year three of the Program.

LWWSS, however, is still proceeding with the hardware upgrades of the servers that host the JD-Edwards system (activity 5.6). This upgrade will accelerate the operation of the system, pending the implementation of the needed enhancements.

### **Component 4: Capital Investment Planning and Program/Project Management**

## Work Plan Activities

Item	Description	Program Resource	Deliverable by end of Year Three	Target Date for Deliverable Completion
<b>4.1</b>	<b>Increase Capacity in Business Planning, Capital Investment Planning and Benchmarking</b>			
4.1.1	Capacity building in planning and updating 5-year business plans, benchmarking and performance monitoring	ValuAdd EMC (MC)	Business plan prepared, issued to WE Follow-up in place	May, 2012
<b>4.2</b>	<b>Implement Asset Survey, Inventory and Valuation</b>			
4.2.1	Pump-station inventory and valuation, in a format that is ready for integration into FAS, MMS and GIS	CDM (BG), EMC (MC), DAI (AS), Cadres	Activity completed	June, 2012
4.2.2	Pump station equipment replacement packages for bidding by BWE	CDM (BG), EMC (MC), DAI (AS), Cadres	Activity completed	June, 2012
4.2.3	O&M training needs assessment for pump-station operators	CDM (BG), EMC (MC), DAI (AS) Cadres	Activity completed	June, 2012

MC-Mike Chalah; BG-Bassem Ghayda; AS-Ahmad Siddik

### Activity 4.1 - Increase Capacity in Business Planning, Capital Investment Planning and Benchmarking

#### ***Five-Year Business Plan Update***

LWWSS has undertaken an update of the SLWE five-year business plan to include amendments that take into account the recently adopted MOEW National Water Sector Strategy (NWSS). As of the end of the third quarter, LWWSS subcontractor Valuadd was working on the final version of the business plan. However, there was a short delay because ValuAdd wanted to confirm the audited data received from the WE.

### Activity 4.2 - Implementing Asset Inventory and Valuation

#### ***Detailed Pump Station Survey and Technical Assessment***

LWWSS' subcontractor CADRES completed the pump station survey as of the end of May, and the LWWSS engineers reviewed, corrected, and approved it during June. LWWSS will hand over the survey, inventory, and bidding packages to SLWE in July.

### **Activity Timeline**



Activity Progress	O	N	D	J	F	M	A	M	J	J	A	S
	2011	2011	2011	2012	2012	2012	2012	2012	2012	2012	2012	2012
Final Business Plan Issued				95%								
Pump-station inventory and valuation in a format that is ready for integration into FAS, MMS and GIS.				100%								
Pump station equipment replacement packages for bidding by SLWE.				100%								
O&M training needs assessment for pump-station operators.				100%								

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012

Revised schedule based on delays described in May 2012 monthly report

### Component 5: Procurement of Technical Equipment to Strengthen WEs

#### Work Plan Activities

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
5.1	<b>Identifying Water Production and Contributing to Water Demand Management</b>			
5.1.1	Supply and install up to 218 production meters, fittings and protection box/manhole (all non-metered sources in WE)	CDM (BG, GT, EH) Local subcontractor (TBD)	Orders placed, installation started	Sept, 2012
5.4	<b>Upgrading Water Analysis Laboratories</b>			
5.4.1	Upgrade the water testing laboratories with infrastructure and equipment	AUB Local suppliers	Activity completed	Sept, 2012
5.4.2	Establish service agreements, and conduct user training programs for the above activities	AUB DAI (MK)	Activity planned	Sept, 2012
5.6	<b>Increase IT Infrastructure Efficiency</b>			
5.6.2	Upgrade server installation and power supply infrastructure at head office and selected branches	DAI (AS) Local subcontractor (MDS + TBD)	Scope defined Procurement and implementation started	Sept, 2012

#### Activity 5.1 - Identifying Water Production

##### Source Metering

The subcontract agreement with Modon was completed and signed by both parties as of the end of April, and a kick off meeting with LWWSS and Modon took place on May 7 in order to review of the scopes of work and to reach a clear understanding of the requirements, schedule, and reporting. LWWSS issued the notice to proceed to Modon in June, and they have begun site visits to the sources where meters will be installed. The implementation period of this activity is expected to last 18 months, through September 2013, including one year of maintenance service agreement, flow meters reading, and data collection.

**Activity Timeline**

	10/1/2011 to 3/30/2012	4/1/2012 to 9/30/2012	10/1/2012 to 3/30/2013	4/1/2013 to 9/30/2013
SLWE Source Metering				
1. Design, development of specifications and bidding for meter installation	█			
2. Selection and Approval of Winning Bid		█		
3. Winning Bidder prepares shop drawings for each site		█		
4. Meter order and site works			█	
5. Installation and Commissioning				█

**Activity 5.4 – Upgrading Water Analysis Laboratories**

The service period for the laboratory equipment began in April 2012 and will continue until March 2013 and includes the following:

- Service and maintenance visits by the subcontractor Numelab (minimum number of visits is one visit to each laboratory per quarter);
- All follow-up training required to ensure staff are up-to-date on the operation, maintenance, and health and safety conditions;
- Response to any calls for repair by the water establishment;
- Full equipment check-up, inspection, corrective actions, and routine maintenance tasks of the equipment, to ensure the equipment is in highest working condition.
- Any required equipment calibration or re-calibration to meet the manufacturer’s and best practice requirements;
- Provision of all equipment consumables throughout the service period;
- All replacement and repair costs and associated labor;
- All software or firmware updates;
- Assurance that the equipment and parts are fully functional, as they were delivered to the client upon commissioning; and
- Phone support throughout the service period.

During April, USAID performance auditors (PMPL) conducted inspection site visits to the Saida, Tyr, Nabatiyeh laboratories.

At the end of May, a certification distribution ceremony for SLWE laboratory operators (as well as with the GNSS operators who were trained) took place in Saida.

During June, the LWWSS Capacity Building Specialist May Koleilat met with SLWE’s Head of Laboratories Amal Chidiac regarding a proposed plan for the atomic absorption equipment training. A follow-up meeting will take place in July during which a final plan will be developed.

**Activity Timeline**

	10/1/2011 to 3/30/2012	4/1/2012 to 9/30/2012	10/1/2012 to 3/30/2013	4/1/2013 to 9/30/2013
SLWE Laboratory Equipment Procurement and Service Agreement				
1. Delivery of laboratory packages	■			
2. Installation and training on equipment		■		
3. Service agreement and follow-up site monitoring			■	

**Activity 5.6 – Increasing Information Systems Infrastructure Efficiency**

As per the Workplan, LWWSS will support SLWE in funding an IT hardware upgrade, including a server upgrade and associated equipment. As of the end of the third quarter, LWWSS IT and Systems Specialist Ahmad Siddik was working with DAI’s IT Specialist to complete an Information Resources Management (IRM) approval request to be submitted to USAID’s Office of Information Resources Management. This request is a mandatory USAID requirement for the purchase of any IT equipment for the project or its beneficiaries. The IRM approval request is very extensive and is thus a time-consuming process, which has therefore delayed the procurement of the IT equipment, especially given Mr. Siddik’s other priorities with the ERP implementation at BWE and BMLWE.

The IRM approval request will be completed and submitted in July, after which an advertisement for the equipment will be placed. The equipment is anticipated to be ordered, delivered, and installed during Q4 of year three and into year four of the program.

**Activity Timeline**

	10/1/2011 to 3/30/2012	4/1/2012 to 9/30/2012	10/1/2012 to 3/30/2013	4/1/2013 to 9/30/2013
SLWE IT Equipment Procurement				
1. Develop equipment specifications and obtain IRM approval		■		
2. IT Equipment advertisement, procurement and Installation			■	

**Component 6: Small- to Medium-Scale Rehabilitation/Upgrade/Extension Water and Wastewater Works within WEs**

**Work Plan Activities**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
6.3	<b>Upgrading Pumping and Energy Efficiency</b>			
6.3.1	SLWE: Test and design pumps, motors and associated works for the rehabilitation of selected stations	CDM (BG, GT, EH) Local subcontractor (TBD)	Design Produced and Approved by SLWE	Sept, 2012
6.3.2	SLWE: Supply and install pumps, motors and associated works for the rehabilitation of selected	CDM (BG, GT, EH) Local subcontractor (TBD)	Activity planned	Sept, 2012

	stations			
6.3.3	Establish service agreements, and conduct user training programs for the above activities	CDM (BG, GT, EH), DAI (MK) Local subcontractor (TBD)	Activity planned	Sept, 2012

Activity 6.3 – Upgrading Pumping and Energy Efficiency

**Rehabilitation of Pump Stations**

After concurrence was received from USAID in February to change the scope of work from rehabilitating 40 single-well pump stations to rehabilitating five major pump stations, LWWSS subcontractor CDM completed the evaluation of four proposals received from engineering companies and recommended to award the contract for engineering services to Design Engineering Partners (DEP).<sup>2</sup> The DAI contracting officer consent to subcontract with DEP was submitted to USAID on April 27, and consent was granted on May 20, 2012, after which the design phase of this activity began. During June, the engineering subcontractor DEP began site investigation work on two of the pump stations that will be rehabilitated as part of this activity - Wadi Jeelo Station and Al Shehabieh Station). DEP also began investigation of the wells that feed these pump stations, as well as beginning preliminary design of the rehabilitation work.

During a meeting with the SLWE Director General (DG) in mid-June, the DG explained to LWWSS that the WE's pump station rehabilitation priorities have changed recently due to the availability of funding through the GoL. This funding will allow SLWE to rehabilitate some of the stations that were originally listed to be funded by USAID/LWWSS. As a conclusion, SLWE advised that instead of rehabilitating the Ebel El Saki Station, the Al Hasbani Station, the Wazzani Fawka (Maysat) Station, and the Wazzani Tahta Station (which will be funded by the GoL), LWWSS should rehabilitate the Batoulay station. As it is a very large station, its rehabilitation would impact over 116,000 people – 35,000 people more than the five smaller pump stations.

Once details of this change in priorities are clearer in early July, a memo will be written and sent to USAID.

<sup>2</sup> The five major pump stations are: Wadi Jeelo, Al Shehabieh, Ebel El Saki, Al Hasbani, and Wazzani Fawka.

### Activity Timeline

	10/1/2011 to 3/30/2012	4/1/2012 to 9/30/2012	10/1/2012 to 3/30/2013	4/1/2013 to 9/30/2013	10/1/2014 to 3/30/2014	4/1/2014 to 9/30/2014	10/1/2014 to April/30/2015
SLWE Pump Station Rehabilitation							
1. Agree with SLWE the scope of work	█						
2. Obtain USAID approval of the Scope of Work	█						
3. Develop Consulting Firm Bids		█					
4. Selection of Winning Firm		█					
5. Consent Request to USAID and Approval		█					
6. Complete Data collection and design work		█					
7. Preliminary Design approval by SLWE		█					
8. Final Design Approval by SLWE		█					
9. Bids Advertised, Bids Received,Evaluated		█					
10. Consent request approved by DAI and USAID		█					
11. Completion of construction and related work							█
	10/1/2011 to 3/30/2012	4/1/2012 to 9/30/2012	10/1/2012 to 3/30/2013	4/1/2013 to 9/30/2013	10/1/2014 to 3/30/2014	4/1/2014 to 9/30/2014	10/1/2014 to April/30/2015
SLWE Pump Station Rehabilitation							
1. Agree with SLWE the scope of work	█						
2. Obtain USAID approval of the Scope of Work	█						
3. Develop Consulting Firm Bids		█					
4. Selection of Winning Firm		█					
5. Consent Request to USAID and Approval		█					
6. Complete Data collection and design work		█					
7. Preliminary Design approval by SLWE		█					
8. Final Design Approval by SLWE		█					
9. Bids Advertised, Bids Received,Evaluated		█					
10. Consent request approved by DAI and USAID		█					
11. Completion of construction and related work							█

*Note on Activity Progress:* This project activity encountered a delay almost from the start of the infrastructure add-on period. The problem arose when the Director General of the SLWE realized that the original 40 pump station rehabilitation proposed would shut down the pump stations too long given that a well test and closed-circuit television review needed to be done prior to design of the pump and well replacement. LWSS decided to request USAID to approve the change in the scope of work from rehabilitation of up to 40 pumping stations. USAID approved the change in scope of work in March 2012 and the process of selecting a consulting engineering firm to design the rehabilitation of three major pumping stations began. The change in scope of work is the primary difference between the project as envisioned at the time of proposal and the current work plan. CDM-Smith is confident that the current time line allows time for completion of the work within the project time frame.

**Component 7: Corporate Culture, Customer Service Orientation, and Public Outreach**

**Work Plan Activities**

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Target Date for Deliverable Completion
7.6	<b>Consumer-Targeted Awareness Programs: World Water Day, Water Quality, Conservation</b>			
7.6.2	Water awareness campaigns on 2012 World Water Day	EMC (NA) Local subcontractor (TBD)	Activity completed	April, 2012

Activity 7.6 - Implementing Consumer-Targeted Awareness Programs: World Water Day, Water Quality, Conservation

LWWSS Communications and Outreach Specialist Nada Akl continued her coordination with Nidal Hashisho, Head of Customer Service and Communications at the SLWE, in conducting outreach activities in schools in South Lebanon. On April 2 and April 23, they led outreach sessions in Hussam Eddine Hariri High School for 103 students.

**Activity Timeline**

Activity Progress	O 2011	N 2011	D 2011	J 2012	F 2012	M 2012	A 2012	M 2012	J 2012	J 2012	A 2012	S 2012
Identify target audience, prepare awareness material and brief all stakeholders				100%								
Conduct interactive activity, record impacts and report to USAID						100%						

Activity schedule, as per Year Three Workplan, detailing percentage completion as of June 30, 2012

**E. COLLABORATION WITH DONORS AND GOL OFFICIALS**

Donor coordination is an essential part of LWWSS project planning and execution in order to (1) avoid unnecessary duplication, (2) identify specific areas of coordination and (3) identify areas where LWWSS can collaborate with other donors on specific projects or programs. The list of meetings and special events with the GOL and other donors below provides a clear picture of this important program activity.

Meeting or Special Event with Donor or GOL Official	Date	Attendees	Brief Synopsis of Meeting

World Bank	April 4, 2012	BMLWE, EDM, Nizar Najm, Randa Daher, Mike Chalah, Ahmad Siddik	Awali Financial Report
CDR	April 4, 2012	Walid Abouzeid, Dr. Youssef Karam	Discussion of Beit Mellat Project
World Bank, CDR	April 11, 2012	CDR, BMLWE, EDM, Nizar Najm, Randa Daher, Mike Chalah, Ahmad Siddik	Awali Financial Report
GIZ	April 19, 2012	Walid Abouzeid, Bassam Jaber, Younes Hassib (GIZ) , Salah Saliba (GIZ)	Discussion of Beit Mellat Project
Donors meeting	May 10, 2012	All major donors	Presentation by several donors of projects and the hand out of the published National Water Sector Strategy
MOEW	May 24, 2012	Abdo Tayar, Sam Coxson, Jimmy Zammar	Update of LWWSS work activities under the year three work plan
USAID	May 25, 2012	Sam Coxson, Jimmy Zammar, Sana Saliba, Heath Cosgrove, Rami Wehbeh, Hadar Mosness	Discussion of "Media Day" - June 6 event in the Bekaa
Donor Meeting	June 14, 2012	Most Donors working in the Water, Wastewater and Irrigation areas	Sharing of information and discussion of the National Water Strategy. The MOEW is seeking a funder for SNWW Project Management Office
Mayor Robert Semaan, Mayor of Ablah	June 26, 2012	Sam Coxson, Bassam Jaber and Mayor Semaan	Discussion about WE-Municipal Service Agreement process and objectives
Mr. Khalil Sharaneq, Pres. Of Union of the Lake Municipalities	June 27, 2012	Sam Coxson, Bassam Jaber and President of UoL Sharaneq	Discussion about WE-Municipality Service Agreement process and objectives
Zahle, Beka'a Valley Water Establishment Customer Service Center	June 29, 2012	USAID Mission Director-Barnhart, E&G Director Heath Cosgrove and COTR Sana Saliba; WE Officials; Minister of MOEW, Basil and other MOEW officials; DAI Staff	The event was to conduct the "Grand Opening" of the BWE Customer Service Center located in the center of Zahle and more accessible to the WE's customer base. The CSC was functional and used the new ERP software system





## **F. CONTRACT DELIVERABLES**

- Quarterly Report for second quarter of year three

## **G. CHALLENGES, PROBLEMS, ISSUES**

### ***Challenge in Pump Station and Chlorination System Operations in the BWE***

The LWWSS team is facing ongoing challenges with the sustainability of this activity, mainly due to pump station operators charged with operating the chlorination systems failing to show up to work or failing to monitor the functionality of the system or chlorine levels. During the third quarter, the following was determined:

- 14 percent operators are available full time in the pump stations permanently and on daily basis
- 35 percent operators are collecting the minimum required data on a daily basis
- 20 percent operators call and report in case of system failure

Given that the chlorination system is composed of sensitive equipment (circulating pumps, ejector, injector non return valve, chlorine flow meters, pressure regulators), this system requires periodic maintenance by the pump station operators. The maintenance is a series of simple cleaning procedures to avoid clogging by hard water or chlorine gas impurities that can lead to system failure and equipment damages. Despite ongoing training and assistance, there is an absence of daily and preventive maintenance (cleaning and inspection) and record keeping by BWE. This lack of care will minimize the reliability and life duration of the equipment and could eventually lead to system damage and failure.

While these are serious issues that are ultimately out of the control of LWWSS, the LWWSS engineers and the LWWSS Capacity Building Specialist are doing everything possible to ensure that when the handover takes place, the BWE will take charge of monitoring the success of this activity. Since April, 2012 the LWWSS team has been in discussion with the BWE Director General (DG) and Head of Stations and Laboratories to develop a team that will conduct regular site visits and be in charge of on-going monitoring of this activity. The DG and Head of Stations and Laboratories are very supportive of this recommendation, but have not yet developed a team. A meeting will take place in July, 2012 between LWWSS and BWE to confirm the personnel on the team and the obligatory monitoring activities.

### ***Challenge of ERP Implementation in the BMLWE***

The progress and achievements to date on the ERP in BMLWE are accompanied with a number of challenges faced by the LWWSS program's teams and subcontractor EDM. These challenges mainly revolve around BMLWE's failure to meet two of its agreed responsibilities under this activity:

- Providing responsive personnel to continuously support the LWWSS team in terms of collaboration, coordination and assistance during the project's implementation stages: this undertaking is not being met by BMLWE, especially in terms of allocating senior IT personnel to facilitate LWWSS' tasks through the implementation of the ERP. This contribution is critical to the project's success;
- Providing the IT hardware and network connectivity required for the ERP platform to be installed on, and to operate as planned and in a timely manner.

Despite their formal agreement to provide the above, LWWSS found that the BMLWE's management and senior IT personnel are often and repeatedly failing to meet these commitments. This unresponsiveness has been impacting the project's progress.

However, LWWSS's mitigation efforts and the positive response by the finance and administrative departments where the ERP is being installed have allowed the LWWSS team to compensate for the delay and the lack of responsiveness from the IT department.

During June, LWWSS' ERP team held a number of coordination meetings with senior IT personnel at BMLWE (June 18) and agreed on an action plan to address the pending issues and to mitigate the delays. The action plan commits BMLWE's teams to increased coordination with LWWSS, weekly meetings with the ERP team, as well as follow-up on key matters such as those associated with installation of IT equipment and addressing pending IT matters to enable full ERP deployment.

LWWSS through the above mitigation activities has overcome any delays and lack of cooperation on the FAS portion of the ERP. Further senior level coordination meetings are planned in July and it is anticipated that any remaining lack of cooperation in implementing the ERP will be resolved.

## H. STTA DURING QUARTER

During this quarter the following personnel worked on LWWSS as STTA.

Person and Subcontractor	Period of STTA	STTA Activity
John Crippen, CDM	June 5- 19, 2012	<p>The STTA entailed the following:</p> <ul style="list-style-type: none"> <li>• General meeting with the SLWE DG and site visits to the SLWE relative to the infrastructure work on pump station rehabilitation</li> <li>• Review of source metering contractor work and site visits and meeting with the SLWE DG</li> <li>• Meeting with CDM Smith consulting engineering firm DEP relative to their initial data collection and analysis of Wadi Jeelo and Al Shehabieh stations and the replacement of several stations (Ebel El Saki, Al Hasbani, Wazzani Fawka and Wazzani Tahta pump stations) with the Batoulay pump station rehabilitation</li> </ul>

## I. MAJOR ACTIVITIES PLANNED FOR NEXT QUARTER

### *BWE Water Establishment Activities*

2.2 Continuation of the water quality management program with completion of the laboratory equipment procurement recommendations and the draft of the combined wet and dry season water quality baseline study and water test sampling strategy and protocols

2.3 Preparations for and training of pump station operations and maintenance advanced training is anticipated to begin in July and continue throughout most of the quarter.

3.1 Continuation of ERP related financial transaction process training and improvement such as properly closing and opening account balances at mid-year and year end for financial reports on an accrual basis

3.2 More CRM testing sessions will take place in early July, followed by the training and the “go live” starting on July 16. Training for the billing and collection module will take place in August and September, 2012. SharePoint implementation will take place in September, 2012.

3.3 Determination of the next steps relative to the wastewater plant sustainability; determination of whether the service agreement approach can be pursued in the current operational environment; meeting with the MOEW to determine how best to ensure the operational and maintenance sustainability for USAID-funded wastewater treatment plants in the BWE

4.4 Master plan consulting firm selection and the requisite DAI and USAID approvals for subcontracting the work

5.4 Continued development of the water quality baseline and recommended protocols to be used in test collection and in laboratory procedures. In the next quarter the baseline will be completed (developed from the wet and dry seasons) and protocols for collection and lab procedures in draft form. Also, the analysis report on recommended laboratory equipment will be issued.

5.5 Continued chlorination system site visits, provision of chlorine and system operation checks as well as remedial training, if needed. Continued efforts to deal with the operational challenges presented above (p.45).

5.6 Installation of the ADSL (asymmetrical digital subscriber line) with the HDSL (high-bit-rate digital subscriber line) in order for the exchange to use fixed IP addresses and operate the email system

6.1 LWWSS will continue to work on the Zahle branch water lines replacement. The consulting engineering firm World Engineering and Technology will begin its data collection and design phase of the infrastructure project. LWWSS anticipates going to bid in October, 2012 and construction of the project to start in January, 2013. Construction is expected to last approximately eight months.

7.3 Completion of the customer service forms and inclusion into the ERP will be finalized in the next quarter.

### ***Beirut-Mt. Lebanon Water Establishment***

3.1 Completion of the accounting system asset management and inventory coding

3.2 Training for the payroll and human resource modules and “go live” by the end of July; testing of the CRM will continue and “go live” also anticipated by the end of July; training sessions on billing and collection will be provide in August and September, 2012 with the “go live” to take place in September

5.2 Jeita pump station procurements will be in shipment to Lebanon; preparatory works at Jeita will be underway or completed. LWWSS anticipates that the pumps and motors will arrive on August 14, 2012. The valves and fittings will be delivered by the end of July and the motor control centers will be installed by mid-August. Full installation of all the pumps and motors is anticipated by the end of October.

7.2 The customer service training will begin in early July and end by mid-August.

### **North Lebanon Water Establishment**

2.3 Continuation of pump station operator training by providing advanced operator training in the fourth quarter of year three (estimated to start mid-August)

3.1 Reestablish training effort for public accounting, budgeting, tax reporting and accrual accounting

5.2 LWWSS will continue its work on the NLWE submersible pump replacement program in the next quarter by (1) determining the number of pumps to be procured and (2) designing and developing specifications for procurement and procure the pumps.

5.3 LWWSS will continue the procurement of the NLWE standby generators based on the priority list provided by the NLWE. The procurement is anticipated to be approved in late July or early August, 2012. Depending on the availability of the generators installation may begin as early as September, 2012.

6.1 LWWSS has advertised for and received interest from 12 consulting firms to carry out the consulting engineering work for Beit Mellat. Proposals are due by July 27, 2012 with design work to be started by late September or early October.

7.3 LWWSS staff will begin work with NLWE staff on the WE corporate website

### ***South Lebanon Water Establishment***

4.1 The business plan rewrite to accommodate the adoption of the National Water Sector Strategy (NWSS) has been completed. The next step is for the WE to present the plan to its board of directors, and once approved, submit it to the MOEW.

4.2 The GIS portion of the CADRE pump station survey will be completed during the next quarter.

5.1 The subcontractor Modon will complete its data collection for development of the BOQ (meters, sizes and quantities) and order the meters during the next quarter.

5.6 LWWSS IT Specialist will finalize specifications for the hardware procurement and obtain IRM approval for the hardware procurement.

6.1 CDM Smith will continue to work with DEP, its local consulting engineering firm to develop the design and bid specifications for the rehabilitation of up to three SLWE pump stations.