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YEAR 3 WORK PLAN OCTOBER 2010 – SEPTEMBER 2011

EGYPT WATER AND WASTEWATER SECTOR SUPPORT PROGRAM

October 14, 2010

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ACRONYMS AND ABBREVIATIONS

AUC	American University in Cairo
CAD	Computer-aided Design
COP	Chief of Party
CWC	Cairo Water Company
DANIDA	Danish International Development Agency
DCOP	Deputy Chief of Party
DWWC	Daqahliya Water and Wastewater Company
EU	European Union
EWRA	Egyptian Water Regulatory Authority
FaDWaSP	Fayoum Drinking Water and Sanitation Project
GIS	Geographic Information System
GOE	Government of Egypt
GTZ	<i>Gesellschaft für Technische Zusammenarbeit</i>
HCWW	Holding Company for Water and Wastewater
HRD	Human Resource Development
HRM/D	Human Resources Management/Development
ISSIP	Integrated Sanitation and Sewerage Infrastructure Project
IT	Information Technology
JICA	Japan International Cooperation Agency
JWG	Joint Working Group
KfW	<i>Kreditanstalt für Wiederaufbau</i>
LWG	Local Working Group
MARS	Monitoring and Analysis Reporting System
MHUUD	Ministry of Housing, Utilities, and Urban Development
NOPWASD	National Organization for Potable Water and Sanitary Drainage
O&M	Operations and Maintenance
OJT	On-the-job Training
PMP	Performance Monitoring Plan
PMU	Project Management Unit
PRiSM	Project Management Information System
QA/QC	Quality Assurance/Quality Control
SOP	Standard Operating Procedure
STTA	Short-term Technical Assistance
TA	Technical Assistance
TOT	Training of Trainers

UAS	Unified Accounting System
UFW	Unaccounted-for Water
USAID	United States Agency for International Development
WPRR	Water Policy and Regulatory Reform Project
WWMP	Water and Wastewater Management Program
WWC	Water and Wastewater Company
WWSS	Water and Wastewater Sector Support Project
WTP	Water Treatment Plant
WWSPR	Water and Wastewater Sector Policy Reform Project

SECTION I: INTRODUCTION

Chemonics International is pleased to present this Year 3 work plan for the Egypt Water and Wastewater Sector Support (WWSS) Program, prepared in cooperation with its subcontractors, CH2M HILL and Chemonics Egypt. The plan covers the period from October 1, 2010 – September 30, 2011. In Section I, we present an overview of the recent developments in the sector and ongoing donor activities, followed by a review of our progress in Year 2 and an overview of our Year 3 approach and organization. Section II contains the detailed activities for Year 3, including timing and resource allocations. Annex A contains a summary of WWSS activities to date by governorate, and Annex B includes the Year 2 annual assessment results. Annex C lists Year 2 activities to be completed in the forthcoming quarter. Annex D provides a detailed timeline of work plan activities and tasks.

A. Program Overview

The USAID-funded Water and Wastewater Sector Support Program (2008 – 2012) is strengthening the capacity of national and regional water and wastewater companies to deliver quality services in a cost-effective fashion. By providing technical support in utility management, the project team is assisting water and wastewater companies to implement recent Government of Egypt (GOE) reforms aimed at improving operational performance and attracting private investments to the sector. To achieve these goals, the project has four key objectives:

- Increase financial and commercial viability of existing water and wastewater companies
- Help establish new regional water and wastewater subsidiaries
- Develop and implement mechanisms for capital investment planning and program/project monitoring and management, and
- Build the capacity of staff to increase managerial, technical, and operational efficiency, improve service, and expand access to water and sanitation

Chemonics' strategy to achieve these objectives is built on the following four pillars, which are also reflected in the contract scope of work:

- Business plan as a central management and accountability tool
- Flexibility and prioritization of interventions: customer-driven, flexible, and responsive ability to address urgent priorities as the sector evolves
- Leveraging partners' expertise and the resources of other technical assistance providers
- Elevating human resource development and organizational change to strategic levels

B. Sector Background

Established pursuant to Public Law 203 of 1991 and Presidential Decree 135 of 2004, the Holding Company for Water and Wastewater (HCWW) owns 23 subsidiaries operating in 25 governorates. A complementary Presidential Decree in 2004 also established the Egyptian Water Regulatory Agency (EWRA), which along with HCWW reports to the Ministry of Housing, Utilities and Urban Development (MHUUD). Through its subsidiaries, HCWW is responsible for the treatment, desalination, transportation, distribution, and selling of potable water, as well as the collection, treatment, and safe disposal of wastewater.

B1. Recent Sector Developments

Though the progress made in recent years in service coverage is laudable, water and wastewater management remain important national priorities. The entities working in the sector receive significant attention from the general public as well as from the highest levels of political leadership. This year, two developments in particular served to focus emphasis on the sector. The first, a UN report on “the issue of human rights obligations related to access to safe drinking water and sanitation in Egypt,” published in

March, presented a nuanced, often critical, view of sector progress, including the slow rolling out of nationwide sanitation coverage, and highlighted the vast discrepancies in water coverage in less developed areas and “informal settlements.” The second event which has focused national attention on the water sector has been the ongoing dispute with upstream neighbors about Nile river allocation. Frustrated by their inability to receive concessions from Egypt and Sudan during ministerial meetings in April, upstream countries negotiated their own revised Nile sharing treaty, removing from Egypt its traditional veto powers over upstream development, a treaty to which most upstream countries have now signed. While these developments primarily affect Egyptian agricultural water use, they do lend credence to ongoing water conservation efforts.

The sustained attention on the sector is beneficial to sector performance, but will also bring along with it increased expectations and demands. Considerable attention will be directed in the coming years toward the issue of sanitation and the comprehensive delivery of wastewater services. There is a sense of urgency related to increasing the percentage of the population with access to wastewater services, as HCWW’s National Rural Sanitation Strategy attests. The Holding Company and its subsidiaries remain committed to increasing public participation in their operations, and have made considerable investments in recent years in increasing avenues for customer engagement. With greater public engagement, however, comes the opportunity for increased public expectations, and the airing of criticisms and grievances that to date have had no viable outlet.

B2. Institutional Developments

The GOE continues to exhibit considerable commitment to reforming the management of the water and wastewater sector, as shown by several key developments this year. Demonstrating commitment to professionalizing the sector, Ministerial Decrees 204 and 205 of 2010 mandated an operator certification program for all water and sanitation plant and laboratory technicians staff nationwide, with varying levels of certification required depending on the complexity of the plant involved. In conjunction with the WPRR Program, WWSS is helping to develop the certification steps for this process.

Organizationally, this year HCWW agreed upon and adopted a new organizational chart, developed in cooperation with GTZ. Among other changes, the new structure raises the profile of human resources development within the Company. In addition, HCWW’s Board of Directors, led by its current Chairmen and two Vice-Chairmen, were reappointed to their posts for an additional three-year period. Regionally, new Chairmen were named in Sharqiya, Assiut, Qena, Luxor, and Sohag.

Sector-wide, tariff levels remain low, and cost recovery even for O&M is rarely achieved by utilities. The political will to address tariffs in the immediate term appears insufficient. Rather, sector leadership is prioritizing service improvements—increasing the capabilities of sector actors to deliver quality sustainable services to citizens—as a first step. There is some discussion of ending the system of central subsidies allocated to the sector. Rather, this system would be replaced with direct budget allocations, in the order of LE6.5 billion annually, thus giving utilities greater control over line item budget allocations and priorities, particularly the breakdown between O&M, rehabilitation, and new capital investments. In addition, the government is currently considering the development of desalination contracts for seaside governorates, which would also stimulate international private sector interest in the sector.

The role of HCWW and its subsidiaries was prominently highlighted this year during the “First International Conference and Exhibition on Sustainable Water Supply and Sanitation” held in July at the Cairo International Conference Center. This program, to which WWSS provided modest technical contributions, brought together regional and international experts on topics related to water and wastewater technologies.

Donor project updates. The sector has a long and broad history of donor assistance, to which USAID has been a major contributor.

- The current USAID portfolio of water sector projects includes the WWSS project, the *Water Policy and Regulatory Reform (WPRR)* project, and a FARA component seeking to invest in new infrastructure in Assiut, Sohag, Beni Suef, Minya, Fayoum, Luxor, New Valley, and Daqahliya.
- The *European Union* remains engaged on a variety of levels. It will soon begin Phase II of its budgetary support to MWRI and MHUUD; it is involved with organizational assistance to EWRA, in addition to the *Improved Water and Sanitation Program (IWSP)*, co-funded by GOE, KfW, EIB and AFD, currently active in four Delta governorates, to be expanded in 2012 in Upper Egypt.
- *Gesellschaft fur Technische Zusammenarbeit (GTZ)*'s *Water and Wastewater Management Program (WWMP)* provides technical advisory services to HCWW and its subsidiaries, in particular to Qena WWC.
- *Kreditanstalt fur Wiederaufbau (KfW)* is supporting infrastructure rehabilitation and related procurement to strengthen the performance of operating subsidiaries and improve cost recovery. They are also considering offering approximately LE 75.0 million in soft loans to the subsidiaries for the purchase of energy efficient technologies for the treatment process, including the replication of our pilot energy rationalization activities.
- Funded by the German Federal Ministry of International Cooperation and Development, *InWEnt* program provides leadership and technical skills training to senior sector officials.
- The ongoing *Fayoum Drinking Water and Sanitation Project (FaDWaSP)*, funded by the Royal Netherlands Embassy, helps to improve coverage, quality, O&M cost recovery, and management capabilities at the Fayoum WWC.
- The *World Bank* funded *Integrated Sanitation and Sewerage Infrastructure Project (ISSIP)*, also supported by *GTZ* and the *Swiss Embassy*, provides a concessionary loan of \$120 million to MHUUD. Those funds are subsequently passed on to the HCWW and NOPWASD for investments in wastewater infrastructure in the Beheira, Kafr el-Sheikh, and Gharbiya governorates. A second phase of the ISSIP program is currently being developed for the governorates of Sohag, Assiut, Sharqiya and Menufiya.
- A Swiss-led component of ISSIP, *Egyptian-Swiss Research on Innovations in Sustainable Sanitation (ESRISS)* undertakes research and field-testing concerning small scale sanitation systems in Delta governorates.
- *UNICEF* has a number of investments via its *Water Sanitation and Hygiene (WASH)* program, including the USAID-supported *Integrated School Sanitation and Hygiene* program in Assiut, Sohag and Qena. UNICEF is also engaged with building public awareness concerning safe water and sanitation practices.

C. Year 2 in Review

The WWSS Year 2 work plan was built on both Year 1 experience and fresh subsidiary needs assessments, and organized around three components to ensure that all areas of the scope of work were sufficiently addressed. The three components were:

- Assistance to the Holding Company
- Cross-cutting activities targeting more than one subsidiary with a common approach, and
- Subsidiary-specific activities, or tasks relating to one of the twelve utilities in our scope of work, and catered to their unique needs

To reach the twelve subsidiaries, beginning in early 2010, we refined our technical assistance approach to focus on high impact/high return activities, suspending unpromising and/or unsustainable initiatives. As noted in the WWSS Board of Directors meeting held on January 11, 2010, we ring-fenced our program to concentrate on HCWW and subsidiary priorities in seven key areas, elucidated below. Although this new approach compelled us to wrap-up certain low-impact and/or unsustainable activities, it has made a clear case for expanding more promising initiatives. What follows is an overview of the activities implemented in Year 2, including preliminary results and impact where possible:

1. *Business planning.* We supported ten companies in developing their first-ever business plans, which will be further refined in Year 3 and used to prioritize WWSS interventions. Across all ten companies, the business planning process enjoyed participation from all divisions of the company and resulted in a strategic framework that enjoys wide support from company leaders.
2. *Human resources management and development.* Since human resources management divisions are new at all of Egypt's water utilities, we started with the fundamentals of HR management: developing their division purpose, function, and job descriptions. In parallel, we worked with the new HR division at the Holding Company to develop their first-ever HR strategy, and with the subsidiaries on developing HRM/D plans (completed in seven companies and underway in an additional four). We automated the HR function using the ADVAC system in five governorates, and those companies are updating it regularly and generating reports for company leadership. Also, in select governorates, we supported the development of company organizational charts and staffing plans. At the central level, we developed and initiated the Advanced Seminar Series for Utility Executives, which is already attracting and developing future leaders for the sector through a ten-module certificate program offered through the American University in Cairo (AUC).
3. *Financial administration.* Our assistance in financial management focused on automation using the ADVAC system, which, so far, is up and running in five governorates, is updated daily, and is generating financial statements. We also continued training and technical assistance on the manual (but GOE-approved) Unified Accounting System, and we will focus on linking the automated and the manual systems in Year 3.
4. *Capital investment planning and program management.* To prepare subsidiaries to take on more responsibility for planning and managing capital investment programs, we supported the establishment of Program Management Units in six companies, and provided such units with a variety of tools and training. Foremost among these tools is the PRiSM system, developed under the auspices of USAID's WWSPR Project and currently in use at the Ministry of Housing, HCWW, and its subsidiaries to track ongoing construction projects on a monthly basis. With WWSS support, over 90% of the ongoing projects are regularly updated in the system. We provided training (and software where necessary) on planning and scheduling using MS Project, hydraulic modeling using Water CAD, project chartering, and construction management fundamentals, as well as on-the-job training on additional topics including drafting conditions of contract, project prioritization, and master plan utilization. Such assistance will continue in the coming year, and will be supplemented with a three-volume set of guidance and sample documents, currently in draft, for use at all stages of the contracting and construction management process.
5. *Unaccounted for water.* Building on a Year 1 initiative, we piloted an approach in Year 2 for reducing unaccounted for water, including physical and commercial losses. Working in cooperation with local teams, we reduced leakage in a pilot area of Luxor City by 32% and commercial losses by 4.5%, representing a cost savings of over LE 300,000 per year by conservative estimates. Building on this success, we are assisting the Luxor company to roll the program out further, while also replicating the activity in Assiut, Sohag, and Aswan.
6. *Operations and maintenance.* To control treatment costs and increase the efficiency of utility operations, we implemented a series of chemical use optimization and energy use rationalization activities in eight companies. Both activities show great potential for cost savings, and company staff have already replicated them in multiple locations. Additionally, after witnessing numerous treatment plants with defunct computerized maintenance management systems, we developed a simple, Arabic-language, low-cost system for this purpose, which is already in use in 20 plants in 7 governorates. The system, called MASTER (Maintenance through Systematic Tracking and Equipment Repair) enables maintenance engineers to plan, track and analyze plant maintenance work. Finally, to further streamline plant operations, we have developed standard operating procedures for five treatment plants in Assiut and Minya, along with simple, laminated, step-by-step poster work instructions.

7. *Communications and public outreach.* WWSS assisted in the update of HCWW’s communication strategy, including an analysis of the communications environment, and re-crafting of messages for the variety of sector audiences. To enable subsidiaries to implement the strategy, we also developed subsidiary-level communications guidelines which will be rolled out in the coming year.

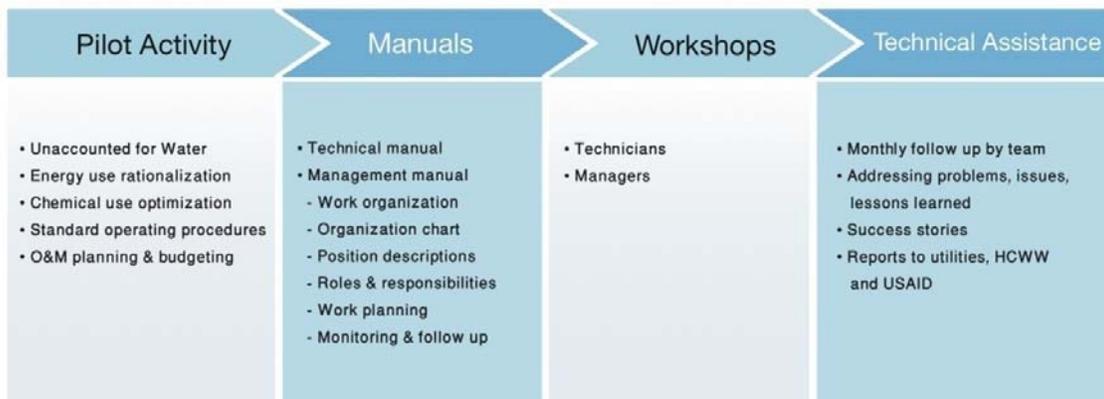
Additional activities were initiated in Year 2, including the nationwide IT master plan for HCWW and its subsidiaries, upgrading and supporting the MARS system for subsidiary performance management, and initiating the training development for the sector’s newly-decreed Operator and Laboratory Analyst Certification Program. Further, technical activities were supported by a number of training courses for over 1,200 trainees throughout the year. The procurement plan initiated in Year 1 was implemented, and most equipment has been delivered to the subsidiaries. All Year 2 activities were evaluated in a year-end assessment, results of which are summarized in Annex B. The assessment was designed to gauge the impact and return of interventions, including (1) impact on service quality and/or expansion, (2) replicability of interventions, (3) cost reduction and productivity improvements, and (4) management buy-in, including the presence of supporting leadership and dedicated staff, in addition to HCWW support and engagement. The feedback gathered is reflected in the selection of activities and approaches in the Year 3 work plan.

D. Year 3 Overview

D.1 Technical Assistance Approach

Having identified a package of critical, high-impact interventions through our Year 2 experience, we will focus in Year 3 on developing tools and capacity to sustain such activities into the future. As outlined in many of our Year 2 communications, our approach to implementing technical tasks, e.g., O&M, UFW, chemical and energy use, typically began with a *pilot activity*, during which a priority problem was diagnosed, followed by the tailoring of a solution to local requirements¹. Drawing upon the lessons learned from the pilot, we document the interventions in *technical reports*, *how-to manuals*, poster-size *plant operating instructions*, and other training materials to facilitate training and future reference. We complement this with classroom sessions, workshops and/or on-the-job training to ensure that concepts are well understood and eventually re-applied in a consistent fashion. In the case of planning, finance and human resource administration activities, the emphasis is on introducing new management concepts, while ensuring compliance with HCWW procedures and GOE rules and regulations. This is done through periodic on-site technical assistance, including on-the-job training, and more formal classroom learning, complemented with manuals and software programs. This approach is summarized by Exhibit I.

Exhibit I: WWSS Technical Assistance Approach



¹ We used pilot interventions as training grounds, complementing the practical training received with workshops, technical documentation and action plans, with the intent of replicating successful programs on a subsidiary-wide basis. Material for the training-of-trainers is currently being developed, followed by instructor training in year 3.

As we move to Year 3, our plan calls for rolling-out successful interventions among targeted water and sanitation utilities, and building their capacity to replicate the activities in their respective territories. This will be accomplished under the direction of the local working groups (LWGs), responsible for steering WWSS Program activities within operating subsidiaries. The LWGs, which consist of senior utility executives, project staff and HCWW counterparts, are responsible for *joint* planning, implementing, following up and evaluating WWSS-sponsored activities.

Technical assistance at the subsidiary level begins with an orientation to the local leadership, consisting of the chairman of the operating company, division (sector) heads, and directors general. The orientation should also lead to the establishment of the aforementioned LWG. The latter will review existing draft business plan programs, ground-truth them, update and finalize the document. These business planning exercises are meant to provide roadmaps to attain corporate objectives, as well as accountability tools for senior management to measure the performance of individual units, and for boards of directors to assess the operating subsidiaries' accomplishments, against mutually agreed upon performance targets. They are also destined to affect behavior modification, and ensure sustainability of recently introduced systems and management processes. At a minimum, the business plans must:

1. Highlight service improvement and expansion targets and their implications as far building new infrastructure, rehabilitating and expanding existing ones, and operating and maintaining plants, network and other equipment,
2. Propose programs to support utility operations in the above areas, as well as ancillary functions (IT, HR, finance, administration, customer service, public awareness, etc.), and
3. Outline capacity building activities aiming at enhancing infrastructure development and rehabilitation, operation and maintenance, and the ancillary support functions.
4. Lead to realignment of functions and/or organizational restructuring to permit more efficient ways to deliver services.
5. Provide financial projections taking into account revenues, subsidies, operating expenses and capital investments, as well as potential savings achieved through efficiency improvements, enhanced billing and collection, tariff adjustments, etc.

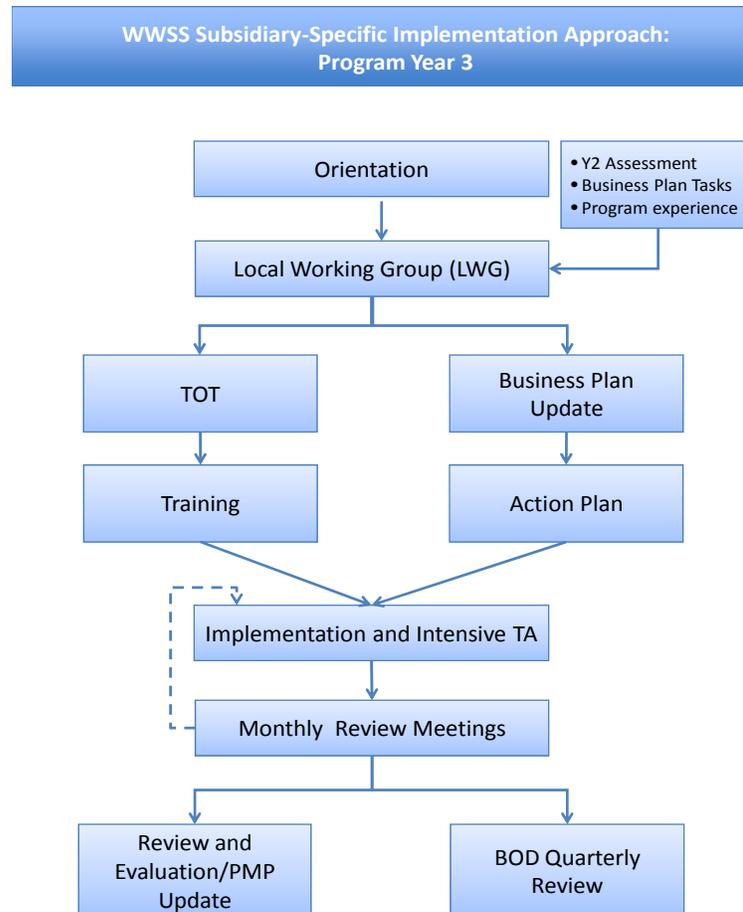
From the updated business plans, the LWGs will extract priority programs and annual action plans for joint implementation². We will complement these programs with training-of-trainers (TOTs), on-the-job (OJT) and periodic visits. Our technical assistance and training activities, including on-training by our trained trainers will be directly linked to the programs being implemented. This process is summarized in the chart displayed in Exhibit II.

Our program activities at the local level will be staggered. For instance, we may begin in the second quarter with water leak reduction programs in three utilities, say, Matrouh, Menufiya and Beni Suef. Working closely with the LWG, we will select the site(s), and start working on the program using local resources trained by us and/or our trainees. By design, our activities will be labor-intensive during the initial three-month period, before redeploying our staff in the following quarter to another group of three utilities. This does not mean that we will neglect the first three subsidiaries afterwards. Rather, we will launch other mutually selected programs, and continue monitoring the water leak reduction activity via the LWG, providing periodical TA throughout the remainder of the plan year and the next. Concurrently with ongoing water leak reduction work in the three aforementioned governorates, another WWSS team will be working other programs (e.g., chemical use optimization, chemical use optimization, HR, etc.) in

² Priority areas highlighted in individual subsidiary business plans may not match our menu proposed activities on a one-to-one basis. As appropriate, our role will be to steer the local plans to our menu of high impact/high return activities, which have proved their relevance to local needs in Year 2. Those subsidiaries not interested in the "technical" offering (e.g., Cairo Water Company), can select from among our capacity building activities, both cross-cutting (AUC certificate program, etc.) and non cross-cutting (technical and soft training program).

other groups of three governorates, following *more or less* the same methodology. This staggered timeline will be fleshed-out towards the end of the first quarter, following the updates of subsidiary business plans.

Exhibit II: WWSS Subsidiary-Specific Implementation Approach – Year 3



D.2 Program Focus

Using this approach, and considering the priorities outlined in the subsidiary business plans and the results of our recent assessment of current priorities, our third year work plan will focus on the following activities:

Updating subsidiary business plans. This will be the first task of the LWGs immediately following our subsidiary orientations. Last year's business planning exercise was instrumental in defining the intermediate- and long-term objectives of the operating utilities through a series of highly participatory workshops involving their entire leadership. The draft documents reflected infrastructure development priorities in terms of service improvement and expansion, as well as capacity development needs, and investments required. Starting with these plans, the LWGs will reexamine these priorities, and extract from them action plans for programs to be implemented this year, along with required organizational restructuring, redefinition of roles and responsibilities, staffing plans, as well as additional investments in office automation and laboratory equipment, work space, vehicle and other rolling stock.

Human resources development. This pivotal activity complements all aspects of our work. At the subsidiary level, all technical training and training-of-trainer tasks are evaluated as to the extent they complement technical activities emanating from needs assessments and locally prepared business plans. Tasks related to subsidiary staffing and HR planning are similarly evaluated in relation to the objectives of particular subsidiaries and their stage of development. At the central level, we are developing performance management and staff evaluation systems for the Holding Company managers, with the view of future application among operating subsidiaries. Three other crosscutting activities, namely the observational study tours, operator certification, and the WWSS-AUC advanced seminar series for utility executives, will continue well into the next year. Certification course development for plant operators and laboratory technicians is currently underway. Initial tests on the operator certification program are targeted for early 2011 (level D water plant operators) and September 2011 (level D wastewater treatment operators). As for the utility executive seminar series, the first graduation is scheduled for the middle of Year 3, and we expect to start replicating the series for another group of senior utility managers prior to the end of the first quarter.

Roll-out of unaccounted-for-water activities. We will follow the methodology applied in Luxor, Sohag, Assiut and Aswan and expand the program in all the WWSS participating utilities. However, since our pilots have shown the highest savings to be in the area of water leak reduction, we will confine our work to this component in Year 3, with the expectation of addressing commercial losses in Year 4. In conjunction with hands-on training associated with this task, we will offer training-of-trainer courses for the purpose of spreading the practice beyond the piloted areas, and creating a core team of trainers/practitioners capable of building additional local capacity and advising various district branches on UFW activities. Two utilities, the Cairo Water Company (CWC) and the Daqahliya Water and Wastewater Company (DWWC) are excluded from our TA and TOT activities in this area. The CWC Chairman indicated that his utility does not require assistance in UFW, and per our scope of work, activities at the DWWC are confined to capital investment planning and program management activities.

Energy use rationalization. In Year 2, we expanded our pilot activities in this area beyond our target of three companies, to cover all WWSS utilities, except the Cairo and Daqahliya companies. In Year 3, we intend to install capacitor banks to address power factor inefficiencies in nine piloted plants and distribute U.S.-procured power factor analyzers to participating subsidiaries, as well as HCWW, ahead of our planned TOT on energy use rationalization. In addition, we will provide on-site assistance for locally selected energy use programs. Should the KfW soft loan for energy use rationalization equipment move forward, we will coordinate to the maximum extent possible and leverage those resources within our targeted subsidiaries.

Chemical use optimization. As in the case of the energy tasks, we expanded Year 2 work beyond the initial pilots to cover 10 utilities. This type of activity figures high on the list of business plan programs and our field surveys, and we intend to roll-out the tasks on a wider scale through the TOT mechanism, and by leveraging both local talent and HCWW expertise.

Financial and human resource information system automation. We will continue with ongoing financial system integration and intensive TA over the remainder of Year 3, adding eventually the inventory management module to the five ADVAC accounting and HR modules acquired last year. We recently acquired five additional HR modules for WWSS utilities already in possession of the finance modules and intend to install them in the course of FY 2010-11. In parallel with ongoing TA and training on ADVAC to generate financial reports, we will cooperate with HCWW on the standardization of subsidiary financial statements and budget submissions. Together, we will also approach the Central Accounting Organization (CAO) and start working on the modalities required to facilitate the *formal* switch from the manual system to ADVAC.

Rolling-out of the computerized maintenance management system. We have successfully released beta version of the Maintenance through Systematic Tracking and Equipment Repair (MASTER), and drafted Arabic language user documentation. With support in some locations from the Dutch-funded Water and Sanitation Project in Fayoum (FaDWaSP), we have installed the program in 7 companies, and are

gathering feedback and recommendations. In Year 3, we will release version 1.0 along with the user and administrator manuals, and continue installation, with the expectation of covering all utilities in our program. For its part, the Holding Company intends to roll-out the software in non-participating subsidiaries. In the latter part of the year, we will transfer responsibility of program development and maintenance to HCWW, after handing-over the source code and training the Company's IT staff.

Simplified operating instructions for water and sanitation treatment plants. In cooperation with local O&M staff, we will undertake additional customization and roll-out of standard operating procedures for water and wastewater treatment plants in additional governorates. To that end, we have developed user-friendly templates to be filled with narratives and photographs to produce laminated posters for display in various plant locations.

Public awareness activities. In addition to helping HCWW implement its recent corporate communication strategy, we will assist the Company in rolling-out the communication guidelines currently being finalized in select subsidiaries.

D.3 Measuring Success

In parallel with the new approach, we will measure our success using subjective criteria and objectively verifiable indicators outlined in our PMP. These include:

- Locally initiated replication of WWSS-introduced interventions.
- O&M cost reduction, particularly in the areas of energy consumption, chemical use, system-wide reduction of water losses, etc.
- Development and/or adoption of management systems, including organization structures, position description, unit level action plans.
- Systemization and documentation of management structures and processes (adoption of organization charts at the sub-sector levels, position descriptions, action plan, monitoring and evaluation systems, etc.).
- Development and/or adoption of management systems, including organization structures, position description, unit level action plans.
- Timely production of management and financial reports.
- Human resource development programs instituted.
- Adoption and regular updates of business plans, etc.

Our quarterly progress reports will highlight progress against such measures, along with the extent of utilization of the tools introduced by WWSS, and the impact of jointly initiated activities on service delivery.

E. Team Organization

The Chief of Party, Ghassan Nakad, will oversee utility-specific work plans. Three team leaders will lead the activities at the regional levels: Chief Engineer Ahmed Allam will lead all activities in Upper Egypt, Mrs. Madiha Afifi, Senior Human Resources Development Advisor, will be responsible for Lower Egypt activities (including, eventually, our Sinai work), and Mr. Ghaleb Akari, Senior Business Planning Advisor, will cover Middle Egypt utilities. Interdisciplinary teams, consisting of finance and human resources development specialists and technical project managers, will assist them in implementing the business plan programs proposed by the subsidiaries and rolling out pilot activities initiated last year. Regional teams will share resources for discrete activities, and upon task completion, individual team members may move across regions. The Technical Support Group, composed of project managers in the key areas of our scope of work, will oversee activities program-wide in their areas of expertise. They are responsible for the QA/QC of the technical work, and for assuring that all activities in each functional area are conducted in a coordinated fashion. The TSG consists of the following task managers: Eng. Ahmed

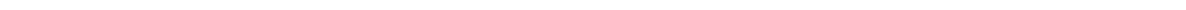
Kandil (capital investment planning), Eng. Sherif Moursi (O&M), Mr. Mahmoud Bakr (Finance), Dr. Abdel Fattah Saad (UFW), and Eng. Ibrahim Sabri (IT).

Engineer Mohamed Hashem, DCOP, will coordinate central-level activities and will represent the project on the WWSS-HCWW Joint Working Group. Mr. Hashem is also responsible for the ongoing Operator Certification Program, and follow-on technical assistance activities related to O&M contracting.

Ms. Kathleen Sheridan, Director for Program Development and Coordination will oversee crosscutting activities, and continue in her capacity as Assistant to the Chief of Party responsible for external reporting and communication, including quality control of contractually mandated documents. She will also prepare and update our monitoring and evaluation tracking system and the PMP in coordination with task leaders.

The complete makeup of the WWSS team is shown in the following graphic:

Exhibit III: WWSS Organizational Chart



SECTION II: DETAILED YEAR 3 WORK PLAN

As in the past year, we continue to organize our activities along four components:

A. Central activities, targeting the HCWW and emphasizing mainly the provision of technical and complementary expertise in support of company-initiated activities. Central among these is the Joint Working Group, which is made up of HCWW and program staff members responsible for coordinating WWSS program activities, as well as planning, implementing, and evaluating subsidiary-level interventions.

B. Cross-cutting activities, targeting multiple subsidiaries at the same time. This includes conferences, workshops, and other training activities not specifically tailored to any particular operating subsidiary.

C. Subsidiary-specific activities, consisting of efforts targeting each subsidiary individually, driven largely by their business plans. While we will limit these activities to those with a high potential for impact, we will adapt the interventions to the needs and situation of each subsidiary, and work with LWGs to plan, implement, and monitor their progress.

D. Project development and coordination activities, helping to effectively coordinate, monitor, and communicate progress of WWSS technical assistance.

In what follows, we present our proposed activities and related tasks. Detailed timelines of the latter can be found in Annex D at the end of this document.

A. Central Activities: Assistance to the Holding Company for Water and Wastewater

Activity HC 1 – Facilitate monthly gatherings of a joint working group (ongoing). To ensure that activities are jointly planned, implemented, and monitored with our counterparts at the HCWW, we will continue the practice of joint working group (JWG) meetings, established in Year 2. The JWG is made up of WWSS senior staff and their opposite numbers at the Holding Company. Responsibility for activity implementation will be shared, with HCWW counterparts taking on increased responsibility for technical assistance activities as our role phases out over time. Eventually, the HCWW group will evolve to become the nucleus of an internal consulting group within the Holding Company dedicated to providing technical support and expert advice to the subsidiary companies.

Tasks. Upon approval of the work plan, we will request nominations to the JWG from HCWW leadership, and agree on a standing date (i.e., first Wednesday of every month) for regular meetings. The suggested agenda will be sent to the HCWW on a monthly basis along with the field trip schedule. We expect many field trips to be jointly scheduled and conducted. Meeting minutes will serve as the group's documentation and reporting tool, circulated by the WWSS team after each meeting to all working group members and USAID, HCWW, and WWSS leadership. The first JWG meeting will be held in early November, 2010.

Co-leads: Eng. Mohamed Hashem (WWSS), HCWW counterpart to be determined

Activity HC 2 – Develop and pilot materials for the operator certification training program (Oct 2010 – Sept 2011). As outlined in decrees 204 and 205, the Minister of Housing, Utilities, and Urban Development recently established a Board of Certification for the water and wastewater sector for the purposes of developing and running a certification program for plant operators and laboratory analysts. The certification program will confirm the competence of the sector workforce, and will result in:

- Upgrading the skills and competency of treatment plant operators and laboratory analysts through training and certification,
- Enhancing the operation of water and wastewater treatment plants and laboratories in Egypt,
- Protecting existing investments in treatment and laboratory facilities, and
- Improving conditions affecting the health of Egyptian citizens.

With support from the USAID WPRR Program, EWRA has developed the program's framework, including the classification levels for plants and operators, related policy documents, and required competencies. WPRR has also developed the certification exams in cooperation with the Building and Housing National Research Center (BHNRC), which will administer them. According to decree 204, HCWW is tasked to develop and manage the training program (see box) to qualify operators and laboratory analysts to pass the tests.

**Operator Certification
Training Program**

- Water Treatment Curriculum: Levels A – D
- Wastewater Treatment Curriculum: Levels A – D
- Water Lab Analysis Curriculum: Levels A – C
- Wastewater Lab Analysis Curriculum: Levels A - C

To these ends, we will develop Level D course materials for water and wastewater treatment plant, and deliver a pilot course for water operators. Starting the third quarter, we will initiate work on Level C course material for all four curricula. The remaining courses will be developed in program Year 4.

Tasks. Following a presentation to HCWW leadership in early October, we will finalize the outline for the water treatment curriculum (levels A through D), and start developing the Level D course. Once its drafted, we will present the material to the Board and Certification, WPRR project, and the Holding Company for review and comment. Based on the feedback received, we will amend the course and pilot it before handing over the final version to HCWW by mid-2011. Identical steps will be replicated for Level D wastewater starting the second quarter, with the intent of handing it over by the end of Year 3.

Co-leads: Eng. Mohamed Hashem (WWSS), HCWW counterpart to be determined

Activity HC 3 – Upgrade the HCWW website (Oct 2010 – Sept 2011). HCWW has concluded that its website is an important means of communicating with a range of its critical audiences and stakeholder groups, and seeks to make corresponding investments in its content and appearance. HCWW's current website has developed on an ad-hoc basis, and HCWW is eager to critically assess and update its content and design. In response to HCWW requests, and in line with their WWSS-supported communications strategy, the WWSS team intends to assist HCWW renew its web presence during Year 3. The new website, available in English and Arabic, will host regularly updated content which supports HCWW's objectives in the online environment.

Tasks. This task will begin with an analysis of HCWW's current website, along with complementary analysis of websites of other utilities and/or utility holding companies in Egypt and around the world. Following this, a report of draft content revisions will be developed, and presented to HCWW leadership via a workshop. During and after this workshop, we will solicit input from HCWW, and finalize and agree upon HCWW's vision for the website. Using this document as a guide, we will develop and release an RFP for communications companies experienced in developing web strategies. The scope of work will include audience analysis, content development, website development, and any required training/capacity building to enable HCWW web staff to update and maintain the website on a sustainable basis. We will work closely with the selected firm to design, test, and activate the site, providing any content and/or reviews necessary. The site will be launched six to nine months after HCWW approves the site design, ideally no later than September 30, 2011. In addition, as an ongoing component of this activity, we will review and support HCWW efforts to project their key messages via social media channels, and assist in regular website updates.

Co-leads: Mr. John Harris (WWSS) and Ms. Ghada Osman (HCWW)

Activity HC 4 – Support the development of the HCWW press kit (Feb – June 2011). A key objective of the WWSS-supported HCWW Communications Strategy is to develop a proactive approach in dealing with the media. Sector organizations have to date been under-effective in engaging with media channels, and in ensuring that accomplishments and viewpoints are accurately reflected within the media. To better engage the media, HCWW aims to design and produce a "press kit," a ready-to-go set of materials providing background information on HCWW and its subsidiaries along with complementary information on the sector as a whole related to water supply, public health, investments in infrastructure, and other

informational material. The kit will also present HCWW priorities and initiatives and will be distributed to media outlets, advocacy groups, and other organizations. Such a kit will enable proactive sector engagement with media representatives, and will result in greater accuracy in press coverage on water and wastewater issues in Egypt. The press kit will be launched at a WWSS-supported press forum (see Activity HC 5).

Tasks: We will begin this task by working with HCWW to develop appropriate content to be distributed to the media. After gathering the necessary approvals from HCWW leadership, we will design the media kit. By design, the kit will be customizable for specific events, audiences, or issues. For example, the outer shell of the kit could include fixed content, unlikely to change over the course of the year, while inside there would be a series of handouts/pamphlets that could be easily tailored or updated depending on the specific emphasis of the press activity. After printing, the launch of the press kit will coincide with one of HCWW's regularly scheduled press forums, supported by WWSS as described as Activity HC 5. We will support HCWW with updates to the press kit throughout the course of the year.

Co-leads: Mr. John Harris (WWSS) and Ms. Neveen Abdel-Rahman (with support from Mr. Mohi El-Serafy) (HCWW)

Activity HC 5 – Facilitate HCWW press forums (Apr - June 2011). As described in Activity HC 4, HCWW aims in its new communications strategy to develop a more proactive and positive relationship with the media. To this end, they have planned a quarterly “press forum,” a platform for reaching out to key media representatives and conveying HCWW viewpoints and materials. Each forum will focus on a particular issue of importance to HCWW (e.g., water conservation, public health, future expansion plans, etc.) and will be led by an HCWW-identified expert or panel of experts. It is expected that each forum will have time allocated for a presentation by the expert(s), time for questions from the gathered media representatives, and targeted materials prepared for distribution. WWSS will actively support HCWW in the organization of the initial press forum, and then provide advisory support for additional press fora held over the course of the year. We will consider working with a PR or media agency in order to identify and invite suitable journalists to the forum. The initial forum will also provide the occasion to launch the press kit described in Activity HC 4. We anticipate that press fora will be attended by senior officials from the sector or from the relevant ministry in order to support significant press coverage.

Tasks. In cooperation with the heads of HCWW's Public Relations and Public Awareness departments, we will prepare a list of topics for a series of press forums and identify the expert(s) who will address each topic. These experts may be drawn from inside or outside of HCWW. Our proposal will indicate time and location, along with a list of potential invitees from the media. We will work closely with the HCWW to host the first forum, and provide advisory support for the subsequent forums.

Co-leads. Mr. John Harris (WWSS) and Mr. Mohi El-Serafy (with support from Ms. Neveen Abdel-Rahman) (HCWW)

Activity HC 6 – Roll-out MARS system upgrade and transfer system to HCWW (Oct 2010 - Sept 2011). The MARS system was designed and developed with USAID support under the WWSPR to allow the Holding Company to monitor the performance of the subsidiary companies using a common set of indicators. The WWSS Program has continued to support this system at the central and regional levels, troubleshooting it and introducing enhancements recommended by the end users. For example, to improve system speed, the project recently provided two servers to host the MARS application at HCWW, and a router to load-balance the data traffic on the system. To complement these efforts, the HCWW agreed to provide a dedicated leased line for MARS. Finally, we upgraded the application to fix bugs, enable increased traffic, and respond to HCWW requests for additional features. We will assist in the first quarter of Year 3 on orienting the HCWW and its subsidiaries to the new version of MARS. Additionally, to ensure that the MARS system is sustained beyond the life of the WWSS project, we will hand the system over to the HCWW for continued support.

Tasks. After completion of the latest series of MARS enhancements and initiation of the system re-engineering, in March 2011, we will work with HCWW to facilitate a series of workshops for subsidiaries to introduce them to the updated system. We will then focus our attention on handing over the program to

the HCWW, through on-the-job training sessions for the IT staff. HCWW has agreed to select a support team for MARS with experience in Visual Basic.net and Microsoft SQL Server. Later in the year, we will continue to re-engineer MARS, working closely with the HCWW, to allow better response time and gain more stability working on the Internet. The re-engineering process will include an update to the MARS documentation, and orientation to HCWW IT staff to the changes.

Co-leads. Eng. Ibrahim Sabri, with support from Eng. Sayed Moustafa (WWSS), Mr. Khaled Gomaa, with support from the IT division (HCWW)

Activity HC 7 – Complete sector IT Master Plan (Oct 2010 - May 2011). This activity was initiated in Year 2 and will be completed in Year 3. The purpose of the exercise is to align IT functions and decisions across the sector under a unified strategy to increase efficiency and functionality. The process began in Year 2 with an assessment of the 23 subsidiaries, and will continue into Year 3 with brainstorming sessions with HCWW and its subsidiaries, followed by the preparation of a sector-wide master plan and a detailed implementation plan.

Tasks. Upon completion of the field visits and assessment in October, 2010, we will produce the due diligence report, including an evaluation of the existing automation efforts, with separate sections for each subsidiary and one for the Holding Company. The report will include a gap analyses, recommendations for the IT Master Plan preparation phase, and an inventory of the existing systems and human resources capabilities. Based on this assessment, we will hold IT strategic planning workshops with the HCWW joint working group members and subsidiary IT managers to define: 1) goals and objectives; 2) components of the IT Master Plan; 3) priorities; and 4) budget estimates. With agreement on these key parameters, we will proceed with development of the IT Master Plan (see box) and, upon its approval, the detailed implementation plan with timelines and responsibilities.

IT Master Plan Contents

- IT mission statement
- IT goals
- IT objectives
- Role of the HCWW IT department
- The IT components, with high level system requirements
- Human resources / staff development
- Sustainability issues
- Cost/benefit analysis
- High level timeline
- Estimated capital and operation budgets

Co-leads. Eng. Ibrahim Sabri (WWSS), and IT Division Director (HCWW)

Activity HC 8 – Document and hand over MASTER, the computerized maintenance management system (Oct 2010 - Sep 2011). During the previous project year, WWSS developed an Arabic computerized maintenance management system (MASTER), tested it, and implemented it in 21 plants. During Year 3, we intend to refine the system, expand its implementation, and build capacity across the sector to sustain the system in the future. To ensure that the system can be fully supported by the HCWW by year's end, we will provide training to Holding Company staff on the system and work closely with them to complete its documentation and provide training to the subsidiaries. We will also work with HCWW to develop a control mechanism to ensure that there is a single point for approving change requests, making changes to the program, and issuing updated versions of the software.

Tasks. Early in the second quarter, we will hand over the MASTER system to the HCWW, and initiate on-the-job training for their dedicated team. To ensure that the handover is successful, HCWW has agreed to select a support team with a strong background in MS Access database. After the first phase of the subsidiary roll-out (see Activity SS 8), we will jointly collect feedback, make changes to the software, and release version 2.0, with updated user and technical manuals. Further, we will also develop and distribute the technical documentation (specifications, source code, etc.) for the system and provide on-the-job training for the IT staff. By the fourth quarter, we expect HCWW to assume full responsibility for MASTER, including managing change requests, issuing and disseminating new versions or upgrades, and providing technical support.

Co-leads. Eng. Ibrahim Sabri, with support from Eng. Sayed Moustafa and Eng. Mina Mounir (WWSS), and IT Division Director (HCWW)

Activity HC 9 - Develop a performance evaluation system for the HCWW (Oct 2010 – June 2011).

With support from short-term advisor Nancy Barnes, our Senior HRM/D Advisor will work with HCWW to develop a performance evaluation system, a priority identified in their WWSS-supported Human Resource Management and Development Strategy. This task was discussed with HCWW Vice Chairman, Eng. Mamdouh Raslan, and agreed upon at the HCWW-hosted conference in July, 2010. The system will outline a process to evaluate the performance of HCWW employees based on the pre-determined targets, and will suggest a methodology for eventual roll-out to the subsidiaries.

Tasks. We initiated this task in August, 2010, by gathering and reviewing various approaches and best practices for performance management appraisals. Based on our findings, we will develop alternative approaches for each stage of the performance appraisal process (individual goals/objectives, performance assessment, and development needs). Using these alternatives as a starting point, we will facilitate a workshop with HCWW representatives to present and discuss options, and obtain their feedback. We will develop the final version based on their input and assist them in developing a plan for implementing the proposed approach.

Co-leads. Ms. Madiha Afifi, with support from short-term consultant Nancy Barnes (WWSS); Eng. Mohamed Moawad (HCWW)

B. Cross-cutting Activities

Activity CC 1 - Plan, design, implement, and monitor training-of-trainers (TOT) program (Oct 2010 – Sept 2011). As described in section I.D.1 above, we will employ a training-of-trainers approach in Year 3 to create a cadre of local talent capable of: (a) instructing other engineers and technicians, and (b) leading activities within their respective utilities in the following areas:

1. Chemical use optimization
2. Energy use rationalization
3. Water leak detection and reduction, and
4. Development and use of illustrated operating instructions

We will begin with those subsidiaries that have demonstrated, through the Year 2 assessment or otherwise, technical readiness to implement the activities listed above. The program will include three days of technical training for each of the four technical activities (implemented simultaneously), and three days of soft skills training for a subset of the trainees (7-8 individuals), focusing on training skills such as presentations, facilitation, and coaching. The last day of the TOT will include a session on developing an implementation plan for the technical activities, including how and when the local trainers will train others.

Tasks. The technical training and TOT materials, including trainer and trainee materials, exercises, and tests, were drafted in Year 2 and will be completed in October, 2010. The HR team will work closely with the O&M team to select governorates and trainees for each course before the training begins, with the first round scheduled for November, 2010. Each course will culminate in the development of an action plan for implementing related activities in congruence with their respective business plan programs, which will be supported with subsequent WWSS technical assistance and monitoring of progress by the Local Working Groups. We will implement one round of the program each quarter, for three subsidiaries each quarter.

Co-leads. Ms. Madiha Afifi for planning and monitoring, Eng. Ahmed Allam for the development of technical materials, and Eng. Mohamed Ashmawi for TOT material development (WWSS). Ms. Wafa Yousef for training, and a technical division member to be determined (HCWW).

Activity CC 2 – Develop and distribute guide for reading and interpreting financial statements (Nov – Dec 2010). The purpose of this manual is to present and explain to non-financial managers the financial results, along with key financial ratios and operation-related indicators of the Holding Company and its subsidiaries.

Tasks. Working closely with HCWW financial management and economic analysis staff, we will outline the *Guide*, and then collect all the relevant quarterly and annual financial statements, along with data provided through the MARS system. Once we complete the document, we will arrange for a third-party subject matter expert to review the document before disseminating it to the subsidiaries via a workshop.

Co-leads: Mr. Mohamed Eid (WWSS) and Dr. Hisham Afifi (HCWW)

Activity CC 3 – Support standardization of budget document submissions (Jan – Oct 2011).

Pursuant to the request of Eng. Raslan, HCWW Vice Chairman for Finance and Administration, we will review current practices of annual budget submissions by the operating subsidiaries and recommend a less complex, uniform format for annual presentations. Particular emphasis will be placed on the operations and maintenance budgets. In conjunction with the above, we will also investigate the possibility of switching from the current spreadsheet system to the automated ADVAC, for potential implementation in Year 4.

Tasks. We will cooperate with HCWW finance and economic analysis staff on this activity, which calls for (a) a thorough review of budget documents and the budgeting cycle, (b) redesign of forms used, (c) recommendations regarding the budgeting cycle and information flow at the local and central levels, and once approved, (d) step-by-step procedures for implementation during the annual budgeting process, and (e) on-site technical assistance in the operating subsidiaries through the next budget submission due, i.e., November 30, 2011 for FY 2012-2013.

Co-leads: Mr. Mahmoud Bakr (WWSS) and Dr. Hisham Afifi (HCWW)

Activity CC 4 – Roll-out subsidiary communication guidelines (Nov 2010 - May 2011). Beginning late in Year 2, we started working on subsidiary communications guidelines, a toolkit for water and wastewater companies to use in planning and implementing awareness campaigns and other public outreach and education activities. During Year 3, we will present the guidelines to subsidiaries, and provide training in their utilization. This activity will be closely coordinated with other donor efforts in this sector, particularly the ongoing training course led by UNICEF addressing key skills required among subsidiary PA/PR units. The Arabic-language guidelines will provide a sustainable and practical resource which will assist subsidiaries in planning and implementing successful communications activities.

Tasks. After reviewing the draft guidelines with HCWW and subsidiaries, refining and adding content as appropriate, we will develop training materials based on the guidelines. Subsequently, we will organize three regional workshops to train all subsidiaries in the application of the guidelines to their ongoing communications activities. The guidelines and related sample materials and templates will be available via a CD, the WWSS website, and a manual for distribution to subsidiaries and their staff.

Co-leads. Mr. John Harris (WWSS) and Ms. Neveen Abdel-Rahman (HCWW)

Activity CC 5 – Finalize and roll-out standard contracting documents (Oct 2010 – Sept 2011). To improve the subsidiaries' efficiency in tendering and evaluating bids, the WWSS scope of work called for the preparation of key standard documents covering all steps of the procurement process. Currently, there are no standard documents used across the sector, and the poor quality of the documents used sometimes results in problems between the contracting company and the contractor, and sometimes the cancellation of the solicitations. Greater consistency and improved quality of tender documents will assist HCWW and especially its subsidiaries in tendering R&R projects more efficiently, and gradually taking on a larger role in managing capital investment projects.

Together with our colleagues on the WPRR Program, we developed and submitted all three required volumes of standard contracting documents and guidance in Year 2. In Year 3, we will collect final feedback on the drafts and utilize them for capacity building activities for subsidiaries. We will also seek a policy from the Chairman of the HCWW endorsing the use of such documents for all future contracting work.

Tasks. After collecting feedback from all concerned parties, we will make the necessary modifications and submit the final versions of the three volumes during the first quarter of Year 3. At that time, in

cooperation with our counterparts at WPRR, we will seek the issuance of ministerial and HCWW decrees endorsing the documents and mandating their use. We will host a joint launch workshop with the WPRR team, to be followed by a series of regional training sessions (four subsidiaries per session) for relevant staff at each subsidiary. Training sessions will include testing and certificates for those who pass the exams.

Co-leads. Eng. Ahmed Kandil, with support from Eng. Ahmed Abdel Hamid (WWSS), and Dr. Salah Bayoumi (HCWW).

Activity CC 6 – Build capacity at the HCWW and its subsidiaries in use and maintenance of PRiSM (Oct 2010 – Sept 2011). The Program Management Information System (PRiSM) is currently in use at all subsidiaries, HCWW, and MHUUD for nation-wide progress monitoring of construction projects. During Year 2, all subsidiaries received extensive training on supporting and using the system, including data entry and analysis of PRiSM information. Additionally, the WPRR team is leading the development of a new version of PRiSM, currently in beta testing. In Year 3, we will assist in the roll-out of the new version, and help the subsidiaries in analyzing and utilizing PRiSM-generated data and reports. We will also assist HCWW in this regard, particularly in preparing project reports to upper management.

Tasks. At the HCWW level, we will coordinate with WPRR to launch the new version of the software using presentations and live demonstrations. We will also work with HCWW for it to take the lead on PRiSM follow-up and monthly updates, attend weekly coordination meetings at the ministry, and carry out periodic audits of projects. We will conduct four to six such audits at select subsidiaries, while also continually raising awareness of the HCWW leadership of the program benefits and their role in ensuring its sustainability. We will also propose a presentation at a monthly Chairman Forum event, and assist in WPRR’s training on the new version of PRiSM and provide follow-up technical assistance to subsidiaries as necessary. To complement PRiSM training, we will provide refreshment courses and technical assistance in planning and scheduling using MS Project, building upon the training offered in Year 2.

Co-leads. Eng. Ahmed Kandil, with support from Eng. Ahmed Shoair (WWSS), and Dr. Hossam Kashef (HCWW).

Activity CC 7 – Support subsidiaries’ capital investment planning efforts (Oct 2010 – Sept 2011). To help utilities maximize the benefits of funds for projects, the HCWW, with support from consultants, led a master planning exercise for the sector and established master planning departments within each subsidiary’s planning division. In most cases, this master planning department consists of three units: GIS, hydraulic modeling, and master planning. The WWSS team has provided various tools and training courses to these units, including hydraulic modeling, Water CAD, GIS training, a project prioritization tool, and a manual on maximizing the benefits of the master plan. To ensure that the tools provided are being applied in planning and selection of new projects, we will prepare manuals, provide on-the-job training, and follow-up technical assistance, and periodically assess the results and effectiveness of the work of these units.

Tasks. Early in Year 3, we will finalize the Capital Investment Planning manual, drafted in Year 2, hold a workshop based on the manual, and provide two days of follow-up technical assistance to each company. We will also continue the Water and Sewer CAD training series initiated in Year 2 with seven subsidiaries. Finally, we will develop and deliver a GIS training course for the planning sector staff, covering GIS database development and integration, conversion of satellite images into base maps, and the GIS/CIP software module.

Co-leads. Eng. Ahmed Kandil, with support from Eng. Yehia Ashrey and Eng. Hani Nahlawy (WWSS), and Dr. Ahmed Moawad (HCWW).

Activity CC 8 - Implement AUC Utility Management Certificate Training program. This ten-module program targets senior managers and decision-makers in the operating subsidiaries, specifically the second layer of leadership (division heads and directors general). It aims to deepen their understanding of the various aspects of utility management and introduce new concepts and practices to improve day-to-day operations at the headquarters and operating levels. During Year 2, WWSS contracted AUC to design

and deliver this training program, which was launched in June, 2010. The first group of trainees was selected by a joint WWSS-AUC-HCWW panel using interviews, a ranking system, and input from HCWW leadership.

Tasks. This first group has completed the first three modules of the program, and will complete the course in the second quarter of 2011. We will hold a graduation ceremony for the trainees, with HCWW and USAID involvement, under the banner of the Cairo Initiative, if appropriate. Also, during the first quarter of Year 3, we will select a second and third group of participants, using a process similar to the one used previously. We will initiate rounds 2 and 3 of the series in the second and third quarters of Year 3.

Co-leads. Ms. Madiha Afifi (WWSS), Eng. Mohamed Moawad (HCWW)

Activity CC 9 – Facilitate attendance at one international conference and one study tour to world-class water and wastewater institutions. We will design and organize one study tour for Egyptian water sector professionals during Year 3, and facilitate attendance at one international conference on a topic of relevance to the sector. To maximize impact of US-based conference attendance on Egyptian participants, to the extent possible, we will couple conference attendance with an abbreviated study tour of exemplary water and wastewater institutions in the US as outlined below. The two trips planned for Year 3 are:

- The Utility Management Conference in Denver, Colorado, co-hosted by the American Water Works Association and the Water Environment Federation, on February 8-11, 2011. The annual conference gathers water and wastewater managers and professionals to discuss the latest approaches, practices, processes, techniques, case studies, and research in all aspects of utility management. Session topics will address the Ten Attributes of Effectively Managed Water Sector Utilities (see box). We expect to send 5-6 Chairmen from selected HCWW subsidiaries to participate. The study tour will follow the conference and will be designed to meet the needs of the Chairman in the Denver, Colorado region.
- The second study tour will take place in Quarter 3, and will be designed to meet the needs of selected HCWW professionals in Finance and HR. Site visits may include: the Association of Boards or Certification and/or a state certification and testing agencies; examining certification training programs or other professional development programs for utility technicians and managers; observing university recruitment programs; visiting technical schools and community colleges specializing in training water and wastewater technicians; visits to utilities to learn about their financial management and human resources development functions. We will work closely with selected participants to identify the areas of interest for the tour and tailor the study tour to meet their needs.

Ten Attributes of Effective Utility Management
<ul style="list-style-type: none"> • Product Quality • Customer Satisfaction • Employee and Leadership Development • Operational Optimization • Financial Viability • Infrastructure Stability • Operational Resiliency • Community Sustainability • Water Resource Adequacy • Stakeholder Understanding and Support

Tasks. Planning for the first trip, to the conference and study tour in Denver, will begin in the first month of the year with a preliminary nomination from the HCWW for participants. Then, through the month of November, we will work with HCWW to finalize the participant list, draft the program and itinerary, and prepare all participant paperwork, which must be submitted with the R3 package and entered into the Train-Net and VCS systems by early December. We will then focus on refining the itinerary and arrangements in cooperation with the Chemonics home office, and supporting the participants as they prepare for departure. After completion of the trip, we will arrange and facilitate a re-entry workshop to evaluate the trip. We will follow the same process for the second study tour, beginning in January.

Co-leads. Ms. Madiha Afifi and Mr. Ghaleb Akari, with support from Ms. Gilan George (WWSS)

C. Subsidiary-specific Activities

As illustrated by Exhibit II in Section I.D, our assistance to the regional utilities in the coming year will be built on the formation of local working groups, consisting of WWSS advisors, subsidiary task leaders, and HCWW representatives who will meet regularly to plan, implement, and monitor mutually agreed-upon programs extracted from their respective business plans. The first effort of each local working group will be to review and update the company's business plan, to prioritize programs and select activities to be implemented in the current plan year with WWSS support. Selected programs, such as energy use rationalization, will be technical in nature and will likely be decentralized (i.e., away from the governorate capital and involving networks, plants, laboratories, etc). These activities are listed below as SS 2 to SS 5 and do not include detailed timing and location, since that will be determined jointly by the LWG. The remaining activities, SS 6 through SS 13, are ancillary support activities, many of which were initiated in Years 1 and 2. Since such activities require less specialized training and equipment, we have planned their timing and location below and in Annex D.

Activity SS 1 – Activate joint local-level working groups (Oct 2010 - Sept 2011). Following approval of this third annual work plan, we will hold a series of orientation workshops in the subsidiary companies to re-introduce their respective chairmen and division heads to the purposes and objectives of the WWSS Program, present our 2010-2011 work plan, and discuss their priorities. The latter will consist of programs they previously identified in their business plans, along with activities they identified in our recent field surveys and assessments. We will take also the opportunity to establish local working groups (LWGs), which are to serve as steering group responsible for joint planning, implementation, and monitoring of subsidiary-specific WWSS technical assistance and training activities.

Steps for subsidiary roll-out of energy rationalization activities

- Orient senior-level management
- Establish the local task force
- Provide equipment – power factor analyzer and correction panel
- Provide technical training and TOT to power factor analysis unit
- Develop action plan for program roll-out
- Monitor implementation, providing technical assistance as necessary
- Evaluate progress and results

Tasks. A five-person team will visit the targeted subsidiary companies soon after we receive the green light on our work plan from USAID and HCWW. Following work plan presentation and program orientation, we will work with company leadership to establish LWGs and jointly update the companies' business plans. Throughout this process, we will assess the subsidiary programs in relation to the needs identified in their business plan and decide on high impact/high return activities to be implemented and monitored together through the LWG, which will serve as the basis for company-specific action plans (kindly refer to our proposed implementation approach outlined in Section I.D of this document).

Co-leads: Mr. Ghaleb Akari, Mrs. Madiha Afifi, and Eng. Ahmed Allam (WWSS)

Activity SS 2 – Institutionalize and roll out energy use rationalization activities. Presently, energy costs represent 30 – 40% of the costs of water treatment, and companies can reduce and control such costs through periodic monitoring and adjustment of its plants' power factor. Most companies, however, have neither the equipment nor the expertise to properly control their plants' power factors. Through a series of pilot energy use rationalization activities in Year 2, we have developed an approach to reducing energy costs and a methodology for building capacity of the sector to conduct such activities on a sustainable basis. In Year 3, we will equip the subsidiaries to analyze and adjust their power factor on an ongoing basis, and to train others in the sector to do the same. Should the KfW soft loan for energy use rationalization equipment move forward, we will coordinate to the maximum extent possible and leverage those resources within our targeted subsidiaries.

Tasks. In the targeted subsidiaries, we will orient the senior-level management to our approach for this activity, and work with them to form a local task force for the activity within the company. We will provide that team with a power factor analyzer, and train ten individuals on the use of both the analyzer and the power factor correction panel. Further, as described in Activity CC 1, we will select five of the trainees at each company to participate in a training-of-trainers course, to further ensure sustainability of

the program. We will work with each company's task force to develop an action plan for roll-out within the company, and we will monitor implementation of the action plan, providing technical assistance as needed.

Co-leads. Eng. Ahmed Allam, with support from Sherif Moursy (WWSS), and Eng. Osama Abdel Rahman (HCWW). Subsidiary teams will include Electricity Sector Head and Plant Managers.

Activity SS 3 – Institutionalize and roll out chemical use optimization activities. Optimization of chemicals in water treatment has multiple benefits. In addition to improving the quality of water provided to customers, it also increases efficiency of the treatment process, reduces pressure on equipment, and controls costs of treatment. After a series of pilot chemical use optimization activities in Year 2 – including studies, dosage adjustments, and equipment calibrations - we received positive feedback on the assistance from a number of companies. We will reinforce the activity in Year 3 through technical training, TOT, and joint roll-out with local working groups.

Tasks. In the targeted subsidiaries, we will orient the senior-level management to our approach for this activity, and work with them to form a task force for the activity within the company. We will provide that unit with technical training (including material on jar tests, break point tests, adjusting alum pumps and chlorinators, and calibration of water meters) and TOT (see Activity CC 1) to enable wider roll-out. We will work with each company's chemical optimization unit to develop an action plan for roll-out within the company, and we will monitor implementation of the action plan, providing technical assistance as needed.

Subsidiary roll-out of chemical use optimization activities

- Orient senior-level management
- Establish the local task force
- Provide technical training and TOT to the local task force
- Develop action plan for program roll-out
- Implement action plan, including
 - Adjusting the alum dosing pump and the chlorinators
 - Maintaining and calibrating the water meters
- Monitor implementation, providing technical assistance as necessary
- Evaluate progress and results

Co-leads. Eng. Ahmed Allam, with support from Medhat Tolba (WWSS), and Eng. Gihan Mohamed (HCWW). Subsidiary teams will include the O&M Sector Head, Lab Manager, and Plant Managers.

Activity SS 4 – Build capacity for water leak detection and reduction. In most Egyptian water utilities, unaccounted for water – made up of both physical losses (leaks) and commercial losses (illegal connections, etc) – exceeds 40% of produced water, which presents a major strain on utility operations. The WWSS Year 2 pilot activities in Luxor resulted in recovery of more than 30% of water losses. Most of this recovery came from reducing physical losses (leaks), so we will expand on this activity in Year 3, focusing on building capacity in the sector to monitor and address leakage on an *ongoing basis*. Some of the subsidiaries targeted have the required equipment, provided through USAID under previous projects. WWSS will purchase equipment for the remaining subsidiaries and HCWW in the first quarter of Year 3.

Tasks. After local-level orientations and formation of local working groups (see SS 1), we will work with the LWG to form a task force for this activity in each company. We will provide the task force members with technical training (in leak detection and repair, valve repair and maintenance, measuring flow and pressure, and GIS), as well as TOT, and work with them to develop an action plan for roll-out in a pilot area in their governorate. Based on our Year 2 experience, the action plan steps will include, but will not necessarily be limited to:

- Selection of pilot area using the water balance technique and GIS mapping technology
- On-the-job training for the GIS staff
- Database and map development, including location of targeted area, pipes, and valves
- Flow and pressure measurements in the pilot area
- Leak detection survey and mapping
- Leak repair
- Repeat flow and pressure measurements in the pilot area

- Analysis of the physical data
- Reporting and recommendations

We will monitor implementation of the action plan in conjunction with the LWG, provide intensive technical assistance as needed for a period of three months, and evaluate progress and results. Ongoing TA will continue, though at a less frequent pace over the remaining life of the WWSS Program.

Co-leads. Eng. Ahmed Allam, with support from Dr. Abdel Fattah Saad, Eng. Sherif Moursy, and Eng. Ahmed Abdel Hamid (WWSS), and Eng. Osama Abed Al-Rahman (HCWW). The subsidiary task force will likely include the O&M Sector Head, the Network Manager, and the District Manager.

Activity SS 5 - Development of and training on plant operating instructions. In Year 2, the WWSS team developed standard operating procedures (SOPs) for five water treatment plants. To supplement the SOPs, we provided poster-size, laminated operating instructions that serve as a day-to-day quick reference for plant operators. The operating instructions were well received by the subsidiaries and HCWW alike, so our aim in Year 3 is to provide training and tools to subsidiary staff for their further development of operating instructions for their water and wastewater treatment facilities. The intent of this activity is to optimize plant operations, minimize mistakes, and increase efficiency and quality of the water treatment process.

Tasks. First, we will orient senior-level management to the activity, and work with them to form a local task force for development and roll-out of operating instructions. We will provide that group with training on development of the posters (including MS powerpoint basics, photography tips and tricks, and poster layout and printing) and TOT (see Activity CC 1) to enable wider roll-out. We will work with each company to develop an action plan for roll-out within the company, and we will monitor implementation of the action plan, providing technical assistance as needed.

Co-leads. Eng. Ahmed Allam, with support from Eng. Sayed Abdel Rafie, Eng. Ahmed Soliman, and Mr. Fady Nessim (WWSS), and Eng. Gihan Mohamed (HCWW). Subsidiary teams will include the O&M Sector Head and participating water treatment Plant Managers.

Activity SS 6 – Support financial systems automation (Oct 2010 - Sept 2011). This is a continuation of a successful activity initiated in FY 2009-2010. In the past year, we purchased several licenses of ADVAC, an accounting, payroll, and human resources management software, and provided multi-level training and assistance in system installation and integration. Our activity this year will center on further assistance in reporting, and the eventual accreditation of ADVAC by the Central Accounting Agency (CAO) as an approved tool for transaction recording and the generation of standardized financial statements. Given the positive results so far, we anticipate converting totally to the automated system as soon as we can (1) ascertain that reliable local IT support is available, and (2) obtain, with HCWW help, the approval of CAO to replace the manual system. We will also investigate in the course of the year the capabilities of the ADVAC inventory management module, currently undergoing tests at Cairo and Gharbiya utilities, along with the Oracle-based inventory management program developed by Menufiya WWC and currently being tested there and at HCWW. Should we select the ADVAC system, we will aim at installing it in our targeted subsidiaries in late 2011. The Oracle option will be TBD and will depend on the availability of licenses and documentation.

Tasks. Per our initial plan, we will continue on-site TA and on-the-job training throughout the third plan year, running the ADVAC accounting modules along with the required manual system. In parallel, we will work with ADVAC to produce and distribute the administrator manual and workflow documentation. Beginning in April, before the end of the fiscal year, we will assist with year-end closeout and generation of financial statements, and seek CAO approval for the adoption of ADVAC.

Co-leads: Mr. Mahmoud Bakr, with support from Mahmoud Abdel Hamid (WWSS) and Dr. Hisham Afifi (HCWW).

Activity SS 7 – Provide IT support for financial systems (Oct 2010 – Sep 2011). To support ADVAC installation and the planned integration with the Unified Accounting System (UAS), and to assist in the

consolidation of financial statements (See Activity CC 3), we will provide the IT assistance necessary to align ADVAC with agreed upon ledgers and formats. We will also advise on the integration of select financial statistics into MARS.

Tasks. To assist in consolidating the format of financial statements submitted to the HCWW, we will develop general ledger consolidation requirements in close cooperation with the HCWW Finance Department, and liaise with ADVAC to develop the required modifications to the program. Similarly, to eliminate double data entry between financial management systems and MARS, we will work closely with the HCWW's Economic Analysis Department and ADVAC to develop the required integration/conversion tools.

Co-leads. Eng. Ibrahim Sabri, with support from Mahmoud Bakr and Eng. Mina Mounir (WWSS), and Dr. Hisham Afifi (Finance), Mr. Khaled Gomaa (Economic Analysis), and the IT Division Director from the HCWW.

Activity SS 8 – Roll-out MASTER computerized maintenance management system. In Year 2, the WWSS team developed a simple, Arabic-language, low-cost computerized maintenance management software program called MASTER (Maintenance through Systematic Tracking and Equipment Repair). Designed for use at the plant level, the system contains functions for: maintaining and inventorying plant equipment; maintenance procedures for each type of equipment; and scheduling, monitoring and reporting on maintenance activities. After testing and piloting the program in numerous plants in Year 2, we intend to roll-out the program further in Year 3 while also creating the mechanism at the HCWW for sustaining the program into the future. We will establish teams at the HCWW and subsidiaries that are equipped to install, operate, and maintain the system at plants across the country. See also Activity HC 8.

Tasks. To prepare for the roll-out, we will establish and train a local task force of IT and O&M staff at the HCWW and each participating subsidiary. The training, including approximately 10 trainees from each company, will cover system functions, the stages of software implementation (data collection, work order generation, analysis and reporting), and support and troubleshooting. Then, at the level of each subsidiary, we will work with the implementation team to pilot the system in one plant. After the pilot, the trained subsidiary teams will lead further roll-out, and we will monitor implementation through the local working groups and provide technical assistance as needed. We will work on this task with three subsidiaries each quarter, as outlined in Annex D.

Co-leads. Eng. Ahmed Allam, with support from Sayed Moustafa and Mina Mounir (WWSS), and Sayed Hassanein (HCWW). Subsidiary teams will include the O&M Sector Head, and the Plant Manager and Plant Operator from the pilot plants.

Activity SS 9 – Provide construction supervision service for three selected projects (Oct 2010 – Sept 2011). Pursuant to the terms of the WWSS scope of work, we will provide construction management services, using local firms, for three projects. This effort is aimed at introducing good practices and enabling subsidiaries to manage such firms on capital investment and/or R&R projects. In Year 2, we studied and discussed possibilities in various governorates, and decided on upcoming projects in Assiut, Sohag, and Menufiya based on the following criteria. We selected projects that:

- Are directly related to the provision of water and wastewater services (not office building improvements, etc.)
- Are multidisciplinary in nature (not simply erections of iron and manganese units or pipe replacement)
- Include sound engineering/design studies
- Apply to at least one of the newly established subsidiaries

Tasks. In the first month of Year 3, we will decide upon the third project with the Sohag company, and will proceed to develop and sign protocol agreements with each of the three utilities. We will work with the company leadership, through the local working group, to select a supervisory team for each project. By the third quarter, we will select a construction management firm and award the contract, and will monitor the contract's implementation throughout the remainder of the year.

Co-leads. Eng. Ahmed Kandil, with support from Eng. Mohamed Sabry (WWSS); PIU Managers from Sohag, Assiut, and Menufiya

Activity SS 10 – Assist subsidiary HR divisions to develop and implement Human Resource Management and Development plans. Subsidiary HR divisions are still in the early stages of development. While, in most cases, the structure and personnel are in place, their functions are largely confined to payroll administration and training. To address this, and to raise their awareness about the various aspects of holistic HR management, the WWSS team provided training and technical assistance in Year 2 to subsidiaries' HR teams to develop subsidiary HR plans, outlining their vision for their division and an action plan for achieving it. To date, five subsidiaries (Sohag, Qena, Menufiya, Beni Suef, and Matrouh) have finalized their plans. We will build upon this process in Year 3 by assisting those companies to implement their plans, and by working with the remaining companies to complete the planning exercise.

Tasks. In Year 3, we will continue to support the five companies with completed HR plans, on an as-needed basis as they implement them. For those subsidiaries which have not yet completed their HR plans (Assiut, Minya, Giza, Aswan, and Luxor), we will conduct a series of field visits and working meetings with their HR teams to draft and refine their plans. Once the plans are complete, the WWSS HR team will support them on an as-needed basis to implement their plans. Finally, for those subsidiaries who have not yet initiated their planning exercise (Cairo and Sinai), we will facilitate the process through workshops, technical assistance visits to draft the plans, and as-needed TA during implementation.

Co-leads. Ms. Madiha Afifi (WWSS), Ms. Ghada Abdel Wahab (HCWW)

HR Planning Workshop – Objectives

- **Assess current HR practices** using standardized tool
- Review and revise **HR division's organizational chart**
- Prepare **mandate and functions** for HR division and all departments therein
- Develop **job descriptions** for HR staff members, linking directly to department and division mandate
- Outline an **HR management and development plan** for the company

Activity SS 11 - Build capacity of Sohag, Cairo, Beni Suef, and Matrouh Companies to develop their staffing plan. The subsidiary companies continue to be grossly overstaffed, particularly with unskilled labor, and relatively understaffed with respect to professional technical positions. To address this, we are working with select companies to analyze their staffing situation and identify optimum staffing levels for their various divisions and units. While this issue remains understandably sensitive, we aim to assist them in thoroughly understanding their staffing situation, the impact of expected retirements and market competition, and how that will affect the company's performance. In doing so, we will also help them identify short-term and medium-term adjustments to gradually move toward a more right-sized staff. Such adjustments can include staff reassignment, natural attrition through retirement, recruitment efforts, outsourcing, etc. In Year 3, we will work with four companies on this exercise, using short-term support from HR Consultant, Dr. Salah Zaki. The process is participatory and designed to build the HR division's capabilities in analyzing staffing levels and preparing a staffing plan.

Tasks. We will initiate this task with the development of staffing plan guidelines, with support from our short-term HR consultant. Using these guidelines, we will hold a 3-4 day workshop with subsidiary HR division staff to explain the concept of manpower planning and rationalization. Following the workshop, we will follow the process used in Year 2 with Assiut and Menufiya companies to discuss and define the performance standard for each division, and provide technical assistance to company leadership to develop their plans. Once the plans are drafted, we will support the companies in presenting their plans to the HCWW.

Co-leads. Ms. Madiha Afifi, with support from HR consultant Dr. Salah Zaki (WWSS), and Ms. Ghada Abdel Wahab (HCWW)

Activity SS 12 - Support installation of ADVAC/HR system at selected subsidiaries. This is the continuation of an activity initiated in Year 2, and it is aimed at automating HR management at the subsidiaries, and providing a central database for employee information, linked to the financial system. In

Year 2 we installed ADVAC/HR module and provided extensive training and hands-on assistance in five subsidiaries (Sohag, Luxor, Assiut, Matrouh, Giza). In Year 3 WWSS will continue to support these five subsidiaries to ensure that the system is working and applied by HR staff. We will also work with the remaining five subsidiaries (Aswan, Qena, Minya, Cairo, and Menufiya) to install and launch the program.

Tasks. For those companies receiving ADVAC/HR in Year 2, we will provide ongoing support throughout the year, as needed. For Minya and Menufiya, currently using Oracle-based HR information systems, we will assess the use of their current systems and the advantages and challenges of integrating ADVAC. In the case of Cairo, Qena, and Aswan, we will install the recently purchased ADVAC HR module, and assist them in the early stages of operation and system integration.

Co-leads. Ms. Madiha Afifi, with support from Eng. Ahmed Abu El-Agha (WWSS), Ms. Ghada Abdel Wahab (HCWW)

Activity SS 13 - Establish Sohag WWC training facility. As part of their HR plan, the Sohag Water and Wastewater Company planned to establish a training facility on company grounds for training of new and existing staff. WWSS has agreed to support them in establishing, launching, and equipping the space. Once the company has decided upon and approved the location, space, and personnel for the center, WWSS will procure the required equipment, collect and provide training material, and conduct training-of-trainers and other capacity building programs, including assistance in preparing their initial training plan.

Tasks. In the second quarter, the WWSS HR team will, in cooperation with the LWG, assess the available space for a training facility at Sohag WWC, and propose a plan for its development. Using our procurement fund, we will furnish and equip the facility, collect and provide training materials, and provide technical assistance to facility staff on planning and managing training programs.

Co-leads. Ms. Madiha Afifi (WWSS), and Ms. Wafa Yousef (HCWW)

D. Project Development and Coordination Activities

Activity PDC 1. Plan and manage field trips and trip reporting (ongoing). The system and approach for field work remains unchanged from Year 2. Travel will take place from Sunday through Tuesday each week, and all staff will be expected in the office on Wednesdays and Thursdays for meetings, report preparation and administrative chores. We will share our field trip schedules with HCWW and USAID and, as noted elsewhere, partner participation in field work will be encouraged to the maximum extent possible.

Tasks. Led by the Deputy Chief of Party, our subsidiary-specific teams will prepare a monthly travel schedule, which we will communicate also to the relevant subsidiaries and post on our website (www.egyptwwss.org). Additionally, in the monthly JWG meetings, we will include a standing agenda item for field work review and travel planning. Upon completion of each trip, each technical team member will submit a brief trip report, using a standard project format, along with his administrative paperwork.

Co-leads: Regional Team Leaders (WWSS)

Activity PDC 2. Monitor, evaluate, and report project progress (ongoing). M&E activities allow us to assess the effectiveness of our interventions and their impact on capacity building and service delivery. They help us steer the program through informed management decisions, and satisfy contractual requirements. Our WWSS performance monitoring plan (PMP) includes annual qualitative assessments of each targeted subsidiary, as well as a set of quantitative indicators to monitor project activities and results.

Tasks. Under the guidance of the Director of Program Development and Coordination, our technical staff will collect quarterly quantitative data for the indicators related to their respective activities. During the last quarter of the plan year, we will replicate the annual subsidiary assessment to evaluate results and

impacts of our work within each company. Data and analysis, along with other findings and recommendations will be included in our reports to USAID and, as appropriate, in monthly reports to HCWW leadership.

Co-leads: Ms. Kathleen Sheridan (WWSS) and Ms. Ghada Osman (HCWW)

Activity PDC 3. Plan, organize, monitor, and report training events (ongoing). The WWSS HR Team serves as the Program’s clearinghouse for training activities, providing assistance to technical team members in designing, planning, organizing, monitoring, and evaluating training events. To do this, we will continue to use the tracking and evaluation tools developed in Year 1, and will prepare quarterly plans and reports of training events. The HR team will also, to the maximum extent possible, collaborate with technical team members to ensure that each event is followed up with on-the-job training or technical assistance.

Tasks. Based on our approved work plan, the Senior HRM/D Advisor will prepare a detailed quarterly training plan outlining courses, dates, locations, participant numbers, and required resources for each course. On a quarterly basis, this plan will be discussed and agreed upon with both USAID and the HCWW. For each training event, HR team members will provide quality control over course materials, using standardized templates. They will also assist in organizing training events, and provide standardized project forms for attendance and course evaluations. Training coordinator M. Kassem will maintain the training event tracking system, and develop quarterly summaries of training events and participants. Short-term training consultant G. George, under the guidance of the HRD/M Advisor, will input data into USAID’s Train-Net system.

Lead: Ms. Madiha Afifi (WWSS)

ANNEX A – WWSS ACTIVITIES TO DATE BY GOVERNORATE

WWSS Activities	HCWW Regional Subsidiaries											
	Assiut	Aswan	Beni Suef	Cairo	Daqahliya	Giza	Luxor	Matrouh	Menufiya	Minya	Qena	Sohag
Business Planning	X	X				X	X	X	X		X	X
Human Resources Management/Development												
HR Plan Development	X	X	X	X		X	X	X	X	X	X	X
Staffing Plan	X					X			X			
ADVAC HR	X					X	X	X				X
Development of Utility Organizational Chart	X											
Capital Investment Planning and Program Management												
PMU Assistance	X					X	X	X	X			X
PRISM OJT and Training	X	X	X	X	X	X	X	X	X	X	X	X
Hydraulic Training	X					X	X	X	X			X
Asset Management									X			X
TA in Project Prioritization Systems	X							X	X		X	X
TA Preparing Conditions of Contract	X										X	X
TA on Using Construction Indicators	X		X		X	X	X	X		X	X	X
TA on Dispute Resolution	X		X		X	X	X	X		X	X	X
TA on Maximizing Use of the Master Plan	X		X		X	X	X	X	X	X	X	X
TA on Prequalification of Consultants and Contractors											X	
Project Chartering and Contracting Workshop	X	X	X	X	X	X	X	X	X	X	X	X
Construction Management Fundamentals Workshop	X	X	X	X	X	X	X	X	X	X	X	X
Planning and Scheduling Training	X		X		X	X	X	X	X		X	X
Financial Management												
Finance ADVAC	X					X	X	X				X
UAS Phase 1	X					X	X	X	X	X		X
UAS Phase 2	X								X			
Operations and Maintenance												
O&M Plan and Budget Development	X					X	X		X			X
Energy Use Rationalization	X	X	X			X		X	X	X		X
Chemical Use Optimization	X					X			X	X		X
SOPs and Operating Instructions	X									X		
UFW	X	X					X					X
CMMS	X		X			X		X		X		X
MARS	X	X	X	X	X	X	X	X	X	X	X	X
Introcution to ArcGIS	X					X	X		X			X
Training in Laboratory Phytoplankton			X			X				X		X
TA in Developing Laboratory Standard Operating Procedures (SOPs)			X							X		X

ANNEX B – ANNUAL ASSESSMENT RESULTS SUMMARY

The annual subsidiary assessment, conducted in late August, 2010, was intended to evaluate 1) application of WWSS-provided tools, training, and technical assistance, and 2) results of such application within the water utilities. Additionally, we utilized the information from the assessment to inform our work plan and collect input for project reports and communications, as outlined in our program performance monitoring plan. The assessment was unique to each company, based on needs assessments and subsidiary-specific work plans. For every system, tool, or training provided by WWSS, we inquired whether the tool/skills are used, how they are being used, and what impact they are having on the subsidiary. What follows is a summary of assessment results by activity area (Section I), and by company (Section II).

I – Summary by Activity Area

Positive	Negative	Noteworthy
Business Planning		
<ul style="list-style-type: none"> 8 of 8 companies with draft business plans find the strategic framework of the plan useful In 7 of 8 companies, more than 50% of the business plan programs have been initiated Business planning enjoyed wide participation across each company, with 7 of 8 citing that “all sectors (divisions)” were involved in its development 	<ul style="list-style-type: none"> Only 2 companies have established business planning units The extent to which plans are being implemented is unclear. While most have initiated some programs, they did not respond much to questions about progress against quantitative targets or team members’ roles in program implementation 	<ul style="list-style-type: none"> Matrouh Chairman issued a decree to form a team to develop the next business plan and monitor its implementation
Human Resources Management and Development		
<ul style="list-style-type: none"> 7 companies have completed HRD/M plans, and 4 more are underway 10 of 11 have implemented some part of the plan 9 companies have developed HR Division org structures, functional and job descriptions Most staff trained on ADVAC are still in their positions, and in 3 of 5 companies, they have trained others In 5 of 5 companies, the HR teams are updating ADVAC HR and generating reports for the Chairmen on at least a monthly basis 	<ul style="list-style-type: none"> Only 3 HR plans have been approved by the company chairmen Sohag is not yet generating reports from ADVAC, as they have only completed Phase I of the activity The needs of the companies are still great in this area. Most frequently cited needs were: performance appraisal/incentive systems, and completion of the ADVAC integration 	<ul style="list-style-type: none"> 6 companies’ HR divisions reported developing an organizational chart for the company (5 without WWSS assistance) Cairo Water Company has implemented the organizational structure developed in cooperation with the project, with few exceptions Giza’s staffing plan, developed with WWSS assistance, has been approved by the Chairman and they have initiated its implementation by hiring new staff and reallocating existing staff

Capital Investment Planning and Program Management		
<ul style="list-style-type: none"> 6 of 6 companies reported that PMUs have been established All companies reporting monthly updates of PRISM data and generation of reports All companies receiving WWSS assistance in project prioritization report application of the skills gained and benefit to the company, mostly (in 4 of 6 cases) for prioritizing R&R projects 3 of 3 companies reported that project assistance in drafting conditions of contract was useful, and was applied in management of R&R projects With the exception of Beni Suef, all companies reported that project assistance in "utilization of the Master Plan" was helpful and improved company operations Project Chartering and Construction Management Fundamentals workshops were reported as useful across the board, with a number of examples of practical applications of knowledge gained 	<ul style="list-style-type: none"> There has been considerable turnover (approaching 50%) among PRISM trainees, but updates are on track with all companies reporting monthly updates and reports In 2 of 6 companies (Luxor and Sohag) receiving hydraulics training, they do not have the hardware or software to apply the training (maps, computers, software) Companies receiving assistance on the standard documents (pre-qualification of contractors, use of indicators, dispute resolution, etc) reported that they were useful but didn't report many examples of how they were used. Assiut and Luxor do not have the computers on which to apply the Planning and Scheduling (MS Project) training 	<ul style="list-style-type: none"> Matrouh's team applied the hydraulic analysis training on the Marina network to identify problems, propose improvements, which were approved and implemented Giza WWC used the hydraulic analysis program to assess R&R needs in Bashteil Beni Suef and Matrouh report use of MS project in their work, on the Sads-Bba sanitation and "garage" projects, respectively
Financial Management		
<ul style="list-style-type: none"> 5 of 5 companies report thorough implementation of ADVAC Finance, daily updates of data, low/no staff turnover, training of others on the system All WWSS-trained companies are using the Unified Accounting System 	<ul style="list-style-type: none"> Only 2 of 5 companies supported with ADVAC are presenting financial statements to the Company leadership 	<ul style="list-style-type: none"> 4 of 6 companies surveyed specifically requested the ADVAC inventory module
Operations and Maintenance		
<ul style="list-style-type: none"> 3 of 5 companies reported use of the O&M planning and budgeting tools for corporate budgeting exercises 4 of 7 trained companies/plants improved their power factor after the training using a panel 8 of 8 treatment plants report sustained use of adjusted doses of alum and/or chlorine after the WWSS-supported study, and 5 report observing a reduction in costs 4 of 8 companies have replicated the chemical optimization activities in additional plants since the WWSS-supported study 5 of 5 companies receiving GIS training reported use of the skills in their work 4 of 4 companies receiving laboratory training report using it in their work 	<ul style="list-style-type: none"> Only 2 of 5 companies reported full completion of the O&M plan and budget, and others cited difficulties in data collection as reason for not completing it While the majority of those trained in energy rationalization are still in their positions, none of them has trained anyone else The SOPs in Kedwan, Minya, are still in draft form only and are not utilized by the plant staff Assiut is not using the CMMS, though they have received training and the computers are available The Aswan WWC has not updated data in MARS in more than 1 year 	<ul style="list-style-type: none"> Beni Suef and Aswan have replicated the energy use rationalization activities in additional plants since the WWSS pilot, and Assiut is planning to purchase power factor correction panels for replication The SOPs in Nazlet Abdillah, Assiut are present, are utilized, and accurately reflect the work of the plant. Further, they reportedly caused a reduction in the losses of produced water by 18% The CMMS is installed and in use at 5 companies. 3 are still in the data entry phase and 2 are already using it to generate work orders

II – Observations by Company

The below summaries are intended to illuminate the assessment results by company. The material is redundant to some extent with the summary table above. It aims to provide a complete picture of WWSS results to date, and to give the reader an overall view of the ongoing cooperation between our project and the targeted subsidiaries.

Assiut Water and Wastewater Company. The Assiut WWC has received a robust package of WWSS assistance due to its status as a newly established company. Results have been largely positive, though staff capacity remains a challenge and has affected the results of some activities.

- *Business planning.* The company completed its draft business plan and has initiated a number of the programs therein. While all divisions were involved in developing the plan, more support is needed to ensure buy-in to carry this activity forward.
- *Human resources management and development.* The company's HR division completed all three phases of ADVAC/HR training, and they are updating the system and generating reports for company leadership on a monthly basis. Additionally, a restructured company organizational chart, developed with WWSS support, has been sent to the HCWW for review and approval, suggesting buy-in among company leadership. The HR division has completed its HR plan with WWSS support, including HR division org structure, job descriptions, and functions, but its implementation has suffered from staff turnover.
- *Financial management.* ADVAC software and training has been very successful – the system is fully functional and updated on a daily basis.
- *Capital investment planning and program management.* A PMU has been established. They are updating PRiSM on a regular basis and providing monthly reports to company leadership. We provided the PMU with technical assistance and on-the-job training in contracting, and they reported using the skills on the Berka wastewater project and that the tools helped minimize problems with contractors. However, some additional tools provided by the project (MS Project, WaterCAD, contracting documents, prioritization tool) are not fully applied and require additional training and follow-up.
- *Operations and maintenance.* After the WWSS-provided energy use rationalization study and training, the Nazlet Abdillah plant adjusted their power factor using a corrective panel. They continue to monitor and adjust their energy use and anticipate savings at year's end. The chemical use optimization activity, also at Nazlet Abdillah, resulted in a reduction in the alum dose and associated savings in chemical costs, and the Company is replicating the activity in additional plants. The standard operating procedures (SOPs) developed are available in the plant and are utilized by shift supervisors and technicians. In cooperation with the Dutch project in Fayoum, we have installed MASTER CMMS in the Nazlet Abdullah plant, but the plant staff are not yet using it – we will provide further training and follow-up in Year 3. We will also continue the UFW program initiated in Year 2, which is progressing well. Finally, we made considerable progress on the O&M plan and budget in Assiut, but since the plan is not utilized at the local or central levels, we will adjust our approach moving forward, in consultation with the HCWW.

Aswan Water and Wastewater Company. WWSS assistance in Aswan has focused on O&M and company-wide business and HR planning. We found the company staff to be very cooperative, eager for assistance, and responsive to WWSS interventions.

- *Business planning and HR management and development.* The Aswan business planning process, initiated in June of 2010 is progressing well and enjoying participation from across the company. The HR division has also made significant progress on their HR plan, and has initiated its implementation through various activities including the development of an organizational chart for the company, installation of ADVAC/HR, and development of their training center, among other things.

- *Capital investment planning and program management.* The PMU in Aswan is established and, despite a 50% turnover rate, is updating PRiSM on a regular basis and generating reports. Aswan PMU members attended two WWSS workshops, on Project Chartering and Construction Management Fundamentals, and report use of the knowledge gained in their project planning efforts.
- *Operations and maintenance.* The chemical use optimization activity in Aswan was very well-received. The plant staff reports a significant reduction in the amount of chlorine used and in the cost of treatment. This has reportedly resulted in replication of the activity in all plants in Aswan. The energy use rationalization activity was also very successful; they continue to monitor their power factor (and electricity bills) and report replication of the activity in eight additional plants. They have faced significant IT-related problems with the MARS system, which we will address in the next release of MARS (in Program Year 3). GIS training, on the other hand, has been well received and utilized.

Beni Suef Water and Wastewater Company. The Beni Suef Company has a history of USAID assistance, and WWSS assistance aimed to strengthen capacity and to preserve USAID investments. The assessment revealed that the company is applying WWSS tools and remains a very cooperative partner.

- *Human resource development and management.* The HR division at the Beni Suef company was among the first to complete their HR plan with WWSS assistance, and they've taken a number of steps to implement it including: development of a company organizational chart, updating their five-year staffing plans based on retirement data, and development of training plans linked to career paths, among other things.
- *Capital investment planning and program management.* The planning sector is utilizing PRiSM, updating the system and generating reports on a monthly basis. They have applied WWSS advice on the use of indicators to monitor construction, as well as the knowledge gained from WWSS workshops in Project Chartering and Construction Management Fundamentals. They also received training in the use of MS Project for project planning and scheduling, and are currently applying the new skills on two projects. However, they did not find the assistance on using the master plan as helpful and have not been able to utilize it in their day-to-day activities.
- *Operations and maintenance.* The assistance to the Beni Suef central laboratory was well-received, and the trainees report an improvement in their sampling and measurement practices. However, they do not have the required chemicals to continue/apply all WWSS-advised practices. The energy use rationalization demonstration activity at the main Beni Suef treatment plant generated positive results. The WWSS consultant helped them fix their defunct power factor correction panel, and they continue to use it to monitor their power factor (and electricity bills). They are planning a large-scale roll out of the activity in all plants, at a rate of 10 per month. The chemical use optimization activity also increased efficiency by reducing the dosage (and cost) of both alum and chlorine, and the company has replicated the activity in the Sheikh Abed direct filtering plant. The computerized maintenance management system has encountered some difficulty due to system bugs and requires more WWSS (or FaDWaSP) support to be reactivated.

Cairo Water Company. WWSS assistance to the Cairo Water Company, as outlined in our Year 2 work plan, was confined to cross-cutting activities and responses to ad hoc requests from the Chairman. While we faced some difficulty moving HR assistance forward in Year 2, the assessment revealed considerable interest in this area on the part of the Chairman (he ranked it as his top priority), so we will ramp up this effort in Year 3.

- *Human resources management and development.* The HR division staff participated in WWSS workshops, initiated their HR plan, and submitted their division organizational design to the HCWW for review. The HR planning process will continue next year, along with a staffing planning exercise. Additionally, the company organizational chart developed with WWSS support has been implemented, with only minor changes to the structure of the Finance division.

- *MARS and PRiSM.* Both systems are functioning well at the company, including frequent updates and reports from the respective teams.

Giza Water and Wastewater Company. Since the Giza company is fairly new (separated from the Cairo Water Company and established in late 2007), they were eligible for a comprehensive package of WWSS assistance. Progress is positive, though long-term dedication to some activities remains uncertain.

- *Business planning.* The Giza WWC was among the first to complete its business plan, and all divisions of the company were involved in its development. They have also been diligent in implementing the many programs from the business plan, with strong support from company leadership.
- *Human resources management and development.* The HR division has completed its HR plan with WWSS support, and submitted it to company and HCWW leadership. Sector buy-in to implement the plan, however, remains tentative. Working with a WWSS short-term consultant, they also completed a staffing plan and have initiated its implementation by hiring new employees to fill vacancies. The company's HR division completed all three phases of ADVAC/HR training, and they are updating the system and generating reports for company leadership on a monthly basis.
- *Financial management.* ADVAC/Finance is up and running in the Giza WWC, with daily updates by the financial management team and regular reports and statements. They also use the manual Unified Accounting System in parallel, and requested additional assistance reconciling the accounts in ADVAC with those in UAS.
- *Capital investment planning and program management.* A PMU has been established, and they are updating PRiSM on a regular basis and providing monthly reports to company leadership. While the training and software provided for hydraulic modeling is in use, the MS Project software for planning and scheduling has not been used and needs additional follow-up. The company staff also reported favorably on the technical assistance provided in master plan utilization, and in project/program management topics such as dispute resolution, project chartering and contracting, and fundamentals of construction management.
- *Operations and maintenance.* The company completed its O&M plan and budget, but they have not been able to use it in company-wide budgeting exercises. At the plant level, the chemical use optimization activity resulted in a reduction in the amount of alum used. They have not, however, analyzed the cost savings or replicated the activity in additional plants. The Gezirat Il-Dahab plant staff, after a series of WWSS on-the-job training sessions, are using the MASTER computerized maintenance management system to plan and manage maintenance tasks. They also found the energy use rationalization activity useful, but they have been unable to sustain it without power factor analyzers and corrective panels (which will be provided by WWSS early in Year 3). Project assistance with MARS and GIS is also applied, and both technologies are functioning well at the company. Finally, plant staff report application of the knowledge gained through WWSS laboratory training, but requested additional chemicals so they could continue such work.

Luxor Water and Wastewater Company. The Luxor company has received a broad range of WWSS assistance, and we have seen very promising results there, in UFW work in particular. However, follow up on some initiatives is lacking and requires additional attention from WWSS and HCWW.

- *Business planning.* The Luxor WWC completed its draft business plan, with wide participation from across the company, and they have initiated the majority of the programs therein.
- *Human resources management and development.* The HR division has initiated development of its HR plan, but has not completed it or shared it with company leadership or the HCWW. However, they are implementing pieces of the plan related to HR information systems and training plan development. The ADVAC/HR trainees are performing well, training others, and updating the system on a regular basis.

- *Financial management.* ADVAC/Finance is up and running at the Luxor WWC, with all WWSS trainees still in their positions and making daily updates and regular reports and statements to the Board of Directors.
- *Capital investment planning and program management.* A PMU has been established with WWSS support. The unit is updating PRiSM on a regular basis and providing monthly reports to the Chairman of the Board. WWSS trainees in project prioritization report that it has helped to clarify a vision for the company's upcoming R&R projects. Additionally, trainees in construction management report using the skills on actual projects since the training course. On the other hand, the WWSS investments in WaterCAD and MS Project software are apparently not in use due to the lack of dedicated hardware.
- *Operations and maintenance.* The hallmark WWSS O&M intervention in Luxor was the UFW pilot program, which was reported by the company as useful, citing the 32% reduction in leaks. They report difficulty sustaining the program due to personnel and budget constraints, but have managed to replicate some of the activities (such as GIS mapping and leak detection) and are planning to expand the program beyond the pilot area. On a related note, the WWSS GIS trainees are regularly using the software and report passing along their skills to others via on-the-job training. Additionally, the company made considerable progress on the O&M plan and budget, but did not complete it due to time and workload constraints. However, they report that it has been useful in company-wide budgeting exercises.

Matrouh Water and Wastewater Company.

- *Business planning.* The Matrouh Company has nearly completed its business plan, and buy-in has been strong across the company throughout the process. The Chairman recently approved the strategic vision, mission, values, and goals, and issued a decree to form a committee to continue updating and monitoring the planning and implementation process.
- *Human resources management and development.* The company's HR division has developed its division structure and job descriptions, and submitted them to the Chairman and the HCWW for approval. They have also drafted their HR plan and implemented a number of its activities including the development of a company organizational chart and a training plan. They have also completed all three phases of ADVAC/HR installation, are regularly updating the data, and utilized it for payroll for two consecutive months.
- *Financial management.* The WWC has completed all three phases of WWSS ADVAC/Finance support, and our trainees report training others on the system. The financial management division updates the system on a weekly, if not daily, basis and is generating financial statements.
- *Capital investment planning and program management.* The planning sector is utilizing PRiSM, updating the system and generating reports on a monthly basis. After WWSS-provided Water CAD training, the trained engineers utilized their skills to conduct hydraulic analysis for the Marina water network. This enabled them to identify problem areas in the network, and propose solutions to the HCWW, which were approved and implemented. Additionally, the WWSS trainees in MS Project, despite having only one computer, report using it on the "garage" project and noticing improved efficiency in the construction process. Finally, the planning unit also reported positively on other WWSS interventions, including: the project prioritization tool, and TA/guidance on dispute resolution, master planning, project contracting, and construction management. They have not yet had the occasion to apply much of the knowledge and skills.
- *Operations and maintenance.* We have seen positive results from the chemical optimization activity – the trainees have trained others and consistently used reduced doses of alum since the study. The lessons learned from the energy use study, on the other hand, have not yet been applied because they lack the power factor correction panels to adjust their power factor (we will provide this equipment in Year 3, along with a training of trainers course). The MASTER CMMS system is still in the data collection and entry stage, which is progressing well.

Menufiya Water and Wastewater Company.

- *Business planning.* The Menufiya Company has completed its draft business plan and established a business planning unit, a key sign of management buy-in.
- *Human resources management and development.* The company's HR division enjoys strong support from the company leadership, and this shows in the results of WWSS activities. The HR staff have developed an HR plan, which has been approved by the Chairman, along with their division structure and job descriptions. The staffing planning exercise in Menufiya, requested by the Chairman, is progressing well and is the basis for the new WWSS approach to staffing planning.
- *Financial management.* The WWC has completed all three phases of WWSS ADVAC/Finance support, and financial management division staff is updating the system regularly and generating financial statements.
- *Capital investment planning and program management.* PRiSM is fully activated and regularly updated, and a PMU has been established. In some cases (for example, the project prioritization tool, MS Project, Water CAD, and guidance on developing conditions of contract), the WWSS-provided tools have been utilized on actual contracts or projects. For example, Water CAD was cited as useful in solving actual technical problems in sites such as Kafr Mit El-Abs and Abu Nashaba, among others.
- *Operations and maintenance.* The chemical optimization activity at the New Shebeen El-Kom water treatment plant generated positive results – the trainees have trained others, have consistently used the reduced dosages recommended by the study, and report savings on chemical purchases. The lessons learned from the energy use study, on the other hand, have not yet been applied because they lack the power factor correction panels to adjust their power factor (we will provide this equipment in Year 3, along with a training of trainers course). Further, the GIS training was a success; all trainees are still in their positions, they report training others, and they use the system on a daily basis.

Minya Water and Wastewater Company. As a well-established and relatively high-performing company, and a recipient of USAID assistance in the past through the Middle Egypt project, the Minya company was identified as a testing ground for a number of WWSS pilot programs. Results have been positive, though company buy-in on some initiatives remains tentative.

- *HRM/D and financial management.* The company's HR division completed their HR plan with WWSS support, but it has not been approved by the Chairman or submitted to the HCWW. Additionally, the Minya Company's Finance Division staff participated in WWSS training on the Unified Accounting System, which is utilized at the company.
- *Capital investment planning and program management.* Despite significant turnover in the Planning Division, PRiSM is updated on a regular basis and reports are used to monitor projects. Additionally, project guidance on contracting has reportedly contributed to fewer conflicts with contractors.
- *Operations and maintenance.* The chemical use optimization activity showed positive results in the Kedwan water treatment plant – they reduced the alum dose, continue to monitor it, and have enjoyed savings on chemical costs. The energy use rationalization activity was not as successful in Kedwan. Though the power factor was adjusted after the project-supported study, the corrective panel has repeatedly broken down due to a lack of ventilation, despite multiple project attempts to fix it and/or encourage the purchase of a fan. The MASTER CMMS was also installed in Kedwan, and progress in the initial data collection stage is slower than expected and requires continuous follow-up. On a more positive note, the MASTER CMMS system at the Abu Korkas and El Saiyda plants is progressing well – plant staff have nearly completed all data entry and anticipate use of the program for maintenance beginning in October. Additionally, the standard operating procedures developed for the Kedwan plant are being delivered in late September, with two additional plants to follow (University plant and El-Hawatka plant).

Qena Water and Wastewater Company. The Qena WWC has a full-time dedicated GTZ team of consultants, working on both technical and managerial capacity building with company staff. Because of this, our activities there have been limited and were designed to complement GTZ efforts.

- *Business planning.* The Qena WWC business planning process has been among the most successful. All sectors of the company contributed to the plan, and they are attentively implementing nearly all of its programs. Further, the Chairman has established a business planning unit to sustain the activity into the future.
- *Human resources management and development.* The company's HR division completed their HR plan with WWSS support, but it has not been approved by the Chairman or submitted to the HCWW – key signs of management buy-in.
- *Capital investment planning and program management.* PRiSM is fully activated and regularly updated at the Qena WWC. Additionally, they report application of WWSS guidance on project prioritization in planning their R&R projects.

Sohag Water and Wastewater Company. As a new company, Sohag has received the complete package of WWSS assistance, and has proven to be a receptive partner across the board for WWSS interventions.

- *Business planning.* With WWSS support, the company completed its draft business plan, with strong involvement with all divisions of the company, and initiated more than half of the plan's programs.
- *Human resources management and development.* The company's HR unit has drafted its HR plan with WWSS support, including HR division org structure, job descriptions, functions, etc. They have also completed two of three phases of ADVAC/HR installation and are regularly updating the HR/personnel data in the system.
- *Financial management.* The WWC has completed all three phases of WWSS ADVAC/Finance support. The financial management division updates the system on a weekly, if not daily, basis and is generating financial statements.
- *Capital investment planning and program management.* PRiSM is fully activated and regularly updated, and a PMU has been established. In some cases (for example, the project prioritization tool and the guidelines on conditions of contract), the WWSS-provided tools have been utilized on actual contracts or projects. Other tools, such as MS Project and WaterCAD, are not yet fully utilized due to lack of equipment and/or dedicated staff.
- *Operations and maintenance.* We have seen positive results from the chemical optimization activity – the trainees have trained others and replicated in other plants. Plant staff has consistently used reduced doses of alum since the study, and report savings on their chemical purchases. The MASTER CMMS system is installed and functioning in the Cola station, is reported as useful for scheduling maintenance tasks, and is being rolled out by the Company staff. The WWC completed their O&M plan and budget and have utilized it in company budgeting exercises. The company has not fully benefitted from the energy rationalization study in the Needa water treatment plant because they lack the power factor correction panels to adjust their power factor – the WWSS team will provide this equipment in Year 3, along with a training of trainers course.

ANNEX C – REMAINING TASKS FROM YEAR 2 WORK PLAN

Task #	Task Title	Explanation
HC 2, HC 7	Assist in the development of a business plan and position descriptions for the HCWW	As GTZ has taken on both of these tasks last year, we will not include it in our Year 3 work plan. We remain ready to assist should GTZ and/or the HCWW request assistance in the future.
CC 1, Beyond Y2WP 1	Facilitate business planning in WWSS subsidiaries	The Matrouh business plan will be completed by the end of October, the last month of Year 2. Exceeding work plan targets, the Minya and Beni Suef business plans were also initiated in Year 2, and will be complete by the end of November, 2010.
CC 6	Develop communications guide for subsidiaries	The guide will be completed by the end of October, the last month of Year 2. The roll-out of the guide through workshops will take place in Year 3.
CC 7	Upgrade/reengineer MARS	While the WWSS team continued to provide day-to-day support to the subsidiaries on the MARS system, the wholesale upgrade was delayed and will be completed by May, 2011. We agreed upon interim upgrades with HCWW, which will be completed by November, 2011.
CC 9	Conduct a field visit to Alexandria Water Company's lab	As GTZ is conducting intensive training of lab technicians across the country, this activity was considered redundant.
CC 10	Conduct network management workshops	This activity has been incorporated into other project training activities, including water leak detection programs (Year 2 and 3), and forthcoming training-of-trainers (Year 3).
CC 11	Develop financial and cost accounting manuals	After an external review, these manuals have been re-designed and will be completed in the first quarter of Year 3.
CC 15	Develop capital investment planning and budgeting manual	Publication of this manual has been delayed, and it will be completed and published in Year 3.
SOH 3, AST 3, LUX 3, GIZ 2	Develop staffing plans	In Year 2, we completed the Giza staffing plan, and initiated plans using a more participatory approach in Assiut and Menufiya. The Sohag staffing plan will be developed in Year 3. The Luxor company updated their staffing plan as part of the business planning process, so we will not proceed with it as a stand-alone activity.
SOH 7, AST 10	Develop O&M plans and budgets	The Y2WP planned this activity for Sohag and Assiut, and to date we have completed the plans/budgets for Sohag, Giza, and Menufiya. The activities in Luxor and Assiut will not continue in Year 3, as we have learned, despite the accuracy and potential uses of the document, they are not being utilized in the field. A WWSS – HCWW group is examining alternative approaches to budgeting (including O&M budgeting) and is expected to agree upon an alternative system in late 2011.
MIN 4, AST 11	Develop SOPs for 4 water and wastewater treatment plants (2 in Minya, 2 in Assiut)	Using the JICA-developed SOPs as a model, we completed development of SOPs for five water treatment plants (three in Assiut, two in Minya), exceeding work plan targets. In the process, we learned that the laminated, multi-page, poster-size “operating instructions” are more practical for plant managers and operators than SOPs. Accordingly, we will continue in Year 3 with development of such instructions for water and wastewater plants.

AST 7, GIZ 6, MEN 6	Establish meter repair workshops	This activity was confined to those governorates receiving assistance in UFW. We will complete this activity in Assiut in Year 3, and may consider it in Giza and Menufiya in the context of future UFW activities.
SOH 6, AST 8	Establish billing/customer service centers in Sohag and Assiut	These activities will continue in Year 3 as part of ongoing UFW programs in Sohag and Assiut.
SOH 5, AST 6, MEN 5, BEN 2, MIN 2, CAI 1	Assist subsidiaries with inventory and warehouse management	This activity was suspended in Year 2 to await the development of the ADVAC inventory management module, currently being tested in Cairo Water Company. Once completed, we will consider it in Year 3 for those companies receiving WWSS ADVAC support.
Beyond Y2WP 4	UFW program expansion in Sohag, Assiut, Aswan	These replication activities were expansions beyond the work plan task (LUX 1), and will be completed in November, 2010.
Beyond Y2WP 5	MASTER CMMS roll-out and continued support	This will be an ongoing activity in Year 3. In Year 2, we initiated roll-out in six governorates, which we will continue to support in Year 3, while also supporting additional treatment plants.
Beyond Y2WP 8	Chemical optimization in Qena and Luxor	Qena and Luxor are the 9 th and 10 th subsidiaries to implement this activity, which exceeds our Y2WP target of two. This activity will be completed in October, the last month of Year 2.
Beyond Y2WP 10	Develop standard documents for O&M and indefinite quantity contracting	This activity, added to Year 2 activities in quarter 3, has been completed, and the documents will be rolled out to the HCWW and subsidiaries through a workshop in the first quarter of Year 3.
PDC 5	Finalize procurement list and distribute equipment	The procurement plan was finalized and all equipment was purchased in Year 2. Distribution of equipment was delayed to make sure that subsidiaries were ready to receive it and that agreed-upon pre-conditions were met. All equipment purchased to date will be distributed by the end of October, the last month of the work plan year, including a server for Assiut's billing and collection system. The remaining procurement budget will be utilized as needs arise in the future.

ANNEX D – WORK PLAN TIMELINE

Tasks and Sub-tasks	Responsibilities		1	2	3	4	5	6	7	8	9	10	11	12	Resources: Short-term technical assistance, subcontractors, donor coordination
	WWSS	Counterpart	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Component A: Assistance to the Holding Company for Water and Wastewater															
Activity HC 1 – Facilitate monthly gatherings of a joint working group	Eng. Mohamed Hashem	TBD													
Task HC 1.1 – Secure nominations to the JWG from the HCWW															
Task HC 1.2 – Send meeting agenda (with trip schedule) on a monthly basis															
Task HC 1.3 – Hold meeting and circulate meeting minutes as reporting tool															
Activity HC 2 – Develop and pilot materials for the operator certification training program	Eng. Mohamed Hashem	TBD													STTA for curriculum outlines, course development, and expert review
Task HC 2.0 – Present the program to the HCWW and assign counterparts															
Task HC 2.1.1 – Prepare curriculum outline for Water Treatment															
Task HC 2.1.2 – Identify and hire ST course developer for Water, Level D															
Task HC 2.1.3 – Develop Water, Level D materials, including trainer guide, trainee guide, and visual aids															
Task HC 2.1.4 – Submit draft Water, Level D materials to reviewers (HCWW, Board of Certification, WPRR)															
Task HC 2.1.5 – Collect feedback on drafts, using a "walk-through" approach															
Task HC 2.1.6 – Amend Water, Level D materials based on feedback															
Task HC 2.1.7 – Pilot Water, Level D class with pilot trainees															
Task HC 2.1.8 – Amend Water, Level D materials based on trainees' feedback															
Task HC 2.1.9 – Hand over final Water, Level D materials to HCWW															
Task HC 2.2.1 – Prepare curriculum outline for Wastewater Treatment															
Task HC 2.2.2 – Identify and hire ST course developer for Wastewater, Level D															
Task HC 2.2.3 – Develop Wastewater, Level D materials, including trainer guide, trainee guide, and visual aids															
Task HC 2.2.4 – Submit draft Wastewater, Level D materials to reviewers (HCWW, Board of Certification, WPRR)															
Task HC 2.2.5 – Collect feedback on drafts, using a "walk-through" approach															
Task HC 2.2.6 – Amend Wastewater, Level D materials based on feedback															
Task HC 2.2.7 – Pilot Wastewater, Level D class with pilot trainees															
Task HC 2.2.8 – Amend Water, Level D materials based on trainees' feedback															
Task HC 2.2.9 – Hand over final Wastewater, Level D materials to HCWW															
Task HC 2.3 – Prepare curriculum outlines for Water Lab Analysis and Wastewater Lab Analysis															
Task HC 2.4 – Identify and hire ST course developers for the 4 Level C courses															

9.1 - Trip 1: Conference	Task CC 9.1.1 – Secure participant nomination for conference attendance from HCWW																			
	Task CC 9.1.2 – Draft itinerary, finalize participant list, register for conference, and initiate participant paperwork																			
	Task CC 9.1.3 – Submit participant paperwork to Train-Net and VCS systems																			
	Task CC 9.1.4 – Implement trip and tour																			
	Task CC 9.1.5 – Facilitate re-entry workshop for participants																			
9.2 - Trip 2: OST	Task CC 9.2.1 – Secure participant nomination for study tour from HCWW																			
	Task CC 9.2.2 – Draft itinerary, finalize participant list, and initiate participant paperwork and program development																			
	Task CC 9.2.3 – Submit participant paperwork to Train-Net and VCS systems																			
	Task CC 9.2.4 – Implement trip and tour																			
	Task CC 9.2.5 – Facilitate re-entry workshop for participants																			
Component C: Subsidiary Specific Activities																				
Activity SS 1 - Activate joint local-level working groups (LWGs)		M. Afifi, A. Allam, G. Akari	NA																	
Task SS 1.1 – Subsidiary orientation																				
Task SS 1.2 – Establishment of local working groups																				
Task SS 1.3 – Review and update of business plans																				
Task SS 1.4 – Prioritization and selection of programs																				
Task SS 1.5 – Preparation of 2011 action plans																				
Task SS 1.6 – Monthly meetings for follow up and program monitoring																				
Task SS 1.7 – Presentation of quarterly reports to subsidiary boards																				
Activity SS 6 – Support financial systems automation		Mr. Mahmoud Bakr	Dr. Hisham Afifi																	
Task SS 6.1 – Continue on-site assistance and OJT																				
Task SS 6.2 – Produce and distribute administrator manual																				
Task SS 6.3 – Document workflows																				
Task SS 6.4 – Assist in fall 2010 closeout and reporting																				
Task SS 6.5 – Secure CAO approval for ADVAC adoption																				
Task SS 6.6 – Investigate ADVAC inventory module																				
Task SS 6.7 – Assist in the preparation of year-end financial statements																				

