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YEAR 2 WORK PLAN NOVEMBER 2009 – OCTOBER 2010

EGYPT WATER AND WASTEWATER SECTOR SUPPORT PROJECT

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ACRONYMS AND ABBREVIATIONS

AUC	American University in Cairo
BOO	Build-Own-Operate
BOT	Build-Own-Transfer
CAD	Computer-aided Design
CAPWO	Cairo and Alexandria Potable Water and Wastewater Organization
CDM	Camp, Dresser, & McKee International Inc.
COP	Chief of Party
DANIDA	Danish International Development Agency
DCOP	Deputy Chief of Party
DEC	Development Experience Clearinghouse
DSM	Demand-side Management
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 fur Technische Zusammenarbeit</i>
HCWW	Holding Company for Water and Wastewater
HRD	Human Resource Development
HRM/D	Human Resources Management/Development
HRMIS	Human Resources Management Information System
ISSIP	Integrated Sanitation and Sewerage Infrastructure Project
IT	Information Technology
JICA	Japan International Cooperation Agency
JWG	Joint Working Group
KfW	<i>Kreditanstalt fur Wiederaufbau</i>
MARS	Monitoring and Analysis Reporting System
MHUUD	Ministry of Housing, Utilities, and Urban Development
MIS	Management Information System
NSMP	National Strategic Master Plan
NOPWASD	National Organization for Potable Water and Sanitary Drainage
NPSEV	National Program for the Sanitation of Egyptian Villages
O&M	Operations and Maintenance
OC	Operating Company

OJT	On-the-job Training
PAU	Policy Advisory Unit
PD	Presidential Decree
PERT	Program Evaluation and Review Technique
PMP	Performance Monitoring Plan
PMU	Project Management Unit
PPP	Public-Private Partnership
PRA	Participatory Rapid Assessment
QA/QC	Quality Assurance/Quality Control
RFP	Request for Proposal
SCADA	Supervisory Control and Data Acquisition
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
WEFTEC	Water Environment Federation Technical Exhibition and Conference
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 2 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 November 1, 2009 through October 31, 2010. Below we present a brief overview of developments in the sector and ongoing donor activities, followed by a discussion of the WWSS Program and progress to date. In Section II, we present our detailed work plan, including a description of proposed activities for the coming year, timing, and resource allocations.

A. Background

A1. Water and Wastewater Sector Overview

The Holding Company for Water and Wastewater and its subsidiaries. Established pursuant to Public Law 203 of 1991 and Presidential Decree (PD) 135 of 2004, the Holding Company for Water and Wastewater (HCWW) owns 23 subsidiaries operating in 21 governorates. The assets of these companies were transferred from pre-existing local utilities and public economic authorities to HCWW pursuant to PD 249 of 2006. The number of operating companies is expected to expand potentially to 29 by year end 2009 to cover the entire country. The territorial coverage of the planned operating companies and the transfer of their assets are presently under consideration.

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. Although not directly involved in treatment, conveyance, and distribution, the Holding Company plays a key role in the operations of the subsidiaries, including: master planning; staff training in operations, maintenance, and water quality testing; invoicing system development; project planning and implementation; and other tasks normally handled at the subsidiary level. Some of these roles are viewed as temporary, in view of the relatively limited experience of the operating subsidiaries in autonomous self-management, and the dearth of qualified staff at the operational levels. HCWW expects these tasks to devolve over time to its subsidiaries in order to concentrate on the management of its portfolio of companies. Other important tasks for which unique expertise is found only centrally – matters of policy and compliance, and initiatives where the economies of scale make it more cost effective to manage at the central-level – are expected to remain within the realm of HCWW.

Typically, the responsibilities of a water and sanitation public utility holding company focus on managing its assets, ensuring quality services and efficiencies, and adequate returns to its shareholders commensurate with the investment risks. Issues of a strategic nature, such as infrastructure expansion and financing, launching new ventures, mergers, acquisitions, and disposal of property, are often concentrated at the headquarters level. Corporate-wide budgeting and financial management are also centralized. Legal, regulatory, environmental, and water quality matters at the operating subsidiary levels are often supplemented with similar functions at the holding company. In the Egyptian context, most of these activities are subsumed by HCWW, where various departments monitor and evaluate the performance of subsidiaries from the financial and service quality points of view, among others, and perform internal audits. Accountability of the subsidiaries consists of periodic reports, presentations to the HCWW and field visits/inspections by HCWW staff and executives. These reviews cover budgets and financial results, capital investment plans, major infrastructure initiatives, and performance against approved plans and other agreed upon objectives and service delivery benchmarks.

Issues and challenges facing the sector. The sector remains inhibited by persistently low tariffs, and severe organizational and staffing constraints on utility managers. With established tariffs, the most

efficient utilities have achieved operations and maintenance (O&M) cost recovery for water services, but continue to rely on central budget allocations for capital investment and rehabilitation.

The creation of the HCWW has provided local utilities with more autonomy in financial management and decision-making, including revenue retention for O&M and other operating expenses, along with more flexibility with staffing and incentive-based compensation. Although major construction is still centrally planned and managed by the Cairo and Alexandria Potable Water and Wastewater Organization (CAPWO) and the National Organization for Potable Water and Sanitary Drainage (NOPWASD), the “crash” capital investment program initiated in 2007 represented a shift toward locally planned and managed capital investment. The HCWW has begun to increase revenue from water, while avoiding the politically sensitive issue of domestic tariffs. Increases in tariffs for commercial and industrial customers and fees, such as Beheira’s IT service charge, where fees were assessed for IT services and training provided, have helped enhance revenue. Some subsidiaries are now charging high-consumption users higher tariffs for all their water, not just water that exceeds basic allocation “lifeline” limits.

The transition of water companies under the umbrella of HCWW has been fraught with difficulties. Prior to the establishment of the HCWW, water and wastewater utility services were run by various local administrative units which reported to governors and were not accountable for financial performance. The sector suffers from decades of under-investment and poor O&M. Newly constructed plants and networks are often of poor quality, and managers at the local level have little control over capital budget allocations and investment decisions. These critical constraints are compounded at the operational level by fundamental issues affecting sustainability: unaccounted-for water (UFW), asset management, cost recovery, and wastewater handling and disposal.

Regarding asset management, resources are not allocated rationally between O&M and capital improvements. Huge investments are made in new facilities, while existing plants and networks often deteriorate long before their design life, while some others are operated so poorly that their contribution is minimal. Although tariff levels are a significant issue for cost recovery, sustainability could be vastly improved with more appropriate allocation of current funding within the sector with consideration for life-cycle costs to operations, maintenance, rehabilitation, and new construction.

Developments in the sector. The Government of Egypt (GOE) has demonstrated considerable commitment to reforming the management of the water and wastewater sector. In addition to forming HCWW, the second key reform was the establishment of a regulatory agency, the Egyptian Water Regulatory Authority (EWRA) under PD 136 of 2004. The GOE is presently preparing a new water and sanitation sector law, which it expects to issue in late 2009 or early 2010.

In an effort to improve the capital investment planning process, HCWW is currently developing Master Plans for water and wastewater in each of the 26 governorates, which will be combined into a National Strategic Master Plan (NSMP) providing the basis for identifying investment priorities for the next 30 years. The NSMP will provide the HCWW with data required to identify, plan, and implement new investments to rehabilitate and expand infrastructure, and establish a sector-wide financing plan. The governorate-level master plans will address both urban and rural needs, with particular emphasis on rural sanitation. One of the first tests of this new approach is the National Program for the Sanitation of Egyptian Villages (NPSEV) – announced in September 2006 – which aims to increase coverage of rural sanitation services from 11 to 40 percent by investing LE20 billion over five years.

A2. Ongoing and Planned Donor Activities

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 and Sohag. USAID sector support covers: small water and wastewater

system improvements in rural areas; development of policies that improve the quality of water and wastewater services; institutional support to the Ministry of Housing, Utilities, and Urban Development (MHUUD), Egyptian Water Regulatory Authority (EWRA), and HCWW; private sector capital investments and innovative financing approaches; private sector participation in the operation and management of the water and wastewater systems; and provision of program management services to the MHUUD and HCWW required to carry out the GOE's water and wastewater capital investment program.

EU involvement in the sector. The European Union (EU) is providing €80 million in budgetary support to the Ministry of Water Resources and MHUUD to promote continued reform of the water sector through assistance in budgeting, strengthening the legal framework, promoting PPPs in water management, master planning, and supporting the subsidiaries in their transition to commercial enterprises. Additionally, the EU is currently providing assistance to EWRA in establishing the required organizational structure, regulatory systems, and management and human resources processes necessary to implement its regulatory functions.

Gesellschaft für Technische Zusammenarbeit (GTZ) Water and Wastewater Management Program (WWMP). GTZ's ongoing Water and Wastewater Management Program has four components: technical advisory services to the HCWW and its subsidiaries, technical assistance to Qena Water and Wastewater Company, support to decentralized wastewater management approaches, and the establishment of a Policy Advisory Unit (PAU). Their work to date with the HCWW has centered on human resource management and development and business planning, while additional sector-wide activities have targeted subsidiary-level master planning. Through these and other activities, they have developed a rich pool of training resources on a broad range of topics covering O&M, warehouse management, finance and accounting, master planning, and human resource management. In Qena, their on-site team is providing capacity building assistance in financial management, O&M management, and human resource management.

Water Supply and Sanitation Services in Qena Governorate. Also in Qena, *Kreditanstalt für Wiederaufbau (KfW)* is supporting infrastructure rehabilitation and related procurement in order to strengthen the performance of the company and improve cost recovery. GTZ provides the technical assistance under the auspices of this activity.

Integrated Water and Sanitation Program (IWSP). IWSP will provide €300 million in capital investment funds and €29 million in technical assistance grants to the subsidiaries in the primarily rural Delta governorates of Beheira, Damietta, Sharqiya, and Gharbiya to strengthen infrastructure planning, design, and construction. The goal of the program is to improve and expand water and wastewater services through institutional strengthening and construction of new physical assets. The funding will come from the GOE and four European donors in a mix of grants and loans. The project planning and implementation approach utilized in the four governorates under this program will serve as a model to be rolled out in other areas.

Fayoum Drinking Water and Sanitation Project (FaDWaSP), funded by the Royal Netherlands Embassy, aims to provide water and sanitation services to the population of the Fayoum Governorate through improving coverage, quality, O&M cost recovery, and management capabilities at the Fayoum Drinking Water and Sanitation Company. Activities toward these aims include the introduction of new systems, on-site technical assistance, and development and delivery of training.

Integrated Sanitation and Sewerage Infrastructure Project (ISSIP). The World Bank is providing limited policy support through studies and workshops on a range of issues, including Public-Private Partnerships (PPPs). The major World Bank-supported initiative is ISSIP, under which the Bank is providing 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. The GOE has committed an additional \$60 million as Phase I of

the National Program for the Sanitation of Egyptian Villages (NPSEV), which GTZ and the Netherlands are supporting through the subsidiary-level technical assistance described above.

B. WWSS Project Overview

WWSS provides technical services and related resources to the HCWW and selected subsidiaries to strengthen their capacity to deliver quality services in a cost effective fashion, and their capability to implement recent GOE initiatives to improve the operational performance of the sector. The project also aims to assist in the policy, legal, and regulatory processes to improve cost recovery and facilitate private-sector investments in the sector. Overall, the program has four key objectives:

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

The project builds upon the achievements of, and is implemented in close coordination with, other USAID- and donor-supported projects in the sector. In particular, WWSS works closely with the WPRR Project to coordinate efforts and avoid duplication of efforts.

As outlined in our original technical proposal, our strategy to achieve the above objectives is built on the following four pillars:

Business planning as a central management and accountability tool. The business plan is the defining relationship between the company, its markets/customers, its owners, and its financing sources. It represents a roadmap for investment and financial results, as well as a tool to monitor qualitative organizational changes that guide corporate activities. It is also a tool for periodic management accountability, which helps provide buy-in and commitment on behalf of management and staff. Building on the corporate planning process introduced under the Secondary Cities and Middle Egypt Utilities Institutional Strengthening Projects, and in cooperation with ongoing GTZ business planning assistance to HCWW, WWSS uses the business plan as the organizing framework for planning, focusing on performance improvement, raising service standards, and increasing revenues for O&M and infrastructure rehabilitation. The business plan also directs capital investment programs, based on priorities identified in the governorate-level master plans. The document, developed by the subsidiaries with assistance from WWSS, will clearly link performance objectives to financial targets, service quality improvements, and organizational changes sought by the company boards. Staff incentives will be contingent on successful implementation of the business plan and individual contributions as stipulated in staff performance evaluations, which we will develop in cooperation with HCWW and utility management.

Leveraging partners' expertise and the resources of other technical assistance providers. The most sustainable technical assistance will come from employees of the HCWW and its most advanced subsidiaries. In this spirit, rather than undertaking interventions independently, we look at WWSS, HCWW, and the operating subsidiaries as part of a unified team for improving utility performance. HCWW and its subsidiaries play an active role in the WWSS annual work planning process, and the project seeks HCWW staff to help implement tasks. This not only helps maximize the use of counterpart talents, it also serves as on the job training (OJT) and a model for future interaction between the HCWW and its subsidiaries, until subsidiaries rely less on central-level support.

Equally important is maximizing the benefit from work carried out by other bilateral and multilateral development institutions. As such, WWSS proactively coordinates with other donor-funded projects, particularly the GTZ-funded Water and Wastewater Management Program and the Dutch-funded

Fayoum Water and Sanitation Project in order to leverage their resources and avoid redundancies in technical assistance and training activities.

Elevating human resource development and organizational change to strategic levels. With few exceptions, most operating subsidiaries suffer from insufficient resources to attract and retain qualified staff. In view of this and the magnitude of capital investments in infrastructure, it is essential that operating subsidiaries start looking at human resource development (HRD) as an objective on par with other challenges facing the sector, requiring investment in time and resources of equal importance. These investments should be coupled with a paradigm shift in the way personnel departments are viewed, with a focus on HRD – from recruitment to performance evaluation, career planning, development, incentives, and opportunities for mobility.

Flexibility and prioritization of interventions. WWSS remains customer-driven, flexible, and responsive in order to address urgent priorities as the sector evolves. In developing the Year 2 work plan, our team carried out field investigations and discussions with our HCWW counterparts to assess needs and priorities in a consultative manner. The new team structure, described below in Subsection E, is customer-focused. It reflects the requirement of subsidiary-specific work plans, and allows for increased flexibility in management of resources, and increased accountability with our stakeholders.

C. WWSS Year 1 Activities

Strategic business planning activities. In January-February 2009, WWSS conducted Participatory Rapid Assessments (PRAs) of the Luxor, Sohag, and Assiut WWCs (the results of which are referenced in Section II of this work plan), and provided demand-driven assistance to the Giza and Menufiya WWCs. The project initiated its main WWSS Strategic Business Planning Activity by delivering business planning workshops for senior and middle management in June and July 2009. The workshops provided forums for subsidiary management to identify issues and develop strategies to meet their particular needs. The exercise allowed the subsidiaries to begin defining their mission and vision, goals, customer needs, and staffing needs, and developing a strategy consistent with these goals and needs. WWSS is providing technical assistance and training related to the development of the subsidiary business plans, as well as monitoring the drafting process. At the writing of this work plan, all five subsidiaries were progressing toward completing draft business plans.

Human resources management/development activities. Based on the above-mentioned assessments of the five selected subsidiaries, WWSS developed urgent training plans in Year 1 and conducted on-the-job training (OJT) for subsidiary training staff during the implementation of the urgent training plans. To date, WWSS has conducted 31 capacity-building events for 725 participants, while applying the WWSS-designed training evaluation system during implementation.

WWSS provided assistance in developing/modifying the organizational structures of the human resources/training departments at the five WWCs, which included developing purpose statements, function definitions, job descriptions, and staffing requirements, as well as proposing the concept of comprehensive human resource development plans as part of the business-planning processes underway at the five subsidiaries. In a demand-driven effort for Giza WWC, WWSS completed an assessment report on the subsidiary's staffing; the project is awaiting feedback. WWSS also provided technical assistance in developing a human resources database, which includes staff information from all 23 subsidiaries.

Based on the USAID-supported database used for identifying, leveling, and positioning employees in order to tie jobs and pay scales to a performance-based system (currently installed at Sohag, Luxor, and Assiut WWCs), WWSS delivered ongoing technical assistance in collecting and validating employee information. WWSS is currently pricing a comprehensive human resources management system to be procured and implemented at the HCWW and subsidiaries. It will cover all human resources practices, including appraisal/evaluation systems that would be tied to a larger incentive plan for each company as a whole.

The WWSS-funded Jordan Water/Wastewater Utility Study Tour was successfully implemented from July 25-30, 2009. The study tour offered the seven-person Egyptian delegation of senior HCWW management and select subsidiary chairmen a detailed, step-by-step overview of the business planning process and the opportunity to observe successful practices implemented at the Jordan Water Company (Miyahuna), one of the best run water and wastewater management utilities in the region. The impact of the study tour was felt immediately as planning discussions on twinning efforts are underway between North and South Sinai WWC and the Aqaba Water Company.

The project is also providing technical assistance to the HCWW in the establishment of a department within the Faculty of Engineering at Cairo University devoted to water studies.

Utility financial, performance, and O&M management activities. In Year 1, WWSS conducted cost management and financial systems analyses, and technical and financial management training needs assessments for HCWW and five subsidiaries. The Utility Management Team developed the *Assessment of Existing Conditions Report* covering all institutional and financial areas of the selected subsidiaries, and conducted capacity building for subsidiary staff on modern management and financial systems. In addition, WWSS developed and delivered to the HCWW for review a draft *Disconnection Policy*.

Under efforts to improve systems and customer services, WWSS developed a customer service center architecture model (currently being applied in Menufiya and Giza WWCs), developed *Customer Service Center Guidelines*, assessed hardware/software necessary to equip billing centers at Assiut and Sohag WWCs, and delivered training on customer service center management.

WWSS provided help desk support for the Monitoring and Analysis Reporting System (MARS) and assisted in modifying performance indicators for the subsidiaries. The project also developed the *Introduction to ARC-GIS (I)* training materials and provided this training to Luxor WWC. WWSS provided ARC-GIS ArcView software to Luxor, Sohag, and Assiut WWCs and created GIS maps for the Assiut subsidiary master plan and for Luxor's unaccounted for water (UFW) pilot program.

WWSS provided technical assistance in developing and implementing the asset management and MARS systems. WWSS installed and ensured operation of asset management at Menufiya and Assiut WWCs and provided technical assistance for the Economic Analysis departments at both subsidiaries. In addition, the project provided technical assistance and on-the-job training to Giza WWC with implementation of the MARS Technical Module and Quality Control Water Network Module. Based on the WWSS-developed questionnaire for MARS, the project has been developing solutions for MARS to meet the identified needs of nine subsidiaries. Security for both asset management and MARS were enhanced in the last quarter.

To improve billing and collection functions, WWSS completed training course materials for metering and collection management and customer service center management. WWSS implemented a study visit for Assiut WWC billing staff to Sohag WWC's billing center in order to identify the best temporary billing system for Assiut. WWSS provided technical assistance to Assiut WWC's billing center in issuing the first bill for the July/August water cycle on September 1, using temporary software supplied by the HCWW, and customized by WWSS. WWSS also completed a needs assessment for the billing center covering equipment, hardware, and software. WWSS developed a design for a new water bill for Sohag WWC, and provided technical assistance to its billing center on managing arrears.

WWSS completed 2009-2010 awareness plans and quarterly action plans for the Assiut, Giza, Menufiya, Sohag, and Luxor WWCs, as well as four newsletters for Assiut, Giza, Menufiya, and Luxor WWCs. In accordance with the subsidiary awareness plans, promotional materials were also produced for all five subsidiaries. At the end of the last quarter, WWSS was providing assistance to Giza and Menufiya WWCs on implementation of their awareness plans. The WWSS team also

assisted HCWW public awareness staff in preparing two company newsletters and other HCWW publicity materials, including a brochure and posters. WWSS completed development of the HCWW customer satisfaction survey RFP, which was announced in September.

WWSS tasks related to improving financial management of all subsidiaries included delivering the proposed draft *Financial Accounting Manual* for use by the subsidiaries to the HCWW for its review on August 4. Development of draft manuals for procurement and warehousing were also nearing completion at the end of Year 1. The project developed specifications for IT hardware procurements for subsidiary Finance, Warehousing, and Procurement Departments, and prepared draft organization charts for the subsidiary Warehousing Departments and job descriptions for both the Warehousing and Procurement Departments.

WWSS pushed forward O&M-related tasks, by providing technical assistance, formal and on-the-job training, and by developing step-by-step instructions for various functions across the five subsidiaries. At the end of the period, preparation of the WWSS-developed O&M manual continued, with ongoing revisions seeking to best meet actual implementation at the subsidiaries, including modifications to O&M processes covering horizontal pumps and surface water treatment, among others. Technical assistance and training covered applying the instructions for water sampling, using water balance programs, sensor installation, calibration, and on-site signal-loss determination, metering equipment set-up, pipe thickness measuring, data-transfer from measuring devices to computers, recordkeeping/monitoring systems implementation, water treatment/chlorination, O&M planning/budgeting, filter operation/washing procedures, best practices in equipment utilization and identification of spare parts/repair needs, and usage of sludge discharge valves in controlling clarifiers operation.

Capital investment planning and program management activities. In Year 1, WWSS conducted in-depth studies of documentation required for development of master plans by the five selected subsidiaries, and by August 2009, draft master plans for Assiut, Sohag, Luxor, and Menufiya WWCs were completed and awaiting approval from HCWW. The project issued a draft report on maximizing the benefits of regional master plans, which will serve as the basis for a formal project deliverable.

WWSS began development of manuals for capital investment planning – a discussion draft is due for delivery in December 2009. As part of the development process, WWSS collaborated with WPRR, HCWW, and NOPWASD to develop priority criteria for the selection of wastewater projects in outlying areas, and worked with the Assiut and Sohag WWCs to obtain data on the status of wastewater operations in villages, based on the priority criteria.

WWSS provided HCWW and Assiut, Sohag, Luxor, and Giza WWCs with organizational charts, proposed staffing, and job descriptions for their Planning and Follow-up Units, as well as obtaining letters for the establishment of Program Management Units (PMUs) in Assiut and Sohag. The Assiut, Sohag, Luxor, and Giza PMUs received training in PRiSM analysis and program management fundamentals (WPRR is currently maintaining PRiSM and providing updates, as well as following up with PRiSM data entry activities). WWSS delivered training to Assiut, Luxor, and Sohag WWCs on project scheduling, cost control techniques, and the use of MS Project for scheduling and tracking progress, along with on-the-job training to Assiut WWC on the evaluation of technical offers and the review of conceptual reports for wastewater systems from consultants. WWSS also evaluated PMU equipment requirements for the HCWW and five subsidiaries, and prepared a list of procurement needs for the PMUs.

Four important WWSS-developed program management deliverables are nearing completion, with anticipated delivery before the end of 2009 depending on HCWW review and approval. WWSS delivered draft *Guidelines for Dispute Resolution Boards* and a draft *Construction Indicators Report* to the HCWW for review on September 17. The *Guidelines for Dispute Resolution Boards* will provide HCWW and its subsidiaries with procedures and guidelines for establishing a dispute resolution board, including a model agreement, and discuss the common causes for disputes in

construction, what owners and engineers should consider to avoid disputes, and the conventional methods for resolving conflicts. The *Construction Indicators Report* reviews the well-established indicators in the construction industry, defines key concepts and terms, provides examples and exercises, and supports the above-mentioned training on scheduling and tracking progress. The project is also nearing completion of the draft *Contractors' Prequalification and Selection Guidelines and Procedures* and *Standard Key Documents*, for which the contract and prequalification documents are complete.

D. WWSS Year 2 Overview

In preparation for Year 2 activities, WWSS carefully reviewed its scope of work in relation to the needs of the HCWW and its subsidiaries. Our team conducted assessments in September 2009 of seven subsidiaries that did not receive direct program assistance in Year 1. Based on the survey results and priorities identified in the original set of utilities, we developed subsidiary-specific work plans, tailored to their needs and requirements. These work plans focus, in varying degrees, on the following areas:

- Business planning, starting with the definition of medium- and long-term objectives, and the means of achieving them, realistically, given their stages of development and the resource constraints facing them.
- Organizational structuring, including staffing, roles and responsibilities, and development of departmental action plans.
- Financial management, with particular emphasis on improving data quality, and timely recording and reporting.
- Operations and maintenance, covering technical skills, as well as planning, budgeting, and resources management.
- Capital investment planning, program management, and infrastructure project development and management.
- Cost recovery, including tariff design and pricing of water and wastewater services.
- Information technology and management information systems.
- Performance standards.
- Service delivery, along with customer service and relations.
- Public outreach and education in such areas as water conservation, environmental health, tariff and service pricing, among others.

In response to HCWW and individual company needs in each of these areas, our Year 2 activities are organized along four components:

- A. *Central activities*, targeting the HCWW and emphasizing mainly the provision of technical support and complementary expertise in support of company-initiated activities. This includes support to ongoing business planning and organizational restructuring efforts, assistance in developing a system-wide IT master plan, a leadership forum for subsidiary chairmen, preparation of a corporate communication strategy, and other support activities. Unlike technical assistance targeting operating subsidiaries, our strategy here is based on common activities carried out within the framework of a Joint Working Group (JWG). The latter includes WWSS and HCWW staff members responsible for coordinating the implementation of subsidiary-specific work plans and cross-cutting activities.
- B. *Cross-cutting activities*, calling for the initiation and implementation of “generic” (as opposed to subsidiary-specific) capacity-building and human resources development programs and activities, based on information gathered during our first project year in five governorates and on field assessments of seven additional operating subsidiaries.

- C. *Subsidiary-specific activities*, consisting of activities targeting each subsidiary individually, for which specific activities are largely derived from our experience, priorities discussed with the chairmen and senior staff of the subsidiaries, supplemented by surveys conducted in September 2009, as well as input from HCWW and donor agencies involved in the water and wastewater sector.
- D. *Project development and coordination activities*, helping to effectively coordinate, monitor and communicate progress of the implementation of technical activities.

Programming considerations. In order to maximize the effectiveness of our approach, our team will keep in mind that *not all subsidiaries will receive the same extent of technical assistance, nor will this assistance occur simultaneously across the group.* Newly established utilities are likely to receive the majority of our assistance initially, without neglecting the immediate needs of the other affiliates targeted in our contract. Consequently, some of our activities, initiated in the Year 2 work plan may extend into the following year, and their timing will be decided in close consultation with HCWW. At the central level, those activities specifically targeting HCWW and sector-wide interventions will be decided in close cooperation with the HCWW, subject to HCWW final review and concurrence.

In the capacity-building arena, WWSS will propose professional development programs for mid-level HCWW and subsidiary staff, along with interdisciplinary seminars for subsidiary executives. The advanced seminar series for utility executives, which will be structured into 8 modules over a 12-month period, is designed to provide broad exposure and complementary skills to senior managers, to help improve intra-utility communication and coordination, and to prepare them for higher managerial responsibilities. WWSS also will cover the legal and regulatory framework of the sector, as well as the role of the HCWW and its relationship with its subsidiaries and other institutions in the sector.

WWSS will then move into technical skills, covering the following topics:

- Organizational development and human resources planning
- Financial management
- Operation and maintenance
- Procurement (including outsourcing)
- Construction management and supervision
- Customer service and relations with consumers
- Billing and collection
- Unaccounted-for water
- Public outreach and education
- Regulatory compliance and intergovernmental relations

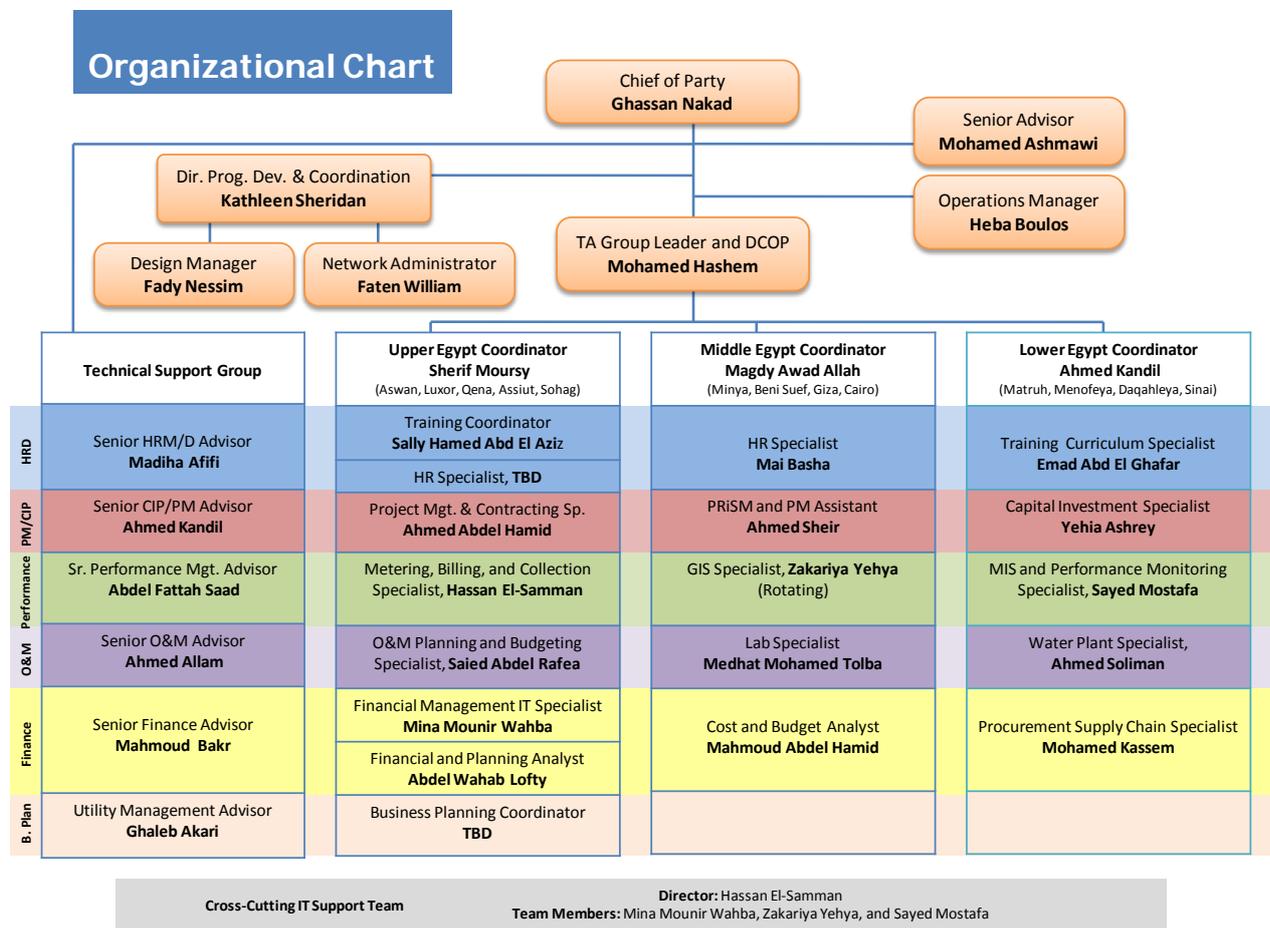
E. Organization of the WWSS Team

To ensure better staff resource allocation, we have staggered our activities within our four-component approach over the course of the second work plan year, with the understanding that some of them will, by necessity, spill over to the next period. And, while most staff members will participate in the implementation of the proposed activities, operational responsibility has been divided between the Chief of Party and his deputy.

Team organization. The Chief of Party, Ghassan Nakad, will oversee both central-level and cross-cutting activities, while utility-specific work plans and tasks will be supervised by Engineer Mohamed Hashem, our proposed Deputy Chief of Party. The latter will be responsible for field operations, providing QA/QC for the tasks outlined in the plans and ensuring their timely completion. Mr. Hashem will be assisted by three regional coordinators: Eng. S. Moursy for Upper Egypt (Aswan, Sohag, Luxor, Qena, and Assiut), Eng. Magdy Awad Allah for Middle Egypt (Minya, Beni Suef, Giza, and Cairo), and Eng. A. Kandil for Lower Egypt (Menufiya, Daqahliya, Matrouh, and Sinai).

Each regional coordinator manages a team of interdisciplinary consultants, who will focus primarily within that region. Regional teams will, however, share resources for discrete activities, and upon completion of activities, individual team members may move across regions. The Technical Support Group, supervised by the COP, includes senior-level specialists in the key areas of the project scope of work, who will oversee activities project-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.

Our Director of Program Development and Coordination, Ms. Kathleen Sheridan, will join the team on a full-time basis on January 18, 2010. She will be responsible for external reporting and communication, and support public awareness activities. She will be also responsible for quality control of contractually mandated documents, including annual work plans, quarterly progress reports, and various required reports and deliverables. She will oversee their publication and distribution, and their timely deposit at Development Experience Clearinghouse (DEC) library. Ms. Sheridan will also prepare and update our monitoring and evaluation tracking system and the PMP in coordination with task leaders and WPRR. The chart below illustrates the organizational structure of the team.



SECTION II: DETAILED YEAR 2 WORK PLAN

A. Central Activities: Assistance to the HCWW

A1. Background and Approach

In addition to being the owner of the operating water and wastewater management utilities, the HCWW plays a key role in the development and standardization of systems and procedures among the subsidiaries, budget support allocation (including foreign assistance loans and grants). Over the past five years, the Company has also become a clearinghouse of expertise, providing technical assistance, either directly or through donor-sponsored activities. The record has been positive in many respects, despite competing claims on HCWW resources, largely due to its ability to mobilize its own internal resources and to leverage those provided by the donors. In this context, we view the Company as an implementation partner, and our role as complementary to that of its staff and consultants, working in tandem to help it achieve its mission and goals. Thus at the Company headquarters level, WWSS staff will support ongoing initiatives such as the business planning exercise and proposed reorganization, both supported by GTZ, and in the development of a sector-wide IT master plan and corporate communication strategy, among other ongoing initiatives.

As far as technical assistance to the operating subsidiaries, we have successfully established a joint WWSS-HCWW working group for the specific purpose of implementing activities outlined in the cross-cutting and subsidiary-specific work plans. The group will also meet monthly to review accomplishments, address hurdles encountered and plan following months activities. Ideally, this group will evolve to include other donor-funded programs to foster cooperation and avoid redundancies.

In addressing HCWW priorities, we focused on activities that are in congruence with our contractual scope of work, and initiatives that are of strategic nature, aligned with company objectives, and likely to have the highest impact (or return) in a relatively short period. Needless to say, we remain flexible and ready to respond to *ad hoc* requests and to capitalize emerging areas opportunity, as they arise.

A2. Tasks

HC 1. Establish and facilitate a joint working group. To manage implementation of Year 2 activities in close cooperation with our partners at the HCWW, we have established, as part of the work planning process, a joint working group (JWG) made up of WWSS team leaders and their HCWW technical counterparts. The group will meet monthly to discuss progress from the previous month and plans for the coming month, and the monthly 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. Responsibility for activity implementation will be shared, with HCWW counterparts taking on increased responsibility for technical assistance activities as the role WWSS phases out. If this proves effective, this group will serve as the seed for an internal consulting group within the HCWW to provide technical support and expert advice to the subsidiary companies.

HC 2. Assist in the ongoing development of the HCWW business plan. The HCWW business planning effort, supported by GTZ consultants, is well underway with some draft sections already completed, Senior Utility Management Specialist Akari, supported by the Senior Advisors will offer our support HCWW and cooperate with GTZ staff in this area in Year 2. This may include workshop organization and facilitation, meetings, high-level discussions, and business plan reviews as requested.

HC 3. Develop a corporate communication strategy. HCWW and its subsidiaries have already launched several public awareness activities. This task complements ongoing efforts and seeks to assist the Holding Company in developing and implementing a communication strategy supporting its

business goals. The strategy will address increases in demand on water resources and customer demand, regulatory pressures, and public health concerns, among other issues. It will include an analysis of stakeholders and target audiences, and outline the specific communication goals, objectives, and implementation steps, as well as the main themes and communication vehicles (media). Lastly, the strategy will specify the level of resources and funding necessary to achieve an effective public outreach and education plan, and help operating subsidiaries develop their own, governorate-specific communication plans. A WWSS short-term expatriate strategic communications specialist, with public awareness specialist Abdel Meguid Abdel Razik, will assist the staff of the public awareness and public relation units at the Holding Company in the development of a corporate communication strategy, tied to the vision, mission, and strategic objectives outlined in its business plan. Once completed, we will work closely with the two units on securing senior management acceptance of the plan in order to obtain the required budget resources and the support, and initiating a public outreach and education campaign. Support will also be provided to subsidiaries in this area, as described in Subsection B3.

HC 4. Provide ongoing support to the public awareness unit. The WWSS communication staff will continue its ongoing activities in support of the HCWW public awareness unit. This assistance covers among other activities the following:

- Design and production of newsletters, posters and brochures production
- Preparation of press releases and press kits
- Design of customer services center prototypes
- Website development
- Preparation of presentations and other promotional material for international conferences

HC 5. Support development of HCWW IT master plan. In Year 1, WWSS completed an assessment of the HCWW IT infrastructure. Building on this activity, Financial Management IT Specialist Mina Wahba will work closely with HCWW counterparts to: establish a joint committee for the development and implementation of the IT master plan; define the scope and functions to be included in the IT master plan assessment phase; oversee the assessment phase of the IT Master Plan; develop recommendations including list of priority interventions; present findings and recommendations for HCWW senior management; and assist HCWW on IT master plan implementation.

HC 6. Develop a comprehensive Human Resource Management and Development Strategy. With support from a short-term expatriate, the Senior HRM/D Advisor will work with the HCWW to develop a comprehensive HR management and development strategy. The strategy will outline plans for development of systems, policies, procedures, and programs covering all aspects of human resource management and development, including rightsizing of staff, compensation and incentives, benefits, performance evaluation, recruitment practices, and training and professional development programs.

HC 7. Assist in development of HCWW position descriptions. At the end of September, 2009, HCWW completed discussions on its new organizational structure, developed with support from GTZ. Upon approval of the new structure by the Company's Board of Directors, the Senior HRM/D Advisor Madiha Afifi, with support from Training Coordinator Abd El Ghaffar and the Chief of Party as necessary, will provide support to HCWW and GTZ teams in developing position descriptions, and assist in the development of approaches to identify and recruit staff for the open positions.

HC 8. Procure and install a Human Resource Management information system (HRMIS). To empower subsidiaries to manage all of their HR functions in an integrated system, we will work with the HCWW to assess, design, develop/purchase, and implement a HRMIS. The HRMIS will be designed as a sector wide system, scalable for eventual implementation in all 23 subsidiaries. Modules for possible inclusion in the HRMIS include: recruitment, personnel, payroll, benefits, health management, document archival and management, training and development management, career

path and succession, appraisal management, performance based incentive systems, competencies and HR key performance indicators. In Year 2, the WWSS HR Specialist Mai Basha with support from HRM/D Senior Advisor will complete an assessment of needs and existing systems, and develop the scope of work for the system design. We will then issue an RFP and select the firm/developer to build the system. This system will be installed and evaluated in Assiut, Sohag, and Menufiya before applying it in other subsidiaries. WWSS will provide ongoing TA and capacity building activities in implementing the HR system.

HC 9. Conduct study of financing options for implementation of the rural sanitation strategy. To address growing sanitation problems across Egypt, including access to sanitation services, untreated drainage water, and inadequate sewage disposal and resulting groundwater contamination, the HCWW has developed a strategy that calls for investing 20 billion Egyptian pounds (approximately \$3.6 billion) to improve rural sanitation infrastructure. To that end, the GOE has launched an ambitious investment program to build additional wastewater treatment capacity. Some 30 wastewater treatment plants (WWTPs) are currently in the final phases of construction and there are plans to build some 124 additional ones in the years to come. According to preliminary estimates based on water and sanitation sector master plans currently being finalized, the country needs to spend nearly LE 80 billion (in today's currency) to achieve 100 percent coverage.

Our proposed study, outlined below, is being carried out pursuant to the request of the Chairman of HCWW to evaluate options for nation-wide financing and implementation of needed rural wastewater management projects. The task, which will be performed by a four-person inter-disciplinary team led by Chemonics International Infrastructure Finance Specialist Mauricio Gutierrez and including Financial Analyst Ali Sherif and a legal advisor, entails (a) a thorough review of recently completed master plans, (b) ascertaining the financing needs and their timetable based on HCWW priorities, and (c) recommending least-cost financing schemes that are compatible with the investment requirements and with GOE laws and regulations pertaining to external financing by government owned corporations and/or public-private partnerships in the provision of public services. This assignment, funded through the studies and procurement line item, will take place in February and March of 2010 and will consist of the following tasks:

- Reviewing and validating the financing requirement of the Egyptian Rural sanitation Strategy
- Assessing financing options potentially available through public and/or public sources including, but not limited to central government funding, commercial banking debt, access to domestic or international credit markets, private sector participation in service provision through concessions, build-operate-transfer and similar schemes, revolving funds, etc.
- Outlining the advantages and disadvantages of alternatives examined, and recommending appropriate course(s) of action
- Examining the congruence of the option(s) proposed with the existing legal and regulatory framework and proposing, when appropriate, amendments to existing laws to facilitate access to capital
- Proposing a roadmap to guide the process of financing
- Making presentations to HCWW, GOE ministries and agencies, and prospective investors, financing providers and/or private sector implementation partners
- Advising HCWW and GOE officials on negotiation strategies in relation to prospective capital providers, concessionaires or other implementation partners

This assignment does not entail any work relating actual raising of capital or structuring of public-private partnerships.

HC 10. Support the establishment of an HCWW PMU. In Year 1, the WWSS Program Management team developed an organizational chart, proposed staffing, and job descriptions for the HCWW Planning and Follow-up Unit, which will serve as the HCWW PMU. To support the launch of this group in Year 2, upon HCWW approval, we will procure and install necessary hardware and software

for the unit, and include their staff in cross-cutting PMU capacity building activities including ongoing PRISM support and training; dissemination of manuals and standardized key documents; and associated workshops and training courses. See Subsection B3 for information on cross-cutting activities.

HC 11. Facilitate coordination between donor projects in the sector. In Year 1, the WWSS team developed a comprehensive matrix of donors working in the sector, with one-page summaries of each donor’s activities. In Year 2, we will promote donor coordination through planning and facilitation of semi-annual meetings, at which issues of mutual interest will be discussed – including training curricula, HRM/D approaches, infrastructure investments, etc., – and the updated donor matrix and other documents of interest will be circulated. In addition to coordinating this semi-annual event, the WWSS Director of Program Development and Coordination will seek out opportunities to coordinate with other donors, hosting meetings and facilitating discussions, including relevant WWSS team members, as appropriate.

HC 12. Sponsor HCWW Human Resource Management Diploma candidates. WWSS will sponsor five mid-level human resource development staff members from the HCWW for a two-term postgraduate diploma program at the American University of Cairo’s (AUC) Institute for Management Development. The proposed candidates have received extensive human resource development and training under the auspices of GTZ and InWent, and have been extremely active in the development and implementation of HWCC training programs for staff and managers of the operating subsidiaries. According to the syllabus of the AUC diploma program, participants are expected at the end of the coursework to be able to apply “the tools needed for human resource management to achieve the objectives of the company ... understand job analysis, needs analysis and identify appropriate development strategies for individuals and groups.” The program aims to introduce advanced approaches to strategic human resources management through six courses conducted in three-hour lectures once per week, with a total of 54 hours per term. The courses consist of the following topics:

1. Introduction to HR Management.
2. Recruitment and Placement, including job analysis, personnel planning and recruiting, employee testing and selection, and interviewing candidates.
3. Training and Development, including performance management and appraisal and career management.
4. Compensation, including the establishment of strategic pay plan, performance pay, financial incentives, employee fringe benefits and services.
5. Employee Relations, including labor law, employee safety and health.
6. Human Resource Information Systems and Employee Record Maintenance.

We have informed the HCWW that admittance to the course is subject to meeting the requirements set forth by AUC, passing an entrance exam, and a commitment on the part of the employee to remain in their current or higher position within the human resources division (or sector) for a minimum of two years after graduation. HCWW has provided assurances that it will free up the diploma candidates for the time required to prepare for and attend the courses as scheduled. A WWSS HR Specialist will support the HCWW candidates through the registration process, as needed.

A3. Resources

Technical assistance to the HCWW will be primarily delivered by WWSS Senior Advisors from our Technical Support Group, with support from other team members and short-term experts in strategic communications, legal advising, financial analysis, infrastructure finance, and human resource development. The procurement and special studies fund will be utilized for the study of financing the rural sanitation strategy and for the PMU hardware/software purchase.

B. Cross-cutting Activities

B1. Background and Approach

A portion of the WWSS interventions targeting subsidiaries are, by their nature, standardize-able across the sector as a whole. In these cases, we have designed activities for efficient implementation by grouping subsidiaries together and/or designing a standard tool or approach for roll-out to numerous project-targeted governorates. Such cross-cutting activities are described in detail below, and are referred to as appropriate in the subsidiary-specific plans in Subsection C.

B2. Tasks

CC 1. Facilitate business planning activities in all WWSS-supported subsidiaries. The strategic business plan development will build upon Year 1 activities and carried out in full collaboration with the selected subsidiary teams. Each plan will cover the major functions of the subsidiary including, five-year financial projections, human resource development, information technology, public awareness, tariffs, and other subsidiary-specific topics. To cover all WWSS-supported subsidiaries over the next two years, we will divide them into three groups to be addressed sequentially:

- Group 1: Sohag, Assiut, Luxor, Giza, and Menufiya. We initiated business planning activities with these 5 subsidiaries in Year 1, and finish draft business plans with each of them by March, 2010
- Group 2: From March 2010, we will initiate business planning activities for Qena and Matrouh
- Group 3: From November 2010 (project Year 3), we will initiate business planning activities for Minya, Beni Suef, Aswan, and Sinai

This task will be led by the Senior Utility Management Advisor with support from the Business Planning Coordinator and a short term consultant.

CC 2. Design and implement an Advanced Management Seminar Series for Senior Utility Executives. This ten-module program targets senior managers and decision-makers in the operating subsidiaries, specifically the second layer of leadership (sector heads and directors general) at these utilities. It aims at deepening their understanding of the various aspects of utility management and introducing new concepts and practices to improve day-to-day operations at the headquarters and operating levels. It builds on the experiences and skills already introduced through prior USAID and other donors' capacity building activities, including their curricula, tools and other resources.

The seminar series is composed of the below modules, to be offered intermittently over a 12-month period. The WWSS Senior Utility Management Advisor will lead the task, supported by the training coordinators and technical team members for content development and delivery. Curriculum development will take place from April, 2010, through September, 2010, and seminar delivery will begin in October, 2010. We will include approximately four representatives from seven of the WWSS-targeted subsidiaries in the first round. Additional rounds will be implemented in Years 3 and 4.

1. Legal and regulatory framework of the water and sanitation sector
2. Organizational development and human resources management
3. Strategy development and corporate planning
4. Financial management and business analysis
5. Customer service and public outreach
6. Capital investment planning and program management
7. Construction management and supervision
8. Operation and maintenance

9. Management information systems and technologies
10. Procurement and outsourcing

CC 3. Design and conduct monthly leadership forum. Working closely with the Chairman, senior executives of the Holding Company, and GTZ, the WWSS Program will co-sponsor monthly forums for the Chairmen of the operating subsidiaries and other members of the sector Policy Committee. The purpose of these gatherings, which will be held at the issue of monthly committee meeting, is to: (1) promote dialogue on priority issues of concern to Egyptian water and wastewater management utilities, (2) reinforce coordination and cooperation among these utilities, (3) facilitate exchanges of experience, lessons learned and success stories, and share best practices among utilities, (4) introduce new concepts in utility management and serve as a conduit for the transfer of know-how, practices and technologies that have proved their effectiveness in the Egyptian and international contexts, and (5) involving stakeholders including NGOs, practitioners, the private sector, academia, and regional organizations in water supply and sanitation.

Drawing on the resources and expertise of HCWW, USAID-funded programs and those funded by other donors, WWSS, led by Senior Advisor Mohamed Ashmawi, will co-sponsor colloquia and small conferences at which various subject matter experts will present papers, and analyze and discuss specific topics on water and wastewater utility management and technical issues. Typically, each session will be led by a different lecturer or presenter. The topics covered will be selected in consultation with HCWW depending on interest and/or an issue or problem requiring expert opinion or different perspectives. These may include:

- Improved management, operation, and maintenance of facilities
- Service standards, performance standards, and benchmarking
- Introduction to new finance and investment strategies
- Concepts of asset management
- Cost recovery and service pricing
- Strategy development, business planning, and results-based strategies for utility management
- Capital investment planning and program management
- Integrated water resources management (conservation, DSM, re-use, loss reduction)
- Monitoring and evaluation
- Outsourcing and private sector participation in the provision of utility services, etc.

Ideally, the forums can also serve as means for utility twinning arrangements. Twinning is a proven cross-fertilization tool for utilities to share expertise and best practices through establishing partnership relationships with one another. These relationships serve as mechanisms through which technical expertise is exchanged, and experiences are shared. Twinning agreements have mutual, but not necessarily equal benefits to both utilities. Activities undertaken by twinned entities may include secondment of expert staff, use of twin-company trainers, curricula and facilities, site visitation and on-site demonstrations. Possible fields of operations that could be covered through a twinning arrangement include NRW reduction, water quality improvements, customer care, planning and implementing capital expansion programs, and improved financial management. Implementation of this task will be supported by a WWSS Training Coordinator.

CC 4. Implement two study tours to world-class water and wastewater institutions and international conferences. To maximize impact of US-based study tours on Egyptian participants, to the extent possible, we will couple trips to industry conferences with study tours of exemplary water and wastewater institutions in the US as outlined below. Trip design and planning will be led by the Senior Utility Management Advisor, with support from the training coordinators and input from AMIDEAST for USAID document processing. The two trips for Year 2 are:

- Utility Management Conference in San Francisco, co-hosted by the American Water Works Association, Water Environment Federation, and California Water Environment Federation –

February 21-24, 2010. The HCWW chairman and vice-chairman, accompanied by the WWSS chief of party, will attend the conference and participate in discussions about common management challenges and acquaint themselves with the latest approaches, case studies, and research in all aspects of utility management. Before and after the conference, participants will conduct visits at relevant institutions – including the US EPA, USAID, the American Water Works Association headquarters, and at least one exemplary water utility – and focus discussions on sector-level innovations in policy, management, and leadership. The program will last approximately one week, including traveling time.

- The second study tour will include approximately six Egyptian participants from the HCWW and/or its subsidiary companies, and will focus on technical, engineering, and O&M innovations in the water sector. Participants will visit exemplary utilities and plants in the Eastern US, and will be accompanied by a CH2M HILL representative. The program will last approximately one week, including traveling time.

CC 5. Provide training to HR personnel. To qualify the HR staff to develop and implement HRD and training plans and systems, a series of workshops will be designed and delivered to subsidiary HRD staff covering the following aspects of HR management and development:

- Workshop 1:
 - Introducing the concept of HRD
 - Preparing HRD plans and strategies
- Workshop 2:
 - Developing the company's organization structure
 - Creating job descriptions for each position
 - Updating the five-year staffing plan
- Workshop 3:
 - Creating a performance-based incentive system
 - Creating a performance appraisal system
- Workshop 4:
 - Preparing HR policies and procedures handbook

Each of these workshops lasts from two- to three-days, and the entire series will be implemented at least two times, one for the five companies worked with last year, and again for the other six companies added to the Year 2 Workplan. These tasks will be led by Senior HRD/M Advisor with support from HR specialist, training coordinator and HR consultant. After designing the curriculum and developing the materials, course delivery will begin in Feb. 2009

CC 6. Develop communications planning guide. During this second year of the contract, our public outreach and communication activities at the operating subsidiary level will be confined to the preparation of a communication planning guide and related workshops to help local utilities in determining the broad themes of their communication programs. The guide will provide a step-by-step outline for operating companies to prepare their own communication plans, along with key messages focusing on water quality and public health, water infrastructure sustainability, water conservation and demand management, and local plans for improved delivery of services. This activity will be completed by a short-term expatriate strategic communications specialist and the WWSS public awareness specialist Abdel Meguid Abdel Razik.

CC 7. Reengineer/upgrade MARS and provide ongoing support. The Monitoring, Analysis, and Reporting System (MARS) is well-established in the sector, and over time, numerous additions and changes have been made to the system including new modules and various reporting formats. In order to integrate these modules into a sustainable system architecture, the HCWW, with WWSS support, has narrowed the options to either 1) reengineer MARS as a website, or 2) upgrade the current MARS software program. To move this activity forward in Year 2, the WWSS MIS and Performance

Monitoring Specialist Sayed Mostafa will analyze the system considering the integration of various existing modules, including the asset management system, and the requirements of the subsidiary company users. Following the analysis, Mr. Mostafa will work with the HCWW to redesign the database, migrate data from the existing databases, and proceed through development, testing, and roll-out. These activities will be followed, in Year 3, by updating manuals, graphics enhancements, and ongoing support, maintenance, and data verification.

CC 8. Conduct O&M planning and budgeting workshops. In Year 1, the WWSS team conducted an O&M planning and budgeting workshop with representatives from companies in Assiut, Sohag, and Luxor. The workshop was attended by a HCWW representative, who provided positive feedback and requested that it be replicated with additional subsidiaries. We will do so in Year 2, led by the O&M Senior Advisor Ahmed Allam, with support from the O&M Planning and Budgeting Specialist Saied Abdel Rafea, Senior Financial Advisor Bakr, and Training Coordinator by conducting the workshop three times to cover the Cairo, Menufiya, Aswan, Qena, and Matrouh. The workshop covers: the planning concept; maintenance; O&M plan preparation; and budgeting.

CC9. Conduct field visit to Alexandria Water Company's lab. In May of 2010, we will prepare and conduct a field trip for chemists from WWSS-supported subsidiaries to Alexandria's central lab. The purpose of the visit will be to demonstrate to chemists of newer labs across the country a good example of systematic and modern management of a central lab, and to encourage peer-to-peer knowledge sharing and communication. This activity will be led by the WWSS Lab Specialist.

CC 10. Conduct network management workshops. Network maintenance is a challenge for many subsidiaries, and has a direct impact on the quality of water reaching consumers. To build capacity of network maintenance staff, we will hold a series of workshops for project-targeted subsidiaries on topics such as: water distribution network cleaning and disinfection; valve exercising; leak detection; water balance; pipe repair and maintenance. This activity, led by Senior O&M Advisors Allam, will require support from the Water Network Specialist Sherief Moursy.

CC 11. Develop and deliver financial accounting and cost accounting manuals. In Year 1, the WWSS team developed a financial accounting manual for Egyptian water and wastewater utilities, and it is currently pending HCWW review and comment. In Year 2, this manual will be finalized, and an additional manual for cost accounting will be developed to be used as a reference for the cost accounting departments in all subsidiaries. After the manual's development it will be submitted to HCWW for revision then published and distributed to subsidiaries. The finance team will train the staff and provide technical assistance for implementation and produce the cost statements.

CC 12. Conduct Unified Accounting System (UAS) training program. This two-module course will be offered three times in Year 2 for Giza, Sohag, Minya, Beni Suef and Luxor. It targets accountants and financial staff, and aims to introduce participants to the unified accounting system. Dr. Osama Mohi, a Financial Consultant, will deliver the training with support from the Senior Finance Advisor Mahmoud Bakr, and the Training Coordinator. The course will cover the following topics:

- Overview of UAS
- Chart of accounts
- W/WW companies' costs and expenses items and their accounting process.
- W/WW companies' revenues items and their accounting process
- Relationship between cost accounting, stores, and UAS
- Financial statement and its clarifications.
- Egyptian Financial Standards.

CC13. Support installation of ADVAC System at selected subsidiaries. WWSS will coordinate with HCWW to procure, install, and launch the software application at selected subsidiaries. The ADVAC financial application has different modules that can serve multiple functions in water companies. The components which are likely to be implemented consist of the general ledger, and the fixed assets and

cost accounting modules. These modules are the core of accounting software applications. This task is led by Financial Management IT Specialist Mina Mounir Wahba, supported by Mr. M. Bakr, Senior Finance Advisor.

CC 14. Provide ongoing PRiSM support. In Year 2, we will provide technical assistance and support to all subsidiaries covered by the WWSS Program, including Qena, Aswan, and Matrouh, where PRiSM has yet to be installed. This task will be lead by the PRiSM and PM Specialist.

CC 15. Develop capital investment planning and budgeting manual, and provide orientation. To further improve the HCWW's and subsidiaries' new approach toward capital planning and budgeting for new projects, we will develop and disseminate to subsidiary master planning departments a manual including structured guidelines for identifying, planning, selecting, and presenting new projects. The manual will discuss and provide "how to's" on such topics as: identifying new projects; utilizing, assessing, and updating the master plan projects; developing the scope and budget for new projects; techniques for prioritization of projects; developing a project charter and implementing a capital investment project. Capital Investment Specialist with support from Senior Program Management Advisor, the Program Management and Contracting Specialist will complete this document. The manual will be followed by workshops at the senior level and by training to selected subsidiaries.

CC 16. Develop and disseminate standard key documents for projects life cycle. To improve efficiency during tendering and implementation of the new projects, the WWSS program management team, in coordination with the WPRR project, will develop a manual covering all steps of procurement from tendering and start up of projects to close out and commissioning. The manual will provide sample and template documents for each step of the process including tendering procedures, prequalification of consultants and contractors, selection of consultants and contractors, general and particular conditions of contract, overview of specifications, overview of claims, causes and dispute resolution boards. The manual will also provide guidelines for construction management including supervision and inspection and cash flow management. The manual will be followed by workshops at the senior level and by training to selected subsidiaries.

CC 17. Develop site identification and acquisition procedures. Guidelines for site selection for different facilities will be provided and will cover technical, space and environmental requirements for selection of sites for water facility, wastewater treatment plants, water intakes, elevated tanks, pumping stations. Steps toward site acquisition and obtaining of approvals will also be covered. A short term expert will work on the procedures guideline and coordinate closely with the Senior Program Management Advisor. After finalizing the document, technical assistance will be provided.

C18. Conduct planning and scheduling training program to improve utilities' ability to manage the construction contracts, including the use of meaningful construction indicators for the progress of projects. This four-day training course for fifteen staff members from Qena, Matrouh, Giza, Daqahliya and Menufiya will be held during Year 2 and will be delivered by a short-term training consultant under supervisor of Senior CIP/PM advisor with support from the training coordinator. This training will assist the construction supervision team within utilities to understand the concepts of project scheduling using the program evaluation and review technique (PERT) and critical path method, and to have hands on training on using Microsoft Project software.

CC 19. Coordinate with the WPRR Project on implementing the Operator Certification Program. The WPRR project team is currently working on development of the certification policy framework, along with the core competency requirements for water and wastewater plant operators. The work of WPRR also includes definition of the key institutions for testing and certifying operators. Once the certification framework is completed and approved, and work is completed on the examination of Level D water plant operators, WWSS will develop the training material to prepare Level D operators to take the examination. Mr. Ghaleb Akari will lead this task, assisted with local and/or international short-term specialists as needed.

CC 20. Training of customer service and billing center staff. WWSS will conduct a formal training course to introduce new concepts and approaches to customer service to utility staff. The courses will cover also clients' rights to receive service, staff accountability, and benefits that can result from improving customer relations. We will also arrange for Sohag, Assiut and Menufiya customer service staff to visit other water and wastewater utilities where improved customer service practices have led to marked performance progress. This activity will be led by the Metering, Billing, and Collection Specialist, with support from the Senior Performance Management Advisor, Training Coordinator and short term training consultant.

B3. Resources

The cross-cutting activities outlined above require input from WWSS long-term staff across all technical areas. In addition, we will utilize short-term experts in program management, strategic communications, and training development and delivery as needed and as specified in Annex A. Finally, we will also utilize the AMIDEAST- and IIE-provided service for planning and other assistance in organizing study tours.

C. Subsidiary-specific Activities

C1. Sohag Water and Wastewater Company

C1.1. Background

Established in March 2008, Sohag WWC faces many challenges, which were confirmed by the WWSS-conducted a Participatory Rapid Assessment (PRA) in January and February 2009. In the ensuing seven months, the subsidiary's chairman was replaced due to a hiring crisis and dispute with the local government.

- | Sohag WWC | |
|-----------|---|
| • | Date of Establishment: March 3, 2008 |
| • | Total Water Production: 419,964 m ³ /day |
| • | Total Wastewater Treatment: 175,000 m ³ /day |
| • | Population Served: 3,747,289 |
| • | Water Coverage: 100% Urban / 100% Rural |
| • | Sanitation Coverage: 25.6% Urban / 0% Rural |
| • | Water Treatment Plants: 6 |
| • | Wastewater Treatment Plants: 3 |
| • | Employees: 4,432 |

Figures accurate as of February 2009.

Currently, 150 employees are working on one-month contracts until the issue is resolved. Deepening the challenge ahead for the new chairman – who previously served in Dakahleya – is that construction of the company headquarters is still not complete.

C1.2 Approach

In keeping with the project contract scope of work, WWSS's interventions target areas of critical need to Sohag WWC and where the greatest immediate impact can be made. Due to its lack of corporate strategy, WWSS provided Year 1 assistance and training on business-plan development, which will continue this year. The Chairman of Sohag WWC was also a participant on the WWSS Jordan Water/Wastewater Utility Study Tour in July 2009. Only compounding the Sohag WWC's staffing problems is a nascent human resources department, which WWSS helped lay the groundwork in Year 1 and will continue efforts to launch a functioning department in Year 2. Sohag WWC received extensive technical assistance and training in Year 1 across its financial, O&M, commercial, and program management units in order to enable the subsidiary to receive more-targeted assistance, outlined in Section I and referenced below. Detailed below are the specific tasks designed to help Sohag WWC improve all aspects of its operations.

C1.3 Tasks

SOH 1. (See CC 1.) Assist in the ongoing development of the Sohag WWC business plan. In Year 2, WWSS will continue providing support of Sohag WWC's business-planning process, which will include human resources development plan and financial plan using the sector-wide five-year financial planning tool. Senior Utility Management Advisor will lead this task, in collaboration with other WWSS senior advisors, HR consultant and the Business Planning Coordinator.

SOH 2. (See CC 5.) Launch Sohag WWC human resources department. Building on the HR planning activity, the project will develop the organization chart, purpose statements, functions, job descriptions, and staffing requirements, so that the department can be formally launched. Technical assistance will then be provided in assigning and recruiting the appropriate staff. Additionally the Sohag HR department will participate in cross-cutting HR training and workshops, as described in Subsection B2.

SOH 3. Develop Sohag WWC staffing plan. The goal of this exercise is to ensure that the organization is set up in an effective way to enable managers, supervisors, staff, and operatives to play their parts in achieving company objectives. It will be possible from this exercise to judge the extent to which the present organisation is suitable and what changes are necessary, if any, to make it more effective. A local short-term consultant will provide hands-on technical assistance, working with subsidiary senior management to review and adjust their organizational structure, including projected staffing levels, building on the WWSPR-supported staffing plan and the company's current strategic direction.

SOH 4. (See CC 11., 12., 13.) Strengthen Sohag WWC finance department. In Year 1, Sohag WWC received urgently needed UAS training on 4-9 and 26-30 July, for a total of 44 participants. In Year 2, WWSS will assist Sohag WWC in developing the organization chart and job descriptions for its finance department. We will then support them in implementing the five-year financial planning tool to generate financial projections, as part of the business planning process. In addition, we will roll out the cross-cutting activities in financial management, as described B2. This will entail developing and supplying the subsidiary with the *Financial/Accounting Manual*, which was submitted by WWSS to the HCWW for review on August 4, assisting in development of a performance-based budget, and providing a cost accounting manual and system, under which an open-source financial management system will be installed.

SOH 5. Support Sohag WWC warehouse and procurement unit. We will strengthen Sohag WWC's Warehouse and Procurement Unit by: developing an organizational chart, job descriptions, and operating procedures, and providing OJT, building on Year 1 efforts. The task will be led by the Procurement and Supply Chain Specialist, with support from the Senior Finance Advisor M. Bakr.

SOH 6. Establish a billing and customer service center. Based on our experience in Year 1, which included the issuance of the first electronically generated water bill at the Sohag WWC, we will expand our assistance in other related areas, including help in developing a public awareness plan along with monthly action plans and other programs to foster the establishment of a commercial unit. WWSS will provide technical assistance to establish a billing and customer service center. The effort will involve procuring and installing required equipment, developing operating instructions, and OJT for staff. Senior Performance Management Advisor Abdel Fattah Saad will lead these activities, supported by Mr. Hassan el-Samman, Billing and collection Specialist.

SOH 7. Assist in development of O&M plan and budget (See also CC 8). In conjunction with the business planning exercise, will assist this subsidiary in completing its O&M plan, building upon the *Planning and Budgeting* training received in July 2009.

SOH 8. Enhance utilization of laboratory. WWSS recently discussed a preliminary action plan with the Director of Laboratories and Director of Technical Affairs Sector at Sohag WWC for improving methods of storage, handling, and management of chemical materials to achieve rationalization of consumption and enhanced work efficiency, as well as evaluating two of the subsidiary's three sectors in terms of inventory and status of warehouses, materials, and display. As its second subtask, WWSS will procure equipment for analysis of water/wastewater samples, including a spectrophotometer, and facilitate related training for the lab staff in cooperation with GTZ. In Year 1, WWSS defined chemical and lab equipment needs at Sohag WWC with emphasis on matching procurement to the subsidiaries ongoing application of WWSS-developed SOPs. The task will be led by Lab Specialist Medhat Mohamed Tolba.

SOH 9. Provide technical and on-the-job training for Sohag GIS unit. In Year 1, WWSS provided the subsidiary with ARC-GIS ArcView software. In Year 2, we will implement the week-long GIS course with the GIS unit, and thereafter provide ongoing OJT. This task will be led by GIS specialist with support from the Training Coordinator.

SOH 10. Support the establishment of the Sohag WWC PMU (See also tasks CC 14, 15, 16, and 17). WWSS provided formal and on-the-job training on PRiSM analysis, program management fundamentals, project scheduling, cost control techniques, and the use of MS Project in Year 1. We will continue our technical assistance and training started in Year 1 to build the capacity of the PMU. This includes preparing and disseminating a *Capital Investment Planning Manual* and *Project Management Manual*, providing related training to support the use the manuals, and contract management training. Sohag WWC will also receive training on WaterCAD and SewerCAD, delivered by a Bentley-certified Training Engineer. The latter program management software is used to investigate and analyze in greater detail the effects of system surcharging, overflows, and bypasses. Mr. A. Kandil, Senior CIP/PM Advisor will lead this task.

C1.4 Resources and Timing

Leadership for all Year 2 tasks for Sohag WWC will lie with the WWSS Upper Egypt Coordinator Sherif Moursy, who will be supported by a team of technical advisors across all functional areas. WWSS also will utilize short-term assistance; specifically, an organizational development expert for SOH 3, and a Bentley-certified training engineer, for the delivery WaterCAD and SewerCAD training under SOH 9. SOH 7, which will be conducted in close coordination with GTZ, will also require short-term assistance from a procurement specialist. Please see Annex A for full details on the WWSS staff responsible for day-to-day management and implementation timing for each task.

C2. Assiut Water and Wastewater Company

C2.1. Background

The WWSS-conducted Participatory Rapid Assessment (PRA) in January and February 2009 showed the following overriding challenges facing Assiut WWC.

- Lack of full utilization of tool, instruments, and IT systems.
- Inadequate staff training and qualifications.
- Variation in quality and quantity of source water.
- Premature aging of some water and wastewater systems.

Assiut WWC

- Date of Establishment: March 3, 2008
- Total Water Production: 753,732 m³/day
- Total Wastewater Treatment: 626,000 m³/day
- Population Served: 3,850,673
- Water Coverage: 93% Urban / 87% Rural
- Sanitation Coverage: 18% Urban / 0% Rural
- Water Treatment Plants: 3
- Wastewater Treatment Plants: 3
- Employees: 3,615

Figures accurate as of February 2009.

Since early 2009, WWSS and Assiut WWC have worked together to build a foundation for deeper impact interventions in Year 2 of the project. Assiut WWC received extensive WWSS technical assistance and training on business planning, GIS, asset management and MARS, procurement, inventory, and finance systems, billing and collection, planning and budgeting, and water treatment, among others. The Chairman of Assiut WWC was also a participant on the WWSS Jordan Water/Wastewater Utility Study Tour in July 2009. Notably, the asset management and MARS systems were installed by WWSS and are operational at Assiut WWC. Assiut WWC is also the sole WWSS-supported subsidiary to have the readiness to receive both *UAS Phase I* and *UAS Phase II* training. WWSS also provided extensive technical assistance and OJT to Assiut WWC's IT department to develop two new computer applications, one for its procurement, inventory, and finance function, and one for its material-coding process, called the "Fast Coding Program." In the area of billing and collection, WWSS enhanced the temporary billing software supplied by the HCWW to cover payments, leading to issuance of its first electronically produced bill for the July/August water cycle on September 1, and developing a network solution for the Assiut WWC billing center.

C2.2 Approach

The project's interventions for Year 2 are designed to align with the contract scope of work and build upon the accomplishments of project assistance in Year 1. We will continue to build the foundation for quality financial, human resources, commercial, and construction management by providing equipment, training, and technical assistance in these areas.

C2.3 Tasks

AST 1. (See CC 1.) Assist in the ongoing development of the Assiut WWC business plan. In Year 2, WWSS will continue providing support of Assiut WWC's business planning process, which will include human resources development plan and financial plan using the sector-wide five-year financial planning tool. Senior Utility Management Advisor will lead this task, in collaboration with other WWSS senior advisors and the Business Planning Coordinator.

AST 2. (See CC 5.) Launch Assiut WWC human resources department. Building on the HR planning activity, the project will develop the organization chart, purpose statements, functions, job descriptions, and staffing requirements, so that the department can be formally launched. Technical assistance will then be provided in assigning and recruiting the appropriate staff. Additionally, the Assiut HR staff will participate in cross-cutting HR trainings and workshops, as described in Subsection B2.

AST 3. Develop Assiut WWC staffing plan. A local short-term consultant will provide hands-on

technical assistance, working with subsidiary senior management to review and adjust their organizational structure, including projected staffing levels, building on the WWSPR-supported staffing plan and the company's current strategic direction.

AST 4. Establish Assiut WWC training center. WWSS recognizes that once the company's human resources department is established and functioning, an equipped facility for training new and existing staff will be needed. Once Assiut WWC approval is received on training center location, space, and personnel, WWSS will procure the required equipment to establish a training center, collect training material, and conduct training-of-trainers and other capacity building programs for the training center staff.

AST 5. (See CC 11., 12., 13.) Strengthen Assiut WWC finance department. In Year 1, WWSS delivered *UAS Phase I* in March and April and *UAS Phase II* training in June to Assiut WWC for a total of 72 participants. In Year 2, WWSS will assist Assiut WWC in developing the organization chart and job descriptions for its finance department. Additionally, in coordination with the business planning process, we will implement the five-year financial planning tool and generate financial projections. We will also roll out cross-cutting activities in financial management, as described in Subsection B2. WWSS will develop and supply the subsidiary with the *Financial/Accounting Manual* (submitted by WWSS to the HCWW for review on August 4), assist in development of a performance-based budget, and deliver a cost accounting manual.

AST 6. Support Assiut WWC warehouse and procurement unit. WWSS will support the development of an organizational chart and job descriptions for the unit. Following that, we will work with the unit's staff to develop operating procedures for warehouse management, coding materials, etc, and provide on-the-job training on their implementation.

AST 7. Establish a meter repair workshop. WWSS will provide technical assistance to establish a meter repair/calibration workshop, which will involve rehabilitation of current facilities, procuring and installing the required equipment, developing operating instructions, OJT for staff, and developing a household meter repair plan. Hassan El-Samman, Metering, Billing, and Collections Specialist will lead this activity, assisted by a short-term consultant.

AST 8. Establish a billing and collections center. Based on the success of Year 1 tasks, which included issuing the first electronically-generated water bill for Assiut WWC, developing a 2009-10 awareness plan and related monthly action plans, and developing a network solution for its billing center, WWSS will continue to assist the subsidiary in establishing a commercial unit. WWSS will provide technical assistance to establish a billing and collections center. The effort will involve rehabilitation of current facilities, procuring and installing the required equipment, developing operating instructions, and OJT for staff. Both subtasks will be led by Senior Performance Management Advisor Abdel Fattah Saad, with assistance from a short-term architect.

AST 9. Provide technical and on-the-job training for Assiut GIS unit. WWSS assisted in the creation of GIS water and wastewater network maps for Assiut WWC's master plan. In Year 2, we will continue GIS support and provide technical and on-the-job training for the GIS unit. This task will be led by GIS specialist with support from the Training Coordinator

AST 10. (See CC 8.) Assist in development of O&M plan and budget. To improve its O&M management, in cooperation with the business planning exercise, WWSS will assist the subsidiary in completing its O&M plan, building upon the *Planning and Budgeting* training in July 2009.

AST 11. Replicate JICA-developed SOPs in two plants. WWSS will replicate implementation in two Assiut WWC plants of the SOPs developed by JICA for Zagazig Sharq and Abbasa. After selecting the most appropriate plants, we will customize the SOPs to the plants and conduct on-the-job training on their implementation.

AST 12. Procure equipment for newly established Assiut WWC PMU. In Year 1, WWSS assisted in the establishment of the Assiut WWC PMU by providing an organization chart, proposed staffing, and job descriptions, and evaluating the PMU's equipment requirements. In Year 2, Senior Program Management Advisor Ahmed Kandil and Project Management and Contracting Specialist Ahmed Abdel Hamid will lead the efforts to procure and install equipment.

AST 13. (See CC 14., 15., 16., 17.) Support the establishment of the Assiut WWC PMU. In Year 1, WWSS provided formal and on-the-job training on PRiSM analysis, program management fundamentals, project scheduling, cost control techniques, and the use of MS Project. WWSS will continue the providing extensive the technical assistance and training started in Year 1, in order to build the capacity of the PMU. This task includes development and provision of the *Capital Investment Planning Manual* and *Project Management Manual*, related training to support the use of each manual, and training on contract management. Assiut WWC will also receive training on WaterCAD and SewerCAD, delivered by a Bentley-certified Training Engineer. This additional program management software is used to investigate and analyze in greater detail the effects of system surcharging, overflows, and bypasses.

AST 14. Perform project management responsibilities. In accordance with the WWSS contract scope of work and based on the level of readiness at the subsidiary, the project has selected Assiut WWC for additional support. WWSS will assist Assiut WWC in performing selected program management functions, including issuance of its monthly PRiSM reporting.

AST 15. Provide technical assistance in managing one construction project. In accordance with the WWSS contract scope of work, the project has selected Assiut WWC for additional support in construction management. Using a local qualified construction management firm, WWSS will provide technical assistance in managing one construction project. This will include project identification, preparation of the terms of reference, selection of a construction management firm, and award of the contract for the project. This task will be led by Senior Program Management Advisor Ahmed Kandil, with support from Capital Investment Planning Specialist.

C2.4 Resources and Timing

Leadership for all Year 2 tasks for Assiut WWC will lie with the WWSS Upper Egypt Coordinator Sherif Moursy, who will be supported by a team of technical advisors across all functional areas. The project will utilize the following short-term technical assistance: an organizational development specialist for AST 3; trainers for AST 4; a meter repair consultant for AST 7, and Bentley-certified training engineers for customizing SOPs for Assiut plants in AST 11 and for delivering WaterCAD and SewerCAD training in AST 13. WWSS will procure the services of a construction management firm under AST 15. The project will also closely coordinate AST 4. efforts with GTZ, FaDWaSP, and InWent. Please see Annex A for full details on the WWSS staff responsible for day-to-day management and the timing of implementation for each task.

C3. Luxor Water and Wastewater Company

C3.1. Background

The WWSS-conducted Participatory Rapid Assessment (PRA) in January and February 2009 revealed that Luxor WWC was facing similar challenges as Assiut WWC; namely:

- Lack of full utilization of tool, instruments, and IT systems.
- Inadequate staff training and qualifications.
- Variation in quality and quantity of source water.
- Premature aging of some water and wastewater systems.

Luxor WWC

- Date of Establishment: April 4, 2008
- Total Water Production: 185,033 m³/day
- Total Wastewater Treatment: 52,000 m³/day
- Population Served: 568,813
- Water Coverage: 100% Urban / 100% Rural
- Sanitation Coverage: 42% Urban / 0% Rural
- Water Treatment Plants: 3
- Wastewater Treatment Plants: 4
- Employees: 1,421

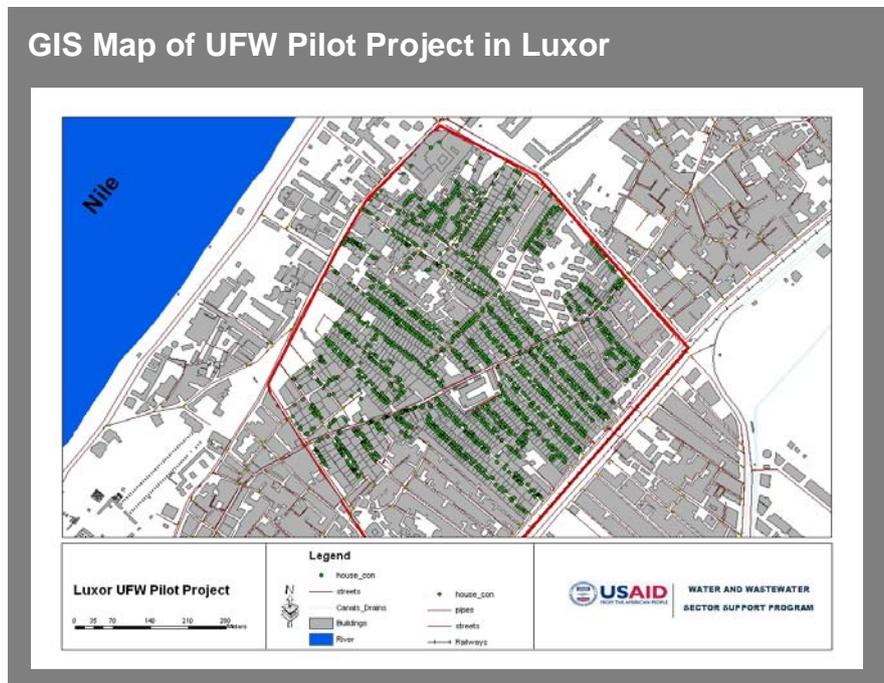
Figures accurate as of February 2009.

Based on this, the project initiated the business planning exercise in Year 1, and provided a mix of technical assistance and training across the financial, commercial, O&M, and human resources sectors of the subsidiary to support its business-planning process and other identified needs. One specific target of opportunity that WWSS began implementation of in Year 1 was the Unaccounted-for Water (UFW) Pilot Program in Luxor. Luxor WWC received past donor assistance from the USAID-funded Secondary Cities Project, which included the provision of leak detection equipment. In 2008, WWSS revived Luxor WWC’s leak detection unit and trained the existing staff on the equipment, and based on this success, the HCWW provided funds to four additional subsidiaries for the purchase of leak detection equipment. WWSS began development of the Luxor UFW Pilot Program in order to build upon the successes

achieved by Luxor’s leak detection unit. The above GIS map 2,095 house connections, 108 valves, and 1,702 buildings covering 80% of the Luxor UFW Pilot Program area.

C3.2 Approach

As described above under WWSS Year 2 Priorities, the project has refined its strategic approach this year to concentrate efforts on tasks that address specific needs of each subsidiary in the project contract scope, while keeping a keen eye on areas of opportunity for sector-wide impact. Luxor WWC continues to require assistance on developing its business plan, and WWSS has identified specific needs related to financial and O&M management and systems, as well as the need for a staffing plan for the subsidiary. WWSS will continue to support the establishment of Luxor WWC’s PMU with equipment procurement, technical assistance, and training.



Continuing implementation of the Luxor UFW Pilot Program provides the most complete example of the WWSS Year 2 refinement in strategy. The combination of a high percentage of unaccounted-for water at Luxor WWC and the existence of leak detection equipment supplied by a previous donor-funded project made the subsidiary a perfect candidate for a high-value intervention. By providing intensive Year 1 training on the leak detection, WWSS has been able to design a pilot program that not only utilizes the already existing assets of Luxor WWC, maximizes donor funding, and helps solve a serious issue affecting its financial solvency, but will also create a replicable program for use throughout the sector.

C3.3 Tasks

LUX 1. Develop and implement Unaccounted-for Water (UFW) Pilot Program. As noted above, WWSS will continue development and implementation of the UFW Pilot Program. Year 2 efforts include procuring bulk meters, and provide orientation and on-the-job training in their use to Luxor WWC O&M staff. In parallel, we will measure, analyze, and present results of the program against a baseline of approximately 50% UFW, which will be implemented under the direction of the Senior Performance Management Advisor. Successful implementation of the pilot in Luxor will be used as an example for other water and wastewater companies, and the project intends to facilitate cross-visits for subsidiaries across Upper Egypt.

LUX 2. (See CC 1.) Assist in the ongoing development of the Luxor WWC business plan. In Year 2, WWSS will continue providing technical in support of Luxor WWC's business-planning process. WWSS will specifically assist in developing Luxor WWC's human resources development plan, O&M plan, and financial plan using the sector-wide five-year financial planning tool. Senior Utility Management Advisor will lead this task, in collaboration with other WWSS senior advisors and the Business Planning Coordinator.

LUX 3. Develop Luxor WWC staffing plan. WWSS introduced the concept of a comprehensive human resource development plan in Year 1 as part of the business-planning process. Luxor WWC has been developing purpose statements, function definitions, job descriptions, and staffing requirements, with WWSS assistance. In Year 2, Senior HRM/D Advisor Madiha Afifi, with support of an organizational development short-term technical assistance consultant, will assist in finalizing the Luxor WWC staffing plan.

LUX 4. (See CC 11., 12., 13.) Strengthen Luxor WWC finance department. Based on the WWSS PRA and in further support of addressing performance deficiencies in Luxor WWC's financial department, WWSS will revisit and revise the organizational chart for the financial sector. Additionally, in coordination with the business planning process, we will implement the five-year financial planning tool and generate financial projections. We will also develop and supply the subsidiary with the *Financial/Accounting Manual*, which was submitted by WWSS to the HCWW for review on August 4, and assist in development of a performance-based budget. Finally, we will provide a cost accounting manual and system and provide on-the-job training.

LUX 5. Update USAID-supported O&M management system. In further support to the subsidiary's O&M department, the project plans to update the PMC2000 O&M management system by contracting a software provider to update the system and provide training – the PMC2000 system was previously supplied under the USAID-funded Secondary Cities Project. The two efforts will be led by the Senior O&M Advisor as well a short-term consultant, likely from the software provider, supported by Eng. Magdy Awad Allah.

LUX 6. Provide technical and on-the-job training for Luxor GIS unit. In Year 1, WWSS provided the subsidiary with ARC-GIS ArcView software. WWSS developed the Introduction to ARC-GIS I training materials and delivered this training to Luxor WWC. We will continue to provide on-the-job training throughout Year 2.

LUX 7. Procure equipment for newly established Luxor WWC PMU. In Year 1, WWSS assisted in the establishment of the Luxor WWC PMU by providing an organization chart, proposed staffing, and job descriptions, and evaluating the PMU's equipment requirements. In Year 2, Senior Program Management Advisor and Project Management and Contracting Specialist Ahmed Abdel Hamid will lead the efforts to procure and install equipment.

LUX 8. (See CC 14., 15., 16., 17.) Support the establishment of the Luxor WWC PMU. WWSS provided formal and on-the-job training on PRiSM analysis, program management fundamentals, project scheduling, cost control techniques, and the use of MS Project in Year 1. WWSS will continue the providing extensive the technical assistance and training started in Year 1, in order to build the capacity of the PMU. This task includes development and provision of the *Capital Investment Planning Manual* and *Project Management Manual*, related training to support the use of each manual, and training on contract management. Luxor WWC will also receive training on WaterCAD and SewerCAD, delivered by a Bentley-certified Training Engineer. This additional program management software is used to investigate and analyze in greater detail the effects of system surcharging, overflows, and bypasses.

C3.4 Resources and Timing

Leadership for all Year 2 tasks for Luxor WWC will lie with the WWSS Upper Egypt Coordinator Sherif Moursy, who will be supported by a team of technical advisors across all functional areas. The project will utilize short-term technical assistance, as such: an organizational development specialist for LUX 3., a financial analyst trainer for LUX 4.; and a Bentley-certified training engineer for the WaterCAD and SewerCAD training in LUX 8. WWSS also will procure the services of a software provider under LUX 5. Please see Annex A for full details on the WWSS staff responsible for day-to-day management and the timing of implementation for each task.

C4. Giza Water and Wastewater Company

C4.1. Background

Similar to the other four subsidiaries selected to for WWSS Year 1 interventions, Giza WWC is facing the following overriding challenges:

- Lack of full utilization of tool, instruments, and IT systems.
- Inadequate staff training and qualifications.
- Variation in quality and quantity of source water.
- Premature aging of some water and wastewater systems.

Giza WWC

- Date of Establishment: September 30, 2007
- Total Water Production: 2,463,000 m³/day
- Total Wastewater Treatment: 820,000 m³/day
- Population Served: 5,724,707
- Water Coverage: 100% Urban / 95% Rural
- Sanitation Coverage: 100% Urban / 6% Rural
- Water Treatment Plants: 5
- Wastewater Treatment Plants: 3
- Employees: 6,698

Figures accurate as of February 2009.

The past year, Giza WWC has received technical assistance and training from WWSS on business-planning (as well as participating in the WWSS-conducted Jordan Water/Wastewater Utility Study Tour), on *ARC-GIS*, SOPs, customer service, asset management and MARS systems, PRiSM, and human resources development. Giza WWC is faces specific challenges in network O&M due to the geographical coverage of its operations, and in reducing cost due to inefficiencies in its electricity and chemical optimization. WWSS has also determined that Giza WWC is also a strong candidate for high-impact intervention in customer service.

C4.2 Approach

While Giza WWC will receive continued assistance in Year 2 similar to the other WWSS subsidiaries on development of its business plan, staffing plan, financial management system, meter repair workshop, and PMU, the company will also be provided with additional assistance designed to meet its specific needs and produce high impact results. For instance, WWSS in Year 2 seeks to establish a circuit-rider program for Giza WWC due to its geographical coverage area and conduct an audit of its electricity and chemical usage due its critical effect on the subsidiary's cost of operations. Giza WWC also will receive slightly different assistance in the area of customer service due to its higher level of readiness, and has been selected as a recipient of program management responsibilities performance by WWSS.

C4.3 Tasks

GIZ 1. (See CC 1.) Assist in the ongoing development of the Giza WWC business plan. In Year 2, WWSS will continue providing support of Giza WWC's business-planning process, which will include human resources development plan and financial plan using the sector-wide five-year financial planning tool, as well as an O&M plan. Senior Utility Management Advisor Ghaleb Akari will lead this task, in collaboration with other Senior Advisors and the business plan coordinator.

GIZ 2. Finalize Giza WWC staffing plan. WWSS and Giza WWC began working together to develop the subsidiary's staffing plan in Year 1, and aim to complete the plan in Year 2. Senior HRM/D Advisor will oversee this task, with the day-to-day work performance by a short-term organizational development consultant.

GIZ 3. (See CC 11., 12., 13.) Strengthen WWC finance department. Based on the WWSS PRA and in further support of addressing performance deficiencies in Giza WWC's financial department, WWSS will revisit and revise the organizational chart for the financial sector. Additionally, in coordination with the business planning process, we will implement the five-year financial planning tool and generate financial projections. We will also develop and supply the subsidiary with the

Financial/Accounting Manual, which was submitted by WWSS to the HCWW for review on August 4, and assist in development of a performance-based budget. Finally, we will provide a cost accounting manual and system and provide on-the-job training.

GIZ 4. Establish circuit rider program for Giza WWC. WWSS determined in Year 1 that Giza WWC would greatly benefit from establishment of a circuit-rider program for its O&M department due to its unique geographical makeup. The circuit-rider program (i.e., mobile O&M workshop) will provide Giza WWC with the ability to more rapidly respond to O&M needs for technical assistance, maintenance, and repair to remote sites throughout its coverage area. To establish the circuit-rider program, WWSS will first work with the O&M department at the WWC to institutionalize the mobile unit in the organizational structure and allocate staff. Contingent upon staff allocation, we will procure the required equipment - including a truck, tools, and spare parts - and provide training and technical assistance on implementing the program. The task will be managed by Senior O&M Advisor and supported by O&M Planning and Budgeting Specialist Saied Abd Rafea.

GIZ 5. Conduct audit of electricity and chemical use of Giza WWC. In Year 1, WWSS determined that Giza WWC could greatly benefit from targeted assistance with optimizing its electricity and chemical usage, which have a significant effect on the cost of water production. WWSS will conduct the audit in close coordination with Giza WWC, and provide detailed recommendations for the optimization of electricity and chemical use. The recommendations are contingent on Giza WWC's making the needed investments to rationalize electricity and chemical use. This two-prong task will be managed by O&M Senior Advisor, supported by Sherif Moursi and Medhat Tolba.

GIZ 6. Establish a meter repair workshop for Giza WWC. In Year 2, WWSS will provide technical assistance to establish a meter repair/calibration workshop, which will include rehabilitating the current facility, procuring and installing the required equipment, developing related operating procedures, and providing OJT for staff. This task will also include developing a household meter repair plan. This task will be performed by the Metering, Billing, and Collections Specialist Hassan El-Samman and a short-term technical consultant.

GIZ 7. Assist Giza WWC with customer service center establishment: WWSS completed the 2009-2010 Awareness Plan and monthly action plans for Giza WWC, along with company newsletters and promotional materials. At the end of Year 1, the project was providing assistance to Giza WWC on implementation of its customer awareness plan. Under this task, WWSS will deliver technical assistance in the design the Pyramids Street Customer Service Center and provide advice on launch of the Kit Kat Customer Service Center for Giza WWC. Both subtasks will be led by Senior Performance Management Advisor Abdel Fattah Saad, with assistance from a short-term architect.

GIZ 8. Provide technical and on-the-job training for Giza GIS unit. In Year 1, WWSS provided the subsidiary with ARC-GIS ArcView software. In Year 2, we will implement the week-long training course, and provide them with on-the-job training throughout the year.

GIZ 9. Procure equipment for newly established Giza WWC PMU. In Year 1, WWSS assisted in the establishment of the Giza WWC PMU by providing an organization chart, proposed staffing, and job descriptions, and evaluating the PMU's equipment requirements. In Year 2, Senior Program Management Advisor Ahmed Kandil will lead the efforts to procure and install equipment.

GIZ 10. (See CC 14., 15., 16., 17.) Support the establishment of the Giza WWC PMU. In Year, WWSS provided formal and on-the-job training on PRiSM analysis, program management fundamentals, project scheduling, cost control techniques, and the use of MS Project. WWSS will continue the providing extensive the technical assistance and training started in Year 1, in order to build the capacity of the PMU. This task includes development and provision of the *Capital Investment Planning Manual* and *Project Management Manual*, related training to support the use of each manual, and training on contract management. Giza WWC will also receive training on WaterCAD and SewerCAD, delivered by a Bentley-certified Training Engineer. This additional program

management software is used to investigate and analyze in greater detail the effects of system surcharging, overflows, and bypasses.

GIZ 11. Perform project management responsibilities: In accordance with the WWSS contract scope of work and based on the level of readiness at the subsidiary, the project has selected Giza WWC for additional program management support. WWSS will assist Giza WWC in performing selected program management functions, including issuance of its monthly PRiSM reporting. Under the direction of Senior Program Management Advisor Ahmed Kandil, this task will be handled by the PRiSM and Project Management Assistant.

C4.4 Resources and Timing

Leadership for all Year 2 tasks for Giza WWC will lie with the WWSS Middle Egypt Coordinator Magdy Awad Allah, who will be supported by a team of technical advisors across all functional areas. The project will utilize short-term technical assistance; namely, an organizational development specialist for Giza 2.; a trainer and a utility chemical and energy auditor for LUX 4.; a meter repair consultant for Giza 6., an architect for Giza 7., and a Bentley-certified training engineer for the WaterCAD and SewerCAD training in Giza 10. Please see Annex A for full details on the WWSS staff responsible for day-to-day management and the timing of implementation for each task.

C5. Menufiya Water and Wastewater Company

C5.1. Background

Similar to the other four subsidiaries selected for WWSS Year 1 interventions, Menufiya WWC is facing the following overriding challenges:

- Lack of full utilization of tools, instruments, and IT systems.
- Inadequate staff training and qualifications.
- Variation in quality and quantity of source water.
- Premature aging of some water and wastewater systems.

Menufiya WWC

- Date of Establishment: September 30, 2007
- Total Water Production: 655,587 m³/day
- Total Wastewater Treatment: 142,395 m³/day
- Population Served: 3,399,439
- Water Coverage: 99% Urban / Rural NR*
- Sanitation Coverage: 100% Urban / 9% Rural
- Water Treatment Plants: 6
- Wastewater Treatment Plants: 13
- Employees: 5,216

*Figures accurate as of February 2009.
Not reported

Menufiya WWC participated in the Jordan Water/Wastewater Utility Study Tour and is receiving ongoing support in developing its business plan from WWSS. The subsidiary also received Year 1 technical assistance and training in GIS, UAS, operating procedures, human resources development, and MARS the asset management systems, as being one of only two WWSS subsidiaries having the asset system installed and operational at its site. Menufiya is also one of two subsidiaries that are actively implementing its WWSS-supported 2009-2010 Awareness Plan.

C5.2 Approach

Menufiya WWC will receive continued assistance in Year 2 similar to the other WWSS subsidiaries on development of its business plan, staffing plan, financial management system, meter repair workshop, GIS, and PMU. The activities presented below are designed to build on those initiated in Year 1, and center on the business plan and related O&M, HR, and financial plans. In addition, WWSS will conduct an audit of the Menufiya WWC's electricity and chemical usage and provide recommendations on electricity and chemical optimization, in coordination with a similar effort at Giza WWC. Additional activities, such as a warehouse management pilot program, will be initiated in Year 3.

C5.3 Tasks

MEN 1. (See CC 1.) Assist in the ongoing development of the Menufiya WWC business plan. In Year 2, WWSS will continue providing support of Menufiya WWC's business planning process, which will include human resources development plan and financial plan using the sector-wide five-year financial planning tool, as well as an O&M plan. Senior Utility Management Advisor Ghaleb Akari will lead this task, in collaboration with other senior advisors and the Business Plan Coordinator.

MEN 2. (See CC 5.) Launch Menufiya WWC human resources department. Building on the WWSS assessment of human resources practices and development of a recruitment and selection process for hiring new staff, the project will develop the organization chart, purpose statements, functions, job descriptions, and staffing requirements, so that the department can be formally launched. Additionally the Menufiya HR staff will participate in cross-cutting HR trainings and workshops, as described in Subsection B2.

MEN 3. Finalize Menufiya WWC staffing plan. WWSS and Menufiya WWC will continue development of the subsidiary's staffing plan in Year 2. Senior HRM/D Advisor Madiha Afifi will lead this task with support an Organizational Development short-term consultant.

MEN 4. (See CC 11., 12., 13.) Strengthen WWC finance department. Additionally, in coordination

with the business planning process, we will implement the five-year financial planning tool and generate financial projections. We will also develop and supply the subsidiary with the *Financial/Accounting Manual* and assist in development of a performance-based budget. Finally, we will provide a cost accounting manual and system and provide on-the-job training.

MEN 5. Implement warehouse management pilot program at Menufiya WWC. WWSS has determined that Menufiya WWC would greatly benefit from targeted assistance in warehouse management. Under terms to outlined in a forthcoming MOU between WWSS and Menufiya WWC, the subsidiary will build the storage facility and the project will provide shelving and the organization system, including procedures, OJT, and technical assistance. At the end a final report will summarize the activities, tasks and lessons learned will be documented for replication of the warehouse management system for in other subsidiaries. The task will be implemented by Procurement Supply Chain Specialist Mohamed Kassem under the direction of Senior Finance Advisor Mahmoud Bakr.

MEN 6. Establish a meter repair workshop for Menufiya WWC. In Year 2, WWSS will provide technical assistance to establish a meter repair/calibration workshop, which will include rehabilitating the current facility, procuring and installing the required equipment, developing related operating procedures, and providing OJT for staff. This task will also include developing a household meter repair plan. This task will be implemented by a short-term technical consultant, under the direction of Senior Performance Management Advisor Abdel Fattah Saad.

MEN 7. Provide technical and on-the-job training for Menufiya GIS unit. In Year 1, WWSS provided the subsidiary with ARC-GIS ArcView software. In Year 2, we will implement the week-long training course, and provide them with on-the-job training throughout the year.

MEN 8. Conduct audit of electricity and chemical use of Menufiya WWC: WWSS has determined that Menufiya WWC – like Giza WWC – could benefit from targeted assistance designed to help optimize its electricity and chemical usage, which have a significant effect on the cost of producing water. In Year 2, WWSS will audit Menufiya WWC, and provide detailed recommendations for the optimization of electricity and chemical use. Provision of the recommendations would contingent on the subsidiary making the required investments to rationalize its electricity and chemical use.

MEN 9. Procure equipment for newly established Menufiya WWC PMU. In Year 2, Senior Program Management Team Leader Advisor Ahmed Kandil and Project Management and Contracting Specialist Ahmed Abdel Hamid will lead the efforts to procure and install equipment.

MEN10. (See CC 14., 15., 16., 17.) Support the establishment of the Menufiya WWC PMU. WWSS will provide extensive technical assistance and training in order to build the capacity of the Menufiya WWC PMU. This task includes development and provision of the *Capital Investment Planning Manual* and *Project Management Manual*, related training to support the use of each manual, and training on contract management. Menufiya WWC will also receive training on WaterCAD and SewerCAD, delivered by a Bentley-certified Training Engineer. This additional program management software is used to investigate and analyze in greater detail the effects of system surcharging, overflows, and bypasses. WWSS will also procure and install the required equipment to establish the PMU.

C5.4 Resources and Timing

Leadership for all Year 2 tasks for Menufiya WWC will lie with the WWSS Lower Egypt Coordinator Ahmed Kandil, who will be supported by a team of technical advisors across all functional areas. WWSS utilization of short-term technical assistance for Menufiya WWC will consist of: an organizational development specialist under MEN 3., a meter repair consultant under MEN 5., and a Bentley-certified training engineer for the WaterCAD and SewerCAD training in MEN 9. Please see Annex A for full details on the WWSS staff responsible for day-to-day management and the timing of implementation for each task.

C6. Beni Suf Water and Wastewater Company

C6.1 Background

The Beni Suf WWC was one of the first companies in the sector, established in 2004. They received donor assistance through the PADCO-implemented Middle Egypt Utilities Institutional Strengthening Project until 2005, in the areas of strategic planning, financial management, and master-planning. Human resource management and commercial functions at the company are strong, with a computerized HR management system in place, collection rates above 90 percent, and less than ten million LE in arrears. They also have strong MIS/GIS capabilities, well-established financial systems (ADVAC and UAS), and are well trained in PRiSM. Additionally, they undertook a business planning activity with support of the PADCO project, but this strategic planning function has not been sustained at the company.

Beni Suf WWC

- Date of Establishment: April 29, 2004
- Total Water Production: 236,225 m³/day
- Total Wastewater Treatment: 88,630 m³/day
- Population Served: 2,348,908
- Water Coverage: 100%
- Sanitation Coverage: 26%
- Water Treatment Plants: 17
- Wastewater Treatment Plants: 5
- Employees: 2,797

Figures accurate as of September 2009.

C6.2 Approach

The Beni Suf WWC does not require WWSS assistance in all functional areas, given its history of donor assistance and its relatively strong organization. After an assessment of the company's various functions and discussions with company management, the WWSS team analyzed the potential areas of assistance per the contract scope of work, and selected those with the most potential for impact on subsidiary management – notably, business planning, human resource management, and energizing available facilities such as the lab. We will begin in Year 2 in the areas of HRM/D, finance, and O&M, and will move on to business planning and additional activities in Year 3.

C6.3 Tasks

BEN 1. Propose a new organizational structure for the HRD section. As occurred elsewhere in the sector, the Human Resource Department was recently restructured per PD 232, combining Personnel and Training functions into an elevated Human Resource unit at the “sector” level of the organization. Under the leadership of the Senior HRM/D Advisor, the HR Specialist will work with this new sector to develop a revised organizational structure in line with this change.

BEN 2. Develop inventory management procedures. While some practices are in place for coding materials, suppliers, and contractors at the company, warehouse management and stock control documentation procedures are not in place, and warehouse staff are not well-trained. To improve the company's procurement and warehousing practices, the WWSS Procurement and Supply Chain Specialist will work with them to develop and document inventory management procedures, and provide on-the-job training for staff on their use.

BEN 3. Improve utilization of central lab. With support from the Middle Egypt Utilities Institutional Strengthening Project, Beni Suf WWC established a central lab in 2003. In order to maximize utility of the lab, and drawing upon the extensive experience and materials of GTZ, the WWSS Laboratory Specialist will work with the company laboratory personnel to develop procedures for laboratory use, and provide on-the-job training for chemists on the procedures.

C6.4 Resources and Timing

Leadership for all Year 2 tasks for Beni Suf WWC will lie with the WWSS Middle Egypt Coordinator Magdy Awad Allah, who will be supported by a team of technical advisors across all functional areas. WWSS will closely coordinate implementation efforts with GTZ on MEN 3. Please see Annex A for full details on the WWSS staff responsible for day-to-day management and the timing of implementation for each task.

C7. Minya Water and Wastewater Company

C7.1 Background

Minya WWC has received considerable donor assistance through the Middle Egypt Utilities Institutional Strengthening Project (1999-2005) and WSPR project (2005-2008), covering asset management, staffing plans, and financial systems. As identified by the Chairman of Minya WWC and confirmed by the WWSS assessment in September 2009, the most critical areas for the company are:

- Human resources capacity building and establishing advanced human resources systems
- Staff development and changing corporate culture
- O&M staff training
- Enhancing the collection system
- Middle management skills and qualification

Minya WWC

- Date of Establishment: April 29, 2004
- Total Water Production: 494,763 m³/day
- Total Wastewater Treatment: 65,557 m³/day
- Population Served: 4,283,791
- Water Coverage: 100% Urban / 100% Rural
- Sanitation Coverage: 24% Total
- Water Treatment Plants: 13
- Wastewater Treatment Plants: 11
- Employees: 4,248

Figures accurate as of February 2009.

C7.2 Approach

Minya requires assistance in targeted areas to further strengthen existing systems, primarily in the core WWSS approaches of business planning and human resource management and development. Considering the company priorities revealed by our assessment, as well as available resources from cross-cutting activities and other activities planned for Middle Egypt, we propose a combination of tasks aimed at maximizing use of their existing resources, such as the central lab, and continuing ongoing – and in some cases USAID-supported – efforts of the company in human resource development, business planning, and financial planning. Minya is included in group three for business planning activities, to be initiated in Year 3.

C7.3 Tasks

MIN 1. Propose a new organizational structure for the HRD section. To assist the newly-established HRD sector, we will work with its leadership to develop its organizational structure. Under the leadership of the Senior HRM/D Advisor, the HR Specialist will work with this new sector to develop a revised organizational structure in line with this change, using other project-supported organizational structures as models. Given that the same activity will be underway in Beni Suef, we will coordinate where possible and consider bringing the companies together to share ideas and solutions.

MIN 2. Develop inventory management procedures. While some practices are in place for coding materials, suppliers, and contractors at the company, warehouse management and stock control documentation procedures are not in place, and warehouse staff are not well-trained. To improve the company's procurement and warehousing practices, the WWSS Procurement and Supply Chain Specialist will work with them to develop and document inventory management procedures, and provide on-the-job training for staff on their use.

MIN 3. Conduct an audit of chemical and electricity use. In coordination with similar activities in Giza and Menufiya, we will conduct an audit of Minya WWC's use of chemicals and electricity, with the goal of improving efficiency of their use to reduce the cost of producing water. As in the other companies, WWSS recommendations for optimizing chemical and electricity use will be contingent on the WWC's making the needed investments for rationalization.

MIN 4. Replicate implementation of JICA-developed standard operating procedures (SOPs). In 2009, the Japan International Cooperation Agency (JICA) rolled-out a set of SOPs for water and wastewater plant operations in two plants in Sharqeya governorate – at Zagazig Sharq and Abbasa. Reviews of the SOPs are positive at both the HCWW and the Sharqeya WWC, which presents an opportunity for companies elsewhere in the country. In Year 2, the WWSS water and wastewater plant specialists will replicate the SOP implementation in one water and one wastewater plant in Minya. They will work with the company to identify the most appropriate plants, and then customize the SOPs for the plants before providing on-the-job training for plant operators to implement the SOPs.

MIN 5. Improve utilization of central lab. As in Beni Suef, we will work with the WWC laboratory staff to maximize utility of their USAID-supported central lab. With coordination and input from our colleagues at GTZ, the WWSS Laboratory Specialist will work with the company to develop procedures for laboratory use and provide on-the-job training for chemists on the procedures.

C7.4 Resources and Timing

Leadership for all Year 2 tasks for Minya WWC will lie the WWSS Middle Egypt Coordinator Magdy Awad Allah, who will be supported by a team of technical advisors across all functional areas. WWSS will require short-term assistance for MIN 3, in the form of a utility chemical and energy auditor, and in efforts under MIN 5, the project will closely coordinate implementation with GTZ. Please see Annex A for full details on the WWSS staff responsible for day-to-day management and the timing of implementation for each task.

C8. Aswan Water and Wastewater Company

C8.1. Background

Based on the WWSS-conducted assessment in September 2009, Aswan WWC is facing the following overriding challenges:

- Weak human resources management and no performance-incentive system.
- Lack of definition of company vision, mission, and programs.
- Need for integration of O&M system.
- Need for improved skills and knowledge to utilize financial systems.
- Hardware and software for billing and collection exists, but is not optimally utilized.
- Staff requires training on new IT, including ArcGIS.
- Program management and capital planning functions require integration, and staff needs introduction to systems (i.e., PRiSM).

Aswan WWC

- Date of Establishment: April 29, 2004
- Total Water Production: 204,851 m³/day
- Total Wastewater Treatment: 105,730 m³/day
- Population Served: 1,222,341
- Water Coverage: 100%
- Sanitation Coverage: 18%
- Water Treatment Plants: 11
- Wastewater Treatment Plants: 8
- Employees: 3,679

Figures accurate as of September 2009.

The WWSS assessment also revealed that the Chairman of Aswan WWC and management are highly receptive to WWSS-proposed interventions and extremely committed to improving the subsidiary in all areas. When asked, the Chairman prioritized the following areas as most critical for Aswan WWC.

1. O&M sector, including laboratories, bulk meters, and training.
2. Human resources development; specifically, human resources systems, plans, policies, and training.
3. Financial systems training and software.
4. Customer service centers.
5. Capital investment, hydraulic modeling, and GIS systems.

Aswan WWC has received extensive prior assistance from USAID and DANIDA, but did not receive WWSS assistance in Year 1.

C8.2 Approach

The post-assessment review by WWSS showed significant alignment between Aswan WWC's needs and the project contract scope of work. WWSS determined that assistance with business-planning, human resources development, training, financial management, O&M management, and program management would provide the greatest immediate impact in improving Aswan WWC's viability. We will begin with assistance in program management in Year 2, and move into business planning, financial management, and HR management in Year 3.

C8.3 Tasks

ASW 1. Provide recommendations for Aswan WWC Planning Unit and PMU on integration. WWSS will provide written recommendations to Aswan WWC on how best to integrate its Planning Unit and PMU, as well as advising on the selected implementation resulting from the recommendations. This task will be led by Program Management Team Leader Ahmed Kandil.

ASW 2. (See CC 14.) Establish Aswan WWC PMU. WWSS will assist in establishing a PMU for Aswan WWC providing the PRiSM manual and related formal training. WWSS also envisions delivering ad-hoc technical assistance related to the use PRiSM to ensure the functioning the Aswan WWC's PMU. These efforts will be led by Project Management and Contracting Specialist Ahmed Abdel Hamid with support from PRiSM and PM assistant.

C8.4 Resources and Timing

Leadership for all Year 2 tasks for Aswan WWC will lie with the WWSS Upper Egypt Coordinator Sherif Moursy, who will be supported by a team of technical advisors across all functional areas. Please see Annex A for full details on the WWSS staff responsible for day-to-day management and the timing of implementation for each task.

C9. Qena Water and Wastewater Company

C9.1 Background

The Qena WWC is a relatively new entity, and faces technical challenges of deteriorating sewage infrastructure and management challenges of excess staff, skill gaps among staff, and lack of modern systems. However, the company is receiving donor assistance, from GTZ, KfW, and DANIDA, to address most of these issues including capital investment, financial management, O&M management, and human resource management.

Qena WWC

- Date of Establishment: August 23, 2006
- Total Water Production: 425,907 m³/day
- Total Wastewater Treatment: 50,000 m³/day
- Population Served: 3,020,000
- Water Coverage: 98%
- Sanitation Coverage: 15%
- Water Treatment Plants: 8
- Wastewater Treatment Plants: 6
- Employees: 3,904

Figures accurate as of September 2009.

C9.2 Approach

Given the presence of multiple donors in Qena, including an on-site GTZ technical assistance team, our interventions were selected to complement existing activities. Business planning and program management, both key to the WWSS approach and not targeted by other donors, were identified as the primary activities for Year 2.

C9.3 Tasks

QEN 1. (See CC 1.) Develop the business plan. The Qena WWC will be included in group 2 of business planning activities (see Subsection B2). Workshops will begin in April, 2010, and the business plan will be completed by the end of Year 2. We will build upon relevant work supported by GTZ, including their support of the master plan development, and we will include sections for an HRD plan, O&M plan, and five-year financial plan.

QEN 2. (See CC 14., 15., 16., 17.) Provide training and technical assistance in project management. We will involve Qena project management personnel in cross-cutting activities in this area, including dissemination of the *Capital Investment Planning and Budgeting Manual*, the *Standard Key Documents* for the project life cycle, the *Site Identification and Acquisition* procedures, and the *PRiSM Manual* as described in Subsection B2. Additionally, we will provide on-site training in contract management, scheduling, and use of Microsoft Project, PRiSM, and Water and Sewer CAD.

QEN 3. Perform program management responsibilities. In accordance with the WWSS contract scope of work, the project has selected Qena WWC for additional support in program management. Once PRiSM is installed and training has been conducted, the WWSS PRiSM and Program Management Assistant will assist Qena's project management personnel in performing selected program management functions, including issuance of its monthly PRiSM reports.

C9.4 Resources and Timing

Leadership for all Year 2 tasks for Qena WWC will lie with the WWSS Upper Egypt Coordinator Sherif Moursy, who will be supported by a team of technical advisors across all functional areas. WWSS will utilize short-term technical assistance under QEN 2.; specifically, a scheduling and MS Project training specialist and a Bentley-certified training engineer for the WaterCAD and SewerCAD training. Please see Annex A for full details on the WWSS staff responsible for day-to-day management and the timing of implementation for each task.

C10. Matrouh Water and Wastewater Company

C10.1 Background

The Matrouh Water Company, recently split off from the Alexandria Water Company, is a newly established company. Uniquely, the company purchases its water from Alexandria; however, an additional water treatment plant is currently under development which will enable Matrouh to be self-sufficient. Matrouh has never received donor assistance, and they are eager to collaborate. Despite its youth, the company has relatively strong management systems in place for financial management and human resource management, having adopted a number of practices from Alexandria.

Matrouh WWC

- Date of Establishment: October 22, 2007
- Total Water Production: 57,000 m³/day
- Total Wastewater Treatment: 25,000 m³/day
- Population Served: 375,000
- Water Coverage: 100%
- Sanitation Coverage: 20%
- Water Treatment Plants: 1
- Wastewater Treatment Plants: 1
- Employees: 1,675

Figures accurate as of September 2009.

C10.2 Approach

To initiate WWSS assistance to the Matrouh WWC in Year 2, we will work with them to maximize use of already-existing tools including hand-held units, O&M management software, an asset management system, and the open-source financial management system. Additional project activities will focus on business planning and strengthening of program management functions within the company.

C10.3 Tasks

MAT 1. (See CC 1.) Develop the business plan. The Matrouh WWC will be included in group 2 of business planning activities (see Subsection B2). Workshops will begin in May, 2010, and the business plan will be completed by the end of Year 2. The business plan will include sections for an HRD plan, O&M management plan, and five-year financial plan.

MAT 2. Revitalize USAID-supported asset management IT system. Under the WWSPR project, USAID supported the development and roll-out of an asset management system to targeted subsidiaries. The WWSS MIS and Performance Monitoring Specialist will work with the subsidiary staff to update and reinstall the system, and provide on-the-job training for relevant personnel.

MAT 3. (See CC 14., 15., 16., 17.) Provide technical assistance to project management staff. As part of the cross-cutting activities, the WWSS program management team will disseminate the *Capital Investment Planning and Budgeting Manual*, the *Standard Key Documents* for the project life cycle, the *Site Identification and Acquisition* procedures, and the *PRiSM Manual* as described in Subsection B2. Additionally, we will provide on-site training in contract management, scheduling, and use of Microsoft Project, PRiSM, and Water and Sewer CAD.

MAT 4. Provide technical assistance in managing one construction project. Based on progress on their capital investment planning process, Matrouh has been identified by the WWSS team as a strong candidate for support in this area. In Year 2, the Senior Program Management Advisor will engage in discussions with Matrouh management and HCWW to identify an appropriate project for WWSS support. Once the project is identified, the Capital Investment Specialist will prepare the terms of reference, RFP, and selection criteria, and select a construction management firm. The contract award and implementation may carry over into Year 3, depending on project timing.

MAT 5. Assist in implementation of procured hand-held units. The Matrouh WWC commercial section recently purchased 20 handheld units for billing and collections, but they have not received

technical support or training, so the units are not in use. The WWSS Metering, Billing, and Collections Specialist will provide on-the-job training on use of the units.

MAT 6. Provide OJT in implementation of procured O&M management software. Matrouh Water Company has purchased and implemented a computerized O&M management system, MP2, which is not fully utilized in O&M planning and budgeting. Eng. Magdy Awad Allah will provide on-the-job training and mentoring of the O&M management to increase utilization of the system for issuing work orders and tracking O&M activities.

C10.4 Resources and Timing

Leadership for all Year 2 tasks for Matrouh WWC will lie with the WWSS Lower Egypt Coordinator Ahmed Kandil, who will be supported by a team of technical advisors across all functional areas. WWSS utilization of short-term technical assistance under MAT 4. will comprise a scheduling and MS Project training specialist and a Bentley-certified training engineer for the WaterCAD and SewerCAD training. Under MAT 6., the project will utilize a short-term training specialist. The project will also procure the services of a construction management firm under MAT 5, and a software provider under MAT 6. Please see Annex A for full details on the WWSS staff responsible for day-to-day management and the timing of implementation for each task.

C11. Cairo Water Company

C11.1 Background

Cairo Water Company produces between one-third and one-fourth of the water for the entire country, covering Cairo and Helwan and part of Giza. They have received USAID assistance in the past, through the USAID-funded Management Training and Systems Strengthening (MTSS) Project and later WWSPR.

Persistent problems remain, including insufficient warehouse management systems, over-staffing, and lack of modern information and management systems. For WWSS Year 2 activities, we have prioritized tasks according to these needs and based on our assessment and discussions with company leadership.

Cairo WC

- Date of Establishment: April 29, 2004
- Total Water Production: 6,200,000 m³/day
- Population Served: 17,000,000
- Water Coverage: 100%
- Water Plants: 13
- Employees: 14,000

Figures accurate as of September 2009.

C11.2 Approach

Since Cairo is the most sophisticated of the WWSS-targeted subsidiaries, we selected interventions with a potential for impact across the sector. Inventory control and management is a challenge sector-wide, with manual systems, incomplete records, and, as a result, poorly managed stocks. We will address this in Cairo, with the intention to replicate the solution in other governorates should it prove successful. In addition, we will involve Cairo personnel in cross-cutting activities throughout the year.

C11.3 Tasks

CAI 1. Identify optimal computerized inventory control and management system. Our field assessment teams and the Holding Company identified major weaknesses in the warehouse management systems installed at the operating subsidiaries (asset management, inventory management, and purchasing management). Improvements of business practices in that area will introduce efficiencies and reduce costs. Improving the business practices within the warehouse management procedures will also lay the groundwork for the implementation of the new systems identified under the IT Master Plan.

The proposed task, which will be initiated in March of 2010, calls for a study to be carried out by an external consultant. The study will assess the current purchasing and inventory systems at the Cairo Water Company with input, as needed, from other water and wastewater management utilities. It will cover: (1) warehousing physical infrastructure, (2) coding structure and categories, (3) warehouse business process mapping, and (4) warehouse integration and relation with other business cycles (i.e., maintenance workshops, procurement, and projects). The study will result in an assessment of current purchasing and warehouse business operations, along with recommendations for enhancements needed to optimize the system from a business perspective, and a roll-out plan once the system is test and deemed acceptable by the managements of the Cairo Water Company and HCWW. These recommendations will include:

- Plans to develop, implement and enforce warehouse policies and management systems
- Cost/benefit analyses of transfers between stores against inventory carrying costs, along with recommendations for the consolidation of sub-warehouses where needed
- An evaluation of automation needs along with recommendation for software, hardware and communication requirements
- Staffing plans
- Training programs for warehouse staff and other utility staff members

The task will be evaluated at its completion at the Cairo Water Company, before being rolled out in Year 3 among the remaining water and wastewater management utilities. Senior Utility Management

Advisor Ghaleb Akari will lead this task, with input from the Procurement and Supply Chain Specialist, IT staff and external consultants.

CAI 2. Assist in implementation of procured O&M management software. Under a previous USAID-funded project, the Cairo Water Company implemented a computerized O&M management system, MP2. The system is no longer in use, and during our assessment the company expressed interest in revitalizing the software program. The WWSS Senior O&M Advisor will assess the status of the CWC's license, and contract the supplier to update the software and provide necessary training with support from Eng. Magdy Awad Allah.

CAI 3. Involve CWC personnel in cross-cutting activities. As a targeted recipient of WWSS assistance, the Cairo Water Company will be included in all cross-cutting activities including the advanced management seminar series, the monthly leadership forum, financial management training program, study tours, MARS and PRiSM support, O&M planning and budgeting workshops, network management workshops, and dissemination of finance, accounting, capital investment, and program management manuals including standardized key documents for project lifecycle.

C11.4 Resources and Timing

Leadership for all Year 2 tasks for Cairo WC will lie with the WWSS Middle Egypt Coordinator Magdy Awad Allah, who will be supported by a team of technical advisors across all functional areas. WWSS will utilize short-term technical assistance, in the form of a warehouse specialist, under CAI 1. The services of a software provider will be procured for CAI 2. Please see Annex A for full details on the WWSS staff responsible for day-to-day management and the timing of implementation for each task.

C12. Daqahliya Water and Wastewater Company

C12.1 Background

WWSS conducted an assessment of Daqahliya WWC in September 2009. The assessment showed that the subsidiary has fairly strong systems in place throughout the organization. For instance, Daqahliya WWC has a comprehensive training program, two customer service centers, and a meter repair workshop. While the subsidiary has a PMU equipped with PRiSM, the WWSS assessment showed that Daqahliya WWC could benefit from support for its program management activities.

Daqahliya WWC

- Date of Establishment: April 29, 2004
- Total Water Production: 1,017,363 m³/day
- Total Wastewater Treatment: 218,150 m³/day
- Population Served: 5,390,969
- Water Coverage: 100%
- Sanitation Coverage: 77%
- Water Treatment Plants: 11
- Wastewater Treatment Plants: 23
- Employees: 5,638

Figures accurate as of February 2009.

C12.2 Approach

Based on the assessment and in-line with the project contract scope of work, WWSS has determined that extensive technical assistance and OJT to Daqahliya WWC's PMU would provide the highest impact.

C12.3 Tasks

DAQ 1. Using a local qualified firm, perform construction management services for one project. In accordance with the WWSS contract scope of work and based on the level of readiness at the subsidiary, the project has selected Daqahliya WWC for additional support in construction management. Using a local qualified construction management firm, WWSS will provide technical assistance in managing one construction project. The task includes project identification, preparation of the terms of reference, selection of a construction management firm, and award of the contract for the project. This task will be led by Senior Program Management Advisor Ahmed Kandil, with support from the Capital Investment Specialist.

DAQ 2. Roll out cross-cutting capital investment planning and program management activities (See CC 14., 15., 16., 17.). As described in Subsection B2, we will provide tools and resources to the company, including the *Capital Investment Planning and Budgeting Manual*, the *Standard Key Documents* for the project life cycle, and the *Site Identification and Acquisition* procedures.

C12.4 Resources and Timing

Leadership for all Year 2 tasks for Daqahliya WWC will lie with the WWSS Lower Egypt Coordinator Ahmed Kandil, who will be supported by a team of technical advisors across all functional areas. Under DAQ 2., WWSS will procure the services of a construction management firm. Please see Annex A for full details on the WWSS staff responsible for day-to-day management and the timing of implementation for each task.

C13. North and South Sinai Water and Wastewater Company

C13.1 Background

North and South Sinai WWC was established in June 2008, but was not operational until several months thereafter. WWSS conducted an assessment of the subsidiary in September 2009 to determine its most critical needs and areas of intervention where the project could provide assistance in improving the operations and management of the subsidiary.

The subsidiary is facing two overriding challenges.

First, as a new subsidiary, its needs for institutional and staff strengthening are great in all areas (billing and collection, financial management, O&M, and program management). Second, illegal connections to its pipeline are a significant problem due to its expansive geographical coverage that includes both *Bedouin* communities and beach resorts; control of illegal connections is non-existent.

The WWSS-conducted assessment also revealed critical needs in the following areas.

- Business plan development.
- Billing and collection system (not computerized).
- Accounting/financial system.
- Water balance and leak detection system.
- O&M and long-term preventive maintenance procedures.
- Limited use of IT (introduction of asset management and MARS).
- Enhanced program management (implement PRiSM).

North and South Sinai WWC is receiving ongoing support from the EU-funded project tasked with constructing a large pipeline from El-Tor to Saint Katherine. The management and staff are receptive to WWSS support and would be cooperative partners.

C13.2 Approach and Tasks

Based on its assessment and the WWSS contract scope of work, the project determined that at this time North and South Sinai WWC activities should be confined to cross-cutting capacity building activities until such time when technical assistance to that utility is formally incorporated into our contract.

As a future targeted recipient of WWSS technical assistance, the North and South Sinai WWC will be included in all cross-cutting activities, including the advanced management seminar series, the monthly leadership forum, financial management training program, study tours, MARS and PRiSM support, O&M planning and budgeting workshops, network management workshops, and dissemination of finance, accounting, capital investment, and program management manuals, including standardized key documents for project lifecycle.

North and South Sinai WWC

- Date of Establishment: June 19, 2008
- Total Water Production: 250,000 m³/day
- Total Wastewater Treatment: 60,000 m³/day
- Population Served: 493,391
- Water Coverage: North 75% / South 95%
- Sanitation Coverage: NR*
- Water Treatment Plants: NR*
- Wastewater Treatment Plants: NR*
- Employees: 1,800

Figures accurate as of September 2009.

**Not Reported*

D. Project Development and Coordination Activities

D1. Background and Approach

To effectively coordinate, monitor, and communicate progress of the implementation of technical activities, we have designed a number of supportive activities, as described below.

D2. Tasks

PDC 1. Plan and coordinate field trips and trip reporting. We anticipate that field travel will increase in Year 2, which further elevates the need for coordinated trip planning and reporting. Travel will take place from Sunday through Wednesday each week, and all staff will be expected in the office on Thursdays for meetings and administration. Led by the Deputy Chief of Party, the regional teams will prepare a weekly travel schedule, to be shared with USAID, the HCWW, and the relevant subsidiaries. We anticipate sharing the schedule via our WWSS intranet site (see below) once it is launched, and until that date will share it via email. Additionally, monthly WWSS/HCWW joint working group meetings will include a standing agenda item for field travel planning, and we will encourage HCWW participation in field trips to the maximum extent possible. 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.

PDC 2. Plan, monitor, and report training activities. Based on our approved work plan, the WWSS the Senior HRM/D Advisor, will prepare a detailed quarterly training plan. This plan will outline courses, dates, locations, participant numbers and descriptions, and required resources for each course, including short-term assistance for course development or delivery, facility rental, travel expenses for participants, etc. On a quarterly basis, this plan will be discussed and agreed upon with both USAID and the HCWW.

The WWSS HRD/M Advisor will continue to use the tracking system developed in Year 1, which tracks participants at each course. Additionally, training coordinator Sally Hamed, under the guidance of the Director of Program Development and Coordination, will input data into USAID's TrainNet system. She will also coordinate with USAID on the planning of study tours, outlining the necessary steps and facilitating completion of participant paperwork.

PDC 3. Monitor, evaluate, and report project progress. Project performance monitoring will happen at the level of the tasks, the contract deliverables, and the results indicators from the Performance Monitoring Plan (PMP). Progress at each level will be described in quarterly progress reports. The work plan will serve as the basis for monitoring and reporting tasks and deliverables, using Annexes A and B as tools for each, respectively. Data on the PMP indicators will be collected quarterly or semi-annually, depending on the indicator, and included, along with brief analysis of progress and trends, in progress reports and success stories. In addition to quantitative data, we will collect qualitative, anecdotal data from project beneficiaries through field visits, which will provide context for interpreting indicator data and also material for periodic success stories.

At USAID's request, the WWSS team is currently working with the WPRR team to integrate the two project PMPs into one program PMP. The updated PMP will be submitted to USAID for review in the first quarter of the work plan year.

PDC 4. Design and launch a WWSS project intranet site. Using the WWSPR website as an example, the WWSS team will design and launch the WWSS project intranet site in Year 2. The website will serve as a model for sector-wide coordination, with up-to-date information on events and project-published materials available for download, as well as links to other sites providing relevant technical material. The WWSS Director of Program Development and Coordination and Design Manager will collaborate on this task.

PDC 5. Finalize and implement WWSS Phase I procurement plan. In Year 1, the WWSS team prepared a draft procurement plan for five of the targeted subsidiaries, including units, items, estimated costs, and specifications. In the first quarter of Year 2, the WWSS regional coordinators will revise and finalize the procurement plan in line with this work plan, once approved. Effort will be made to cooperate with the HCWW and its subsidiaries to leverage resources to the maximize extent. The final procurement plan will include a schedule and division of the equipment into batches based on program, timing, source/origin, and type of item. We will follow the source/origin requirements in our contract, requesting waivers and/or approvals as necessary. During the first quarter, the procurement plan will be finalized and procurement will be initiated.

D3. Resources

Project development and coordination activities are by nature cross-cutting and will require input from all team members. For training-related activities, the training coordinators will be primarily responsible, with guidance from the Senior HR Advisor. Trip planning and reporting will be managed by the Deputy Chief of Party, with support from the operations team. Project performance monitoring and reporting activities will be led by the Director of Program Development and Coordination beginning in January, and by the Monitoring and Reporting short-term consultant in the interim period. The Monitoring and Reporting consultant will also lead the intranet site design and launch, in coordination with the Design Manager. This task will also involve a subcontract with an IT/web design firm. Please refer to Annex A for implementation timeframes for the above four tasks.

Annex A – Work Plan Timeline

ANNEX A: Year 2 Work Plan Timeline															Resources: Short-term technical assistance, subcontractors, donor coordination
Tasks and Sub-tasks	Responsibilities		1	2	3	4	5	6	7	8	9	10	11	12	
	WWSS	Counterpart	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Component A: Assistance to the Holding Company for Water and Wastewater															
HC 1. Establish and facilitate a joint working group	WWSS Regional Coordinators and Senior Advisors	HCWW													
HC 2. Assist in the ongoing development of the HCWW business plan	Senior Utility Management Advisor and Senior Advisors	HCWW													Strategic communications specialist, Business Plan Reviewer, Collaboration with GTZ
HC 3. Develop a corporate communication strategy	Public Awareness Specialist	HCWW													
HC 4. Provide ongoing support to the public awareness unit	Public Awareness Specialist	HCWW													
HC 5. Support the development of the HCWW IT master plan															
Establish a joint committee for the development and implementation of the IT master plan	Financial Management IT Specialist	HCWW													
Define the scope and functions to be included in the IT master plan assessment phase	Financial Management IT Specialist	HCWW													
Oversee the assessment phase of the IT Master Plan	Financial Management IT Specialist	HCWW													
Develop recommendations including list of priority interventions	Financial Management IT Specialist	HCWW													
Present findings and recommendations for HCWW senior management	Financial Management IT Specialist	HCWW													
Assist HCWW on IT master plan implementation	Financial Management IT Specialist	HCWW													
HC 6. Develop a comprehensive Human Resource Management and Development Strategy	HRM/D Senior Advisor	HCWW													HRD Specialist
HC 7. Assist in development of HCWW position descriptions	HRM/D Senior Advisor and Training Coordinator	HCWW													Collaboration with GTZ
HC 8. Procure and install a Human Resource Management Information System (HRMIS)															
Complete an assessment of needs and existing systems	HRM/D Senior Advisor / HR Specialist	HCWW													HR Firm
Develop the scope of work for system design and issue RFP	HRM/D Senior Advisor / HR Specialist	HCWW													Procurement Specialist
Select the firm/developer	HRM/D Senior Advisor / Dir.Prog.Dev & Coordination / HR Specialist	HCWW													
Install and evaluate system in Assiut, Sohag, and Menufiya	HRM/D Senior Advisor / HR Specialist	HCWW													IT Firm/Developer
HC 9. Conduct study of financing options for implementation of the rural sanitation strategy	Chief of Party	HCWW													Infrastructure Finance Specialist, Legal Advisor, Utility Financial Consultant
HC 10. Support the establishment of an HCWW PMU															
Seek and obtain HCWW approval on PMU space and personnel	Program Management Senior Advisor	HCWW													
Procure and install necessary hardware and software for the unit	Program Management Senior Advisor	HCWW													Procurement Subcontract
Include HCWW staff in cross-cutting PMU capacity building activities	Program Management Senior Advisor	HCWW													

HC 11. Facilitate coordination between donor projects in the sector												
Plan and facilitate semi-annual meetings	Director of Program Development and Coordination	HCWW										
Ongoing coordination	Director of Program Development and Coordination	HCWW										
HC 12. Sponsor HCWW human resources management diploma candidates												
	HR Specialist	HCWW										
Component B: Cross-Cutting Activities												
CC 1. Facilitate business planning activities in all WWSS-supported subsidiaries												
	Senior Utility Management Advisor	HCWW and subs										
CC 2. Design and implement an Advanced Management Seminar Series for Senior Utility Executives												
Design curriculum	Senior Utility Management Advisor, Training Coordinators and technical team	HCWW and subs										
Develop curriculum	Senior Utility Management Advisor, Training Coordinators and technical team	HCWW and subs										
Deliver seminar series	Senior Utility Management Advisor, Training Coordinators and technical team	HCWW and subs										Trainers
CC 3. Design and conduct monthly leadership forum												
	Senior Advisor and Training Coordinator	HCWW and subs										
CC 4. Implement two study tours to world class water and wastewater institutions and international conferences												
Plan and arrange study tour to San Francisco, including working with Egyptian participants to submit required documents	Senior Utility Management Advisor, Training Coordinators	HCWW and subs										AMIDEAST and IIE services
Egyptian delegates participate in Utility Management Conference in San Francisco	Senior Utility Management Advisor, Training Coordinators	HCWW and subs										
Plan and arrange study tour to W/WW utilities in the Eastern US, including working with Egyptian participants to submit required documents	Senior Utility Management Advisor, Training Coordinators	HCWW and subs										AMIDEAST and IIE services
Egyptian delegates participate in Technical/O&M study tour	Senior Utility Management Advisor, Training Coordinators	HCWW and subs										
CC 5. Provide training to HR personnel												
Introduced the concept of HRD/M plans and strategies	HRM/D Advisor & HR Specialist	HCWW and subs										
Develop the company's organization structure / job descriptions / five year staffing plan	HRM/D Advisor & HR Specialist	HCWW and subs										
Creating a performance base incentive system/appraisal system	HRM/D Advisor & HR Specialist	HCWW and subs										
Preparing HR policies and procedures handbook	HRM/D Advisor & HR Specialist	HCWW and subs										
CC 6. Develop communications planning guide												
	Public Awareness Specialist	HCWW and subs										Strategic communications specialist
CC 7. Reengineer/upgrade MARS and provide ongoing support												
Analyze the MARS system considering the integration of various existing modules	MIS and Performance Monitoring Specialist	A. Alaa, HCWW										
Redesign the MARS database and migrate data	MIS and Performance Monitoring Specialist	A. Alaa, HCWW										
Develop and test redesigned modules	MIS and Performance Monitoring Specialist	A. Alaa, HCWW										
Implement new system in subsidiaries	MIS and Performance Monitoring Specialist	A. Alaa, HCWW										

SOH 2. (See CC 5.) Launch Sohag WWC human resources department												
Develop HR plan in coordination with the business plan	HR Specialist	Sohag HR Dept										
Develop the organizational chart, purpose statements, functions, job descriptions, and staffing requirements	HR Specialist	Sohag HR Dept										
Provide technical assistance in assigning and recruiting the appropriate staff	HR Specialist	Sohag HR Dept										
SOH 3. Develop Sohag WWC Staffing Plan												
	HR Consultant & Senior HRM/D Advisor	Sohag HR Dept										Organizational Development Specialist
SOH 4. (See CC 11., 12., 13.) Strengthen Sohag WWC Finance Department												
Revisit and revise organizational chart for the financial sector	Financial and Planning Analyst	Sohag WWC Finance										
Implement five-year financial planning tool as part of the business planning process	Senior Utility Management Advisor & Financial and Planning Analyst	Sohag WWC Finance										
Provide OJT in finance and accounting using the approved manual	Financial and Planning Analyst	Sohag WWC Finance										
Assist in development of a performance-based budget	Cost and Budget Analyst	Sohag WWC Finance										
Provide OJT in cost accounting using the approved manual	Cost and Budget Analyst	Sohag WWC Finance										
SOH 5. Support Sohag WWC Warehouse and Procurement Unit												
Develop an organization chart and job descriptions	Senior Financial Advisor / Procurement Supply Chain Specialist	Sohag WWC's Warehouse and Procurement Unit										
Develop operating procedures and provide OJT	Senior Financial Advisor / Procurement Supply Chain Specialist	Sohag WWC's Warehouse and Procurement Unit										
SOH 6 Establish a billing and customer service center												
	Metering, Billing, and Collections Specialist/Training Coordinator	Sohag WWC's Warehouse and Procurement Unit										
SOH 7. (See CC 8.) Assist in the development of O&M plan and budget												
	O&M Planning and Budgeting Specialist	Sohag O&M Dept										
SOH 8. Increase utilization of laboratory												
Procure equipment for analysis of water/wastewater samples, including a spectrophotometer	Lab Specialist	Sohag lab										Procurement Specialist
Facilitate related training for the lab staff	Lab Specialist	Sohag lab										Collaboration with GTZ
SOH 9. Provide training and OJT for Sohag GIS unit												
Provide training course for new GIS unit	GIS Specialist / Training Coordinator	Sohag GIS Unit										
Provide ongoing OJT	GIS Specialist / Training Coordinator	Sohag GIS Unit										
SOH 10. (See CC 14., 15., 16., 17.) Support the establishment of the Sohag WWC PMU												
Conduct training on contract management	Senior Program Management Advisor	Sohag WWC PMU										
Deliver training on water CAD and sewer CAD	Senior Program Management Advisor	Sohag WWC PMU										Bentley-certified Training Engineer

Assistance to the Assiut W/WW Company													
AST 1. (See CC 1.) Assist in the ongoing development of the Assiut WWC business plan	Senior Utility Management Advisor & Senior Advisors	Assiut WWC	■	■	■	■	■						
AST 2. (See CC 5.) Launch Assiut WWC human resources department													
Develop HR plan in coordination with the business plan	HR Specialist	Assiut HR Dept	■	■	■	■	■						
Develop the organizational chart, purpose statements, functions, job descriptions, and staffing requirements	HR Specialist	Assiut HR Dept		■	■								
AST 3. Develop Assiut WWC Staffing Plan	Senior HRM/D Advisor	Assiut HR Dept		■	■	■							Organizational Development Specialist
AST 4. Establish Assiut WWC training center													
Seek and obtain Assiut WWC approval on training center space and personnel	HR Specialist and Training Coordinator	Assiut Training Dept					■	■					
Procure the needed equipment to outfit the training center	HR Specialist and Training Coordinator	Assiut Training Dept					■	■	■				
Collect and assess training material	HR Specialist and Training Coordinator	Assiut Training Dept					■	■	■	■			Collaboration with GTZ, FaDWaSP, InWent, USAID
Conduct a training-of-trainers and other training programs	HR Specialist and Training Coordinator	Assiut Training Dept						■					Trainers
AST 5. (See CC 11., 12., 13.) Strengthen Assiut WWC Finance Department													
Revisit and revise organizational chart for the financial sector	Financial and Planning Analyst	Assiut WWC Finance Dept		■									
Implement five-year financial planning tool as part of the business planning process	Senior Utility Management Advisor & Financial and Planning Analyst	Assiut WWC Finance Dept	■	■	■	■	■						
Provide OJT in finance and accounting using the approved manual	Financial and Planning Analyst	Assiut WWC Finance Dept			■	■	■	■	■	■	■	■	
Assist in development of a performance-based budget	Cost and Budget Analyst	Assiut WWC Finance Dept								■	■	■	
Provide OJT in cost accounting using the approved manual	Cost and Budget Analyst	Assiut WWC Finance Dept					■	■	■	■	■	■	
AST 6. Support Assiut WWC Warehouse and Procurement Unit													
Develop an organization chart and job descriptions	Procurement Supply Chain Specialist	Assiut WWC's Warehouse and Procurement Unit		■	■	■							
Develop operating procedures and provide OJT	Procurement Supply Chain Specialist	Assiut WWC's Warehouse and Procurement Unit				■	■	■					
AST 7. Establish a Meter Repair Workshop													
Rehabilitate current facility	Metering, Billing, and Collections Specialist	Assiut Commercial Unit	■	■	■	■							
Procure and install required equipment	Metering, Billing, and Collections Specialist	Assiut Commercial Unit			■	■	■						
Develop operating instructions and provide OJT	Metering, Billing, and Collections Specialist	Assiut Commercial Unit				■	■	■	■	■			
Develop a household meter repair plan	Metering, Billing, and Collections Specialist	Assiut Commercial Unit									■	■	Short term technical consultant

AST 8. Establish a Billing and Collections Center													
Rehabilitate current facility	Senior Performance Management Advisor	Assiut Commercial Unit	■	■	■	■							Short term architect
Procure and install required equipment	Senior Performance Management Advisor	Assiut Commercial Unit			■	■	■						
Develop operating instructions and provide OJT	Senior Performance Management Advisor	Assiut Commercial Unit				■	■	■	■				
AST 9. Provide training and OJT for Assiut GIS unit													
Provide training course for new GIS unit	GIS Specialist / Training Coordinator	Assiut GIS Unit	■										
Provide ongoing OJT	GIS Specialist / Training Coordinator	Assiut GIS Unit		■	■	■	■						
AST 10. (See CC 8.) Assist in the development of an O&M plan and budget													
	O&M Planning and Budgeting Specialist	Assiut O&M Unit							■	■	■		
AST 11. Replicate JICA-developed SOPs in two plants													
Customize SOPs to Assiut plants	Senior O&M Advisor / Water Plant Specialist	Targeted Plants							■	■	■		Bentley-certified Training Engineer
Provide OJT for plant operators	Water Plant Specialist	Targeted Plants									■	■	
AST 12. Procure equipment for newly established Assiut PMU													
	Senior Program Management Advisor	Assiut PMU			■	■	■						Procurement Specialist
AST 13. (See CC 14., 15., 16., 17.) Support the establishment of the Assiut WWC PMU													
Conduct training on contract management	Senior Program Management Advisor	Assiut PMU							■				
Deliver training on water CAD and sewer CAD	Senior Program Management Advisor	Assiut PMU					■	■					Bentley-certified Training Engineer
AST 14. Perform project management responsibilities													
	PRiSM and Program Management Assistant	Assiut PMU			■	■	■	■	■	■	■	■	
AST 15. Provide technical assistance in managing one construction project													
Identify project	Capital Investment Specialist	Assiut PMU						■					
Prepare terms of reference	Capital Investment Specialist	Assiut PMU							■				
Select construction management firm and award contract	Capital Investment Specialist	Assiut PMU										■	Construction Management Subcontract
Assistance to the Luxor W/WW Company													
LUX 1. Develop and Implement UFW Pilot Program													
Procure and install bulk meters	Senior Performance Management Advisor	Luxor WWC			■	■	■	■	■				Procurement Specialist
Provide OJT on bulk meter use	Senior Performance Management Advisor	Luxor WWC							■	■			
Conduct study including leak detection activities	Senior Performance Management Advisor	Luxor WWC								■	■		
Prepare and publish report on lessons learned	Senior Performance Management Advisor	Luxor WWC										■	

LUX 2. (See CC 1.) Assist in the ongoing development of the Luxor WWC business plan	Senior Utility Management Advisor & Senior Advisors	Luxor WWC	■	■	■	■	■													
Develop Human Resources Plan	HR Specialist	Luxor HR Dept		■	■	■	■													
Develop Financial Plan	Senior Financial Management Advisor	Luxor Finance Department		■	■	■	■													
Develop O&M Plan	Senior O & M Advisor / O & M Planning and Budget Specialist	Luxor O&M Dept		■	■	■	■													
LUX 3. Develop Luxor WWC Staffing Plan	Senior HRM/D Advisor	Luxor HR Dept		■	■	■	■													Organizational Development Specialist
LUX 4. (See CC 11., 12., 13.) Strengthen Luxor WWC Finance Department																				
Revisit and revise organizational chart for the financial sector	Financial and Planning Analyst	Luxor Finance Department		■																
Implement five-year financial planning tool as part of the business planning process	Senior Utility Management Advisor & Financial and Planning Analyst	Luxor Finance Department	■	■	■	■	■													
Provide OJT in finance and accounting using the approved manual	Financial and Planning Analyst	Luxor Finance Department			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	Financial Analysis Trainer
Assist in development of a performance-based budget	Cost and Budget Analyst	Luxor Finance Department																		
Provide OJT in cost accounting using the approved manual	Cost and Budget Analyst	Luxor Finance Department						■	■	■	■	■	■	■	■	■	■	■	■	
LUX 5. Update USAID-supported O&M management system																				
Contract the software provider to update the system	Senior O & M Advisor / Waste Water Specialist	Luxor O&M Dept			■	■														Software provider
Provide training	Senior O & M Advisor / Waste Water Specialist	Luxor O&M Dept					■	■												Software provider
LUX 6. Provide technical and OJT for GIS Unit	GIS Specialist / Training Coordinator	Luxor GIS Unit	■	■	■	■														
LUX 7. Procure equipment for newly established PMU	Senior Program Management Advisor	Luxor PMU			■	■	■													Procurement Specialist Sub-contracted
LUX 8. (See CC 14., 15., 16., 17.) Support the establishment of the Luxor WWC PMU																				
Conduct training on contract management	Senior Program Management Advisor	Luxor PMU																■		
Deliver training on water CAD and sewer CAD	Senior Program Management Advisor	Luxor PMU																■	■	Bentley-certified Training Engineer
Assistance to the Giza W/WW Company																				
GIZ 1. (See CC 1.) Assist in the ongoing development of the Giza WWC business plan	Senior Utility Management Advisor & Senior Advisors	Giza WWC	■	■	■	■	■													
Develop Human Resources Plan	Senior HRM/D Advisor / HR Specialist	Giza HR Unit		■	■	■	■													
Develop Financial Plan	Senior Financial Management Advisor	Giza Finance Department		■	■	■	■													
Develop Draft O&M Plan	Senior O & M Advisor / O & M Planning and Budget Specialist	Giza O&M Unit		■	■	■	■													
GIZ 2. Finalize Giza WWC Staffing Plan	Senior HRM/D Advisor	Giza HR Unit	■	■																Organizational Development Specialist

GIZ 3. (See CC 11., 12., 13.) Strengthen Giza WWC Finance Department												
Revisit and revise organizational chart for the financial sector	Financial and Planning Analyst	Giza Finance Department										
Implement five-year financial planning tool as part of the business planning process	Senior Utility Management Advisor & Financial and Planning Analyst	Giza Finance Department										
Provide OJT in finance and accounting using the approved manual	Financial and Planning Analyst	Giza Finance Department										
Assist in development of a performance-based budget	Cost and Budget Analyst	Giza Finance Department										
Provide OJT in cost accounting using the approved manual	Cost and Budget Analyst	Giza Finance Department										
GIZ 4. Establish circuit-rider program for Giza WWC												
Confirm institutionalization of unit, including allocation of staff	Senior O & M Advisor / O & M Planning and Budget Specialist	Giza O&M Dept										
Procure and deliver required equipment	Senior O & M Advisor / O & M Planning and Budget Specialist	Giza O&M Dept										
Provide training and technical assistance	Senior O & M Advisor / O & M Planning and Budget Specialist	Giza O&M Dept										Trainer
GIZ 5. Conduct audit of electricity and chemical use of Giza WWC	Senior O&M Advisor / Lab Specialist / Leak detection specialist	Giza O&M Dept										Utility Chemical and Energy Auditor
GIZ 6. Establish a meter repair workshop												
Rehabilitate current facility	Metering, Billing, and Collections Specialist	Giza Commercial Sector										
Procure and install required equipment	Metering, Billing, and Collections Specialist	Giza Commercial Sector										
Develop operating instructions and provide OJT	Metering, Billing, and Collections Specialist	Giza Commercial Sector										
Develop a household meter repair plan	Metering, Billing, and Collections Specialist	Giza Commercial Sector										Meter repair consultant
GIZ 7. Assist Giza WWC with customer service center establishment												
Assist in design of the Pyramids Street customer service center	Metering, Billing, and Collections Specialist	Giza Commercial Sector										Architect
Advise on launch of the Kit Kat customer service center	Metering, Billing, and Collections Specialist	Giza Commercial Sector										
GIZ 8. Provide technical and OJT for GIS Unit												
Provide training course for new GIS unit	GIS Specialist / Training Coordinator	Giza GIS Sector										
Provide ongoing OJT	GIS Specialist / Training Coordinator	Giza GIS Sector										
GIZ 9. Procure equipment for newly established Giza PMU	Senior Program Management Advisor	Giza PMU										
GIZ 10. (See CC 14., 15., 16., 17.) Support the establishment of the Giza PMU												
Conduct training on contract management	Senior Program Management Advisor	Giza PMU										
Deliver training on water CAD and sewer CAD	Senior Program Management Advisor	Giza PMU										Bentley-certified Training Engineer
GIZ 11. Perform project management responsibilities	PRISM and Program Management Assistant	Giza PMU										
Assistance to the Menufiya W/WW Company												
MEN 1. (See CC 1.) Assist in the on-going development of the Menufiya WWC Business Plan (draft) Utility Management Senior Advisor												

Develop Human Resources Plan	HR Specialist	Menufiya HR Unit																		
Develop Five Year Financial Plan	Senior Financial Management Advisor	Menufiya Finance Department																		
Develop Draft O&M Plan	Senior O & M Advisor / O & M Planning and Budget Specialist	Menufiya O&M Unit																		
MEN 2. (See CC 5.) Launch Human Resources Department																				
Develop organization chart, purpose statement, job descriptions, staffing requirements	HR Specialist	Menufiya HR Unit																		
MEN 3. Finalize Menufiya WWC Staffing Plan	Senior HRM/D Advisor	Menufiya HR Unit																		Organizational Development Specialist
MEN 4. (See CC 11., 12., 13.) Strengthen Menufiya WWC Finance Department																				
Implement five-year financial planning tool as part of the business planning process	Senior Utility Management Advisor & Financial and Planning Analyst	Menufiya Finance Department																		
Provide OJT in finance and accounting using the approved manual	Financial and Planning Analyst	Menufiya Finance Department																		
Assist in development of a performance-based budget	Cost and Budget Analyst	Menufiya Finance Department																		
Provide OJT in cost accounting using the approved manual	Cost and Budget Analyst	Menufiya Finance Department																		
MEN 5. Implement warehouse management pilot program with Menufiya WWC																				
Prepare action plan for implementation phase	Senior Finance Advisor / Procurement Supply Chain Specialist	Menufiya Finance Department																		
Provide Technical Assistance and On the Job Training during implementation	Senior Finance Advisor / Procurement Supply Chain Specialist	Menufiya Finance Department																		
Testing the effectiveness of the system	Senior Finance Advisor / Procurement Supply Chain Specialist	Menufiya Finance Department																		
Finalizing report for the pilot program and lesson learned	Senior Finance Advisor / Procurement Supply Chain Specialist	Menufiya Finance Department																		
MEN 6. Establish a meter repair workshop for Menufiya WWC																				
Rehabilitate current facility	Senior Performance Management Advisor	Menufiya WWC																		
Procure and install required equipment	Senior Performance Management Advisor	Menufiya WWC																		
Develop operating instructions and provide OJT	Senior Performance Management Advisor	Menufiya WWC																		
Develop a household meter repair plan	Senior Performance Management Advisor	Menufiya WWC																		Meter repair consultant
MEN 7. Provide technical and OJT for GIS Unit																				
Provide training course for new GIS unit	GIS Specialist / Training Coordinator	Menufiya GIS Unit																		
Provide ongoing OJT	GIS Specialist / Training Coordinator	Menufiya GIS Unit																		
MEN 8. Conduct audit of electricity and chemical use of Menufiya WWC																				
	Senior O&M Advisor / Lab Specialist/ Upper Egypt Coordinator	Menufiya O&M Unit																		

Assistance to the Qena W/WW Company													
QEN 1. (See CC 1.) Develop Business Plan													
Conduct business planning workshop	Senior Utility Management Advisor	Qena WWC											
Provide technical assistance in developing the business plan	Senior Utility Management Advisor	Qena WWC											
Develop Human Resources Plan	HR Specialist	Qena HR Dept											
Develop Five Year Financial Plan	Senior Financial Management Advisor	Qena Finance Dept											
Develop Draft O&M Plan	Senior O & M Advisor / O & M Planning and Budget Specialist	Qena O&M Dept											
QEN 2. (See CC 14., 15., 16., 17.) Provide training and technical assistance in project management													
Provide training on contract management	Senior Program Management Advisor and Training Coordinator	Qena PMU											
Conduct training on scheduling and Microsoft Project	Senior Program Management Advisor and Training Coordinator	Qena PMU											Trainer
Conduct training on PRiSM	Senior Program Management Advisor and Training Coordinator	Qena PMU											
Conduct training on water CAD and sewer CAD	Senior Program Management Advisor and Training Coordinator	Qena PMU											Bentley-certified Training Engineer
QEN 3. Perform project management responsibilities	PRiSM and Program Management Assistant	Qena PMU											
Assistance to the Matrouh W/WW Company													
MAT 1. (See CC 1.) Develop Business Plan (draft) Utility Management Senior Advisor													
Conduct business planning workshop	Senior Utility Management Advisor	Matrouh WWC											
Provide technical assistance in developing the business plan	Senior Utility Management Advisor	Matrouh WWC											
Develop Human Resources Plan	HR Specialist	Matrouh HR Dept											
Develop Five Year Financial Plan	Senior Financial Management Advisor	Matrouh Finance Dept											
Develop Draft O&M Plan	Senior O & M Advisor / O & M Planning and Budget Specialist	Matrouh O&M Dept											
MAT 2. Revitalize USAID-supported asset management IT system													
Update and reinstall system	MIS and Performance Monitoring Specialist	Matrouh WWC											
Provide training and orientation	MIS and Performance Monitoring Specialist	Matrouh WWC											
MAT 3. (See CC 14., 15., 16., 17.) Provide training and technical assistance in project management													
Review, update, and disseminate PRiSM manual	PRiSM and Program Management Assistant	Matrouh PMU											
Provide training and follow-up assistance on PRiSM	PRiSM and Program Management Assistant	Matrouh PMU											
Provide training on contract management	Senior Program Management Advisor and Training Coordinator	Matrouh PMU											
Provide training on scheduling and Microsoft Project	Senior Program Management Advisor and Training Coordinator	Matrouh PMU											Trainers
Provide training in water and sewer CAD	Senior Program Management Advisor and Training Coordinator	Matrouh PMU											Bentley-certified Training Engineer

MAT 4. Provide technical assistance in managing one construction project													
Identify project	Capital Investment Specialist	Matrouh PMU											
Prepare terms of reference	Capital Investment Specialist	Matrouh PMU											
Select construction management firm and award contract	Capital Investment Specialist	Matrouh PMU											Construction Management Subcontract
MAT 5. Assist in implementation of procured hand-held units	Metering, Billing, and Collections Specialist	Matrouh Commercial Unit											Trainer
MAT 6. Provide OJT in implementation of procured O&M management software	O&M Planning and Budgeting Specialist	Matrouh O&M Dept											Software provider
Assistance to the Cairo Water Company													
CAI 1. Identify optimal computerized inventory control and management system													
Complete assessment of current purchasing and warehouse operations	Senior Utility Management Advisor and Procurement Supply Chain Specialist & IT coordinator group	Cairo Procurement and Warehouse Dept											Warehouse Specialist
Provide recommendations for enhancements	Senior Utility Management Advisor and Procurement Supply Chain Specialist & IT coordinator group	Cairo Procurement and Warehouse Dept											
Provide a roll-out plan once the system is tested and deemed acceptable	Senior Utility Management Advisor and Procurement Supply Chain Specialist & IT coordinator group	Cairo Procurement and Warehouse Dept											
CAI 2. Assist in implementation of procured O&M management software													
Update and reinstall system	Senior O&M Advisor/Middle Egypt Coordinator	Cairo O&M Dept											Software provider
Provide training	Senior O & M Advisor / Middle Egypt Coordinator	Cairo O&M Dept											
CAI 3. (See all CC Tasks) Involve Cairo Water Company in cross-cutting activities	Middle Egypt Coordinator	Cairo WC											
Assistance to the Daqahliya W/WW Company													
DAQ 1. Provide construction management services for one project													
Identify project	Capital Investment Specialist	Daqahliya WWC											
Prepare terms of reference	Capital Investment Specialist	Daqahliya WWC											
Select construction management firm and award contract	Capital Investment Specialist	Daqahliya WWC											Construction Management Subcontract
DAQ 2. (See CC 14., 15., 16., 17.) Roll-out cross-cutting capital investment planning and performance management activities	Senior Program Management Advisor	Daqahliya WWC											
Component D: Project Development and Coordination Activities													
PDC 1. Plan and coordinate field trips and trip reporting	Deputy Chief of Party												
PDC 2. Plan, monitor, and report training activities													
Prepare a detailed quarterly training plan	Training Coordinators, HRM/D Senior Advisor												
Monitor training participant tracking system	Training Coordinators												
Input data into USAID's TrainNet system and coordinate with USAID on study tour planning	Training Coordinator, Director of Program Development and Coordination												

PDC 3. Monitor, evaluate, and report project progress	Director of Program Development and Coordination																		
PDC 4. Design and launch a WWSS project intranet site																			
Design intranet site	Design Manager, Director of Program Development and Coordination																		
Develop and launch intranet site	Design Manager, Director of Program Development and Coordination																		
PDC 5. Finalize and launch WWSS Phase I Procurement Plan	Regional Coordinators and Senior Advisors																		Procurement Specialist

Annex B – Activity Matrix by Subsidiary

WWSS Contract Tasks and Deliverables		HCWW	Sohag	Assiut	Luxor	Giza	Menufiya	Beni Suef	Minia	Aswan	Qena	Matrouh	Cairo	Daqahliya	
Strategic/Business Planning	Assessment of existing conditions report covering all institutional and technical areas in selected governorates	--	(Y1)	(Y1)	(Y1)	--	--	--	--	--	--	--	--	--	
	A clear and documented description of the roles of and business relationships between the HCWW and its subsidiaries	Y3	--	--	--	--	--	--	--	--	--	--	--	--	
	A study of outsourcing options and recommendations	Y4	--	--	--	--	--	--	--	--	--	--	--	--	
	Corporatization procedures and recommendations	--	Y4	Y4	Y4	Y3	Y4	Y3	Y3	Y3	--	Y3	--	--	
	Develop business plans	Q1-3	Q2	Q2	Q2	Q2	Q2	Y3	Y3	Y3	Q4	Q4	Y3	--	
Human Resource Management/Development	Long-term training plans for HCWW and subsidiaries	Q3	Q2	Q2	Q2	Q2	Q2	Y3	Y3	Y3	Q4	Q4	Y3	--	
	Training of HCWW and subsidiaries senior and middle managers	Q1-4	(Y1) Q1-4	(Y1) Q1-4	(Y1) Q1-4	(Y1) Q1-4	(Y1) Q1-4	Q1-4	Q1-4	Q1-4	Q1-4	Q1-4	Q1-4	--	
	Improved staffing systems	Q1-3	Q2	Q2	Q2	(Y1) Q1	Q3	Q2	Q2	Y3	--	Y3	--	--	
	A performance-based incentive system linked to continuous education efforts and the company's performance targets	Y3	Y3	Y3	Y3	Y3	Y3	Y3	Y3	Y4	--	Y4	--	--	
	Human resources development plans	Q3	Q2	Q2	Q2	Q2	Q2	Y3	Y3	Y3	Q4	Q4	Y3	--	
	Market-based compensation plans	Q3	Q2	Q2	Q2	Q2	Q2	Y3	Y3	Y3	Q4	Q4	Y3	--	
	Assistance in HCWW negotiations on staff rationalization in new subsidiaries	Y3	--	--	--	--	--	--	--	--	--	--	--	--	
	Establish a training center	Y3		Q3										--	
	Four study tours to world class water and wastewater facilities in the United States conducted	(Y1) Q2-Q3	(Y1) Q1-4	(Y1) Q1-4	--	--	(Y1) Q1-4	--	--	--	--	--	--	Q2-Q3	--
	Participation in four international conferences, workshops, or exhibitions in the US	Q2	--	--	--	--	--	--	--	--	--	--	--	--	--
	Plans for continuing participation in study tours and international events developed and adopted	Q1	--	--	--	--	--	--	--	--	--	--	--	--	--
	Develop modern systems and procedures including organizational and management systems	Q4	(Y1) Q4	(Y1) Q4	(Y1)	Y3	Q4	Y3	Y3	Y3	--	Y3	--	--	
	Financial Management	Improved financial planning, management, and accounting techniques and systems for subsidiaries	Q2-Q4	Q1-Q4	(Y1) Q1-Q4	(Y1) Q1-Q4	Q1-Q4	(Y1) Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	--
Provide training in financial management for the HCWW and subsidiary company staff		Q4	(Y1) Q1-4	(Y1) Q1-4	(Y1) Q1-4	(Y1) Q1-4	(Y1) Q1-4	Y3	Y3	Y3	--	Y3	--	--	
Long-term tariff plans for achieving cost recovery		Y3	--	--	--	--	--	--	--	--	--	--	--	--	
Performance Management	Develop modern systems and procedures including MIS, GIS, target setting and monitoring and evaluation	Q1-4	(Y1) Q1-4	(Y1) Q1-4	(Y1) Q1-4	(Y1) Q1-4	(Y1) Q1-4	Q1-4	Q1-4	Q1-4	Q1-4	Q1-4	Q1-4	--	
	Computerized metering, billing, and collection systems	--	Q3	Q3	Q3	--	--	--	--	Y3	--	Q1	--	--	
	Public awareness plans for HCWW and Subsidiaries	Q1-2	(Y1)	(Y1)	(Y1)	(Y1)	(Y1)	Y3	Y3	Y3	Y3	Y3	Y3	--	
	Recommendations for service standards that could be used as the basis for reviewing performance of companies	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Service disconnection policy developed and approved	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Provide training in technical management for the HCWW and subsidiary company staff, including including GIS and MIS		Q3-Q4	Q1-Q2	(Y1) Q1-Q2	Q1-Q2	Q1-Q2	Y3	Y3	Y3	--	Y3	--	--	
Operations and Maintenance	Develop modern systems and procedures including SCADA; leak detection; asset valuation and management; storage and inventory control; and procurement	--	Q2	Q2	Q4	Q3	Q3	Q2-3	Q3	Y3	--	Q3	Q4	--	
	Measures for cost reduction, such as chemical and electricity rationalization, developed	--	Y3	Y3	Y3	Q1	Q1	Y3	Q1	Y3	Y3	Y3	--	--	
	Operations and maintenance procedures and long-term preventative maintenance procedures developed	--	Q2	Q2	Y3	Q3	Y3	Q1-2	Q3	Y3	Y3	Y3	--	--	
	Provide training in technical management for the HCWW and subsidiary company staff, including SCADA systems, leak detection, mapping, and asset management	Q1-3	(Y1) Q1-3	(Y1) Q1-3	(Y1) Q1-3	(Y1) Q1-3	(Y1) Q1-3	Q1-3	Q1-3	Q1-3	Q1-3	Q1-3	Q1-3	--	

Capital Investment Planning and Program Management	Recommendations for finalizing the master planning process and ensuring regular updates	(Y1)	--	--	--	--	--	--	--	--	Q1	--	--	--	--
	Capital investment planning and budgeting manuals	Q2													
	Resource plans identifying medium and long-term equipment and services needs, and potential contractors, consultants, and suppliers database	Y3	Y3	Y3	Y3	Y3	Y3	Y4	Y4	Y3	Y4	Y4	--	Y3	
	Maintain the existing PRISM program	Q1-4													
	Establish and equip Program Management Units at the HCWW and selected subsidiary companies	Q1	Q1	Q2	Q2	Q2	Q2	--	--	Q2	--	--	--	--	
	Training of HCWW and subsidiaries' staff on all aspects of planning and program, project, and construction management	--	Q2-3	Q2-3	Q2-3	Q2-3	Q2-3	Y3	Y3	Q1-4	Q2-3	Q1-3	Q2	Q2	
	Facilitation of senior-level discussions at the HCWW to identify objectives for data use for decision-making	Y3	--	--	--	--	--	--	--	--	--	--	--	--	
	Assistance to companies to prioritize projects and introduce the concept of funding planning including cash flow requirements	(Y1)	Y4												
	Operation and maintenance planning methodology, including: start-up; warranty requirements; turnover procedures; maintenance contracts; service contracts; etc.	Y3													
	Contractors prequalification and selection guidelines and procedures	Q2													
	Procedures for establishing dispute resolution boards and operation guidelines	(Y1)	Q2												
	Site identification and acquisition planning procedures	Q3													
	Standardized key documents for all steps of procurement, implementation, and evaluation developed and adopted by HCWW and subsidiaries	Q2													
	Meaningful and measurable indicators established to measure actual progress of construction	(Y1)	Q2												
	Develop modern systems and procedures including capital investment planning; program management; and project management	--	Q3	Q3	Q3	Q2	Q2	Y3	Y3	Y3	Q3	Q2	--	Y3	
	Performance of all program management responsibilities for the first two years of the contract for three subsidiaries	--	--	Q1-4	--	Q1-4	--	--	--	--	Q1-4	--	--	--	
	Using local qualified firms, provision of construction management assistance to three of the selected subsidiaries during the first two years of the program and assistance to selected subsidiaries in undertaking or outsourcing this responsibility thereafter	--	--	Q4	--	--	--	--	--	--	--	Q4	--	Q4	

NOTE: Activities completed in project Year 1 are so noted with a (Y1) in the appropriate cell. Activities planned for Year 2 are illustrated by quarter (e.g., Q1, Q2, etc). Quarters are defined according to the work plan year (November - October). Activities planned for project years 3 and 4 are noted as such (Y3, Y4).

Annex C – HCWW Summary of Work Plan Activities in O&M, Performance Management, and Program Management

أنشطة تطوير الأداء في السنة الثانية بمشروع دعم قطاع مياه الشرب والصرف الصحي

- تجهيز ورشة صيانة ومعايرة العدادات في كل من أسوط والجيزة والمنوفية بأجهزة معايرة العدادات والعدد والأدوات المطلوبة لهذا الغرض هذا بالإضافة إلى تدريب الأفراد على كيفية استخدامها. طما بأن الإلصر بها ورشة من مشروع المدن القوية أما سوهاج فسيتم دعمها في السنة الثالثة.
- توريد الحاسبات والطابعات لمراكز إصدار القوائم والتحصي في أسوط وسوهاج . كما سيتم تدريب الأفراد على أسلوب التشغيل الأمثل لهذه المراكز. وستتبعها بقية الشركات خلال السنوات الباقية من المشروع.
- توفير التدريب الفني والتدريب أثناء العمل لوحدات نظم المعلومات الجغرافية في أسوط وسوهاج والإلصر والمنوفية والجيزة . مع دعمها ببرنامج (ArcGIS Arc View) أما بقية الشركات ففيها هذه الوحدات طبقاً للمسح الميداني الذي تم في هذا الشأن.
- الاستمرار في البرنامج التدريبي للمياه الغير محاسب عليها في شركة الإلصر. التي سيتم دعمها بأجهزة قياس التدفق (Portable Ultrasonic Flow meters) وأجهزة قياس الضغط لم يتم تطبيقه على الشركات الأخرى تباحاً.
- المعاونة في إنشاء مركز نموذجي لخدمة العملاء في كل من الجيزة والمنوفية . كنمط سيتم تنفيذه في الشركات الأخرى طبقاً لاحتياجاتها . وسيقدم المشروع الدعم الفني في مجال إعداد الرسومات المعمارية من الداخل ومن الخارج . هذا بالإضافة إلى تدريب الكوادر من الأفراد على كيفية تشغيل هذا النوع من المراكز.
- تفعيل نظام تكنولوجيا المعلومات لإدارة الأصول المدعم من الوكالة الأمريكية للتنمية الدولية وسوف يتم تنفيذه في شركة مرسى مطروح. المساعدة في تنفيذ برنامج أجهزة قراءات العدادات المحمولة في مرسى مطروح . وهذه الأجهزة لدى الشركة وسيكون الدعم في كيفية استخدامها والعمل بها بالتعاون مع الشركة الموردة.

أنشطة إدارة المشروعات في السنة الثانية بمشروع دعم قطاع مياه الشرب والصرف الصحي

- سيتم تأجيل الأنشطة الخاصة بتخطيط الموارد إلى السنوات التالية
- وضع كتيبات إرشادية خاصة بكيفية وضع الخطة الاستراتيجية، ووضع أولويات المشاريع والميزانية السنوية للإحلال والتجديد للشركات التابعة. [بلي الكتيبات، ورش عمل وتدريب تم تطبيق على وضع الخطة الاستراتيجية السنوية خلال العام الثالث].
- وضع مستندات إرشادية تشمل جميع مراحل المشروع والتعاقدات بدءاً بصياغة مجال العمل (Scope) ثم كيفية تأهيل واختيار الاستشاري، وكيفية وضع الشروط العامة والخاصة للتعاقد، اختيار المقاولين، إدارة الإتشادات والتحكم في الجودة ، الاستلام وإغلاق المشروع. [بلي الكتيبات، ورش عمل وتدريب للشركات تم وضع خطط عمل وتطبيق].
- وضع مستندات إرشادية لاختيار المواقع المختلفة وخطة الاستحواذ على الأراضي (سيتم لاحقاً دراسة مدى احتياج الشركات إليها)
- وضع مستندات إرشادية خاصة بالتحكم والجدول الزمنية.
- مساعدة الشركات في تحديث البيانات عبر برنامج (PRISM) لعدد 3 شركات والقيام بعمام إدارة البرامج لعدد 3 شركات أخرى.
- تقديم الدعم الفني لعدد 3 مشروعات في 3 شركات من خلال مكتب استشاري متخصص لإدارة المشروعات.
- شراء احتياجات برامج Software وأجهزة Hardware لعدد 6 شركات.
- تدريب لعدد 5 شركات في مجال الجودة الزمنية للمشروعات والتحكم في المشاريع.
- لضمان الاستمرارية وتعظيم الاستفادة من التدريب المقدم في مجال إدارة ومتابعة المشروعات ، سيتم دراسة تقديم هذا التدريب في إطار برامج الشهادات الدولية المتخصصة في هذا المجال مثل الـ PMP
- تدريب لعدد 9 شركات في مجال إدارة العقود وكتابة مستندات التعاقد.
- تكوين وحدات الـ PMU لعدد خمس شركات بالإضافة إلى الشركة الفيضية

أنشطة التشغيل والصيانة في السنة الثانية بمشروع دعم قطاع مياه الشرب والصرف الصحي

- عقد ورش عمل بخصوص تغطية مصاريف التشغيل والصيانة للشركات التي لم تحضر هذه الورشة وهدفاً حشر شركات وسيم متابعة شركات أسبوط وسوهاج والإقصر في كيفية ملء الجداول وحساب المصاريف على مستوى المحطات .
- إجراء القياسات الخاصة بتوفير استهلاك الكهرباء في شركات الجزيرة والمنوفية والمنيا . ولقد تم اختبار محطة أشمون في المنوفية ومحطة كتوان في المنيا وجرى اختبار إحدى المحطات التابعة لشركة الجزيرة . وعليه سيتم تحديد عدد المكثفات المطلوبة لكل محطة وطرحها بمعرفة مشروع WWSS . ثم المتابعة بعد التركيب وإعداد تقرير عن التوفير في الطاقة طبقاً لذلك .
- بالنسبة لضبط الشبة والكثور ستكون محاضرة أو تدريباً عاماً في أحد المعامل المركزية أو المعمل المرجعي على ضبط الشبة (jar test) وقياس نقطة الانكسار للكثور (Break point) على مستوى شركات المنوفية والجزيرة والمنيا على أن يقتصر دور المشروع على التدريب العام فقط . أما المتابعة فستتم بمعرفة الشركة القابضة.
- تطبيق خطوات التشغيل القياسي (S.O.P) التي أصدرتها الـ JICA بشركة الشرقية على إحدى محطات المياه بكل من شركتي أسبوط والمنيا . مع عمل S.O.P لمحطة صرف صحي بكل من هاتين الشركتين والمتابعة.
- تطوير برنامج MP2 الموجود حالياً في بعض الشركات و إمكانية أعمال التشغيل والصيانة بشركات المنوفية والجزيرة ومطروح . وسيقوم المشروع بتحديث البرنامج القائم أو تطبيقه على محطات ليس بها هذا البرنامج مع التدريب والمتابعة المستمر.
- في حالة الموافقة على عدم شراء الورشة المنقلة لشركة الجزيرة يمكن توجيه الوافر في هذا البند لشراء برامج MP2 أو أجهزة قياس التسرب.
- شراء أجهزة معمل متكامل للمياه والصرف الصحي في شركة سوهاج حيث لوحظ عدم وجود أجهزة في هذا المعمل.
- التدريب وإعداد ورش عمل على أجهزة التسرب ، وصيانة المحابس ، والشبكات بكل من أسبوط والمنوفية والجزيرة مع اختبار منطقة شبكات في كل شركة لتطبيق ما تم التدريب عليه . وترى الشركة أن يتم النظر في اختبار شركة أخرى بدلاً من شركة مياه القاهرة تحتاج لهذا النوع من التدريب .