Ministry of
Water Resources and Irrigation

US Agency
for International Development

LIFE Integrated Water Resource Management
Task Order No. 802
EPIQ II: Contract No. EPP-T-802-03-00013-00

Annual Work Plan

Year 1
(October 2004 – September 2005)

Report No. 1

December 2004

International Resources Group

In association with
Academy for Educational Development (AED)
Development Alternatives, Inc. (DAI)
ECODIT
Environmental Quality International (EQI)
Montgomery Watson Harza (MWH)
Training Resources Group, Inc. (TRG)

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Acronyms and Abbreviations

AED	Academy for Educational Development (a US-based entity providing USAID-funded assistance regarding environmental education and awareness)
APRP	Agricultural Policy Reform Program
BCWUA	Branch Canal Water User Association
CTO	Cognizant Technical Officer. The USAID person responsible for supervising a technical assistance contractor
DAI	Development Alternatives, Inc. (a Washington DC-based consulting firm providing USAID-funded assistance regarding water management)
EEAA	Egyptian Environmental Affairs Agency
EEPP	Egyptian Environmental Policy Program (a USAID-funded program aimed at achieving environmental policy reform)
EPADP	(MWRI) Egyptian Public Authority for Drainage Projects
EPIQ	Environmental Policy and Institutional Strengthening Indefinite Quantity Contract
GIS	Geographic Information System
GOE	Government of Egypt
GPS	Global Positioning System
GW	Groundwater
GWS	Groundwater Sector
HD	(Aswan) High Dam
IAS	Irrigation Advisory Service (CD: Central Directorate)
IBRD	International Bank for Reconstruction and Development or World Bank
ID	Irrigation Department
IIIMP	Integrated Irrigation Improvement and Management Project
IIP	Irrigation Improvement Project
IRG	International Resources Group (a Washington DC-based consulting firm that is prime contractor for USAID's support the Water Component)
IS	Irrigation Sector of the MWRI
IT	Information Technology
IWMD	Integrated Water Management District
IWMU	MWRI Integrated Water Management Unit
IWRM	Integrated Water Resources Management
LAN	Local Area Network
LOE	Level of Effort
M&E	Monitoring and Evaluation
MALR	Ministry of Agriculture and Land Reclamation
MED	(MWRI) Mechanical & Electrical Department
MIC	MWRI Ministry Information Center
MISD	Matching Irrigation Supply and Demand
MOE	Ministry of Education
MOH	Ministry of Health
MOU	Memorandum of Understanding
MSEA	Ministry of Sate for Environmental Affairs
MWRI	Ministry of Water Resources and Irrigation
NGO	Non governmental Organization
NWRC	(MWRI) National Water Research Center

O&M	Operation and Maintenance
OJT	On-the-Job Training
PM&E	Performance Monitoring and Evaluation
RSC/WP	Red Sea Coastal/Water Project, short name for USAID Red Sea Coastal and Improved Water Resource Management Project
STTA	Short-term Technical Assistance
TA	Technical assistance
TOR	Terms of reference
USAID	United States Agency for International Development
WCU	Water Communication Unit
WDC	MWRI Central Water Distribution Center
WPRP	Water Resources Results Package
WQU	MWRI Water Quality Unit
WUA	Water User Association

1. Introduction

1.1 Authorization

Under the USAID/Egypt-funded Livelihood and Income from the Environment (LIFE) Integrated Water Resources Management (IWRM) Project (Contract No. EPP-I-802-03-00013-00 Task Order 802), International Resource Group (IRG) in association with the Academy for Educational Development (AED), Development Alternatives, Inc. (DAI), ECODIT, Environmental Quality International (EQI), Montgomery Watson Harza (MWH), and Training Resources Group, Inc. (TRG) is responsible for assisting the Government of Egypt (GOE) to promote integrated water resources management. The period of performance for the contract is October 1, 2004–September 30, 2008.

1.2 Purpose of Report

The purpose of this report is to present the LIFE/IWRM Annual Work Plan for Year 1 (October 2004–September 2005). The Annual Work Plan has been prepared based on agreements reached in annual planning workshops attended by key representatives of the technical assistance (TA) team, USAID, the Ministry of Water Resources and Irrigation (MWRI), and other key stakeholders.

The Annual Work Plan includes information on outputs that will contribute to achievement of each objective and related tasks, the inputs required, and level of effort needed. Flow charts are provided setting out all tasks to be completed, individual responsibilities for task completion, task durations, critical paths for task completion, and links to the Monitoring and Evaluation Plan (M&E) indicators and targets.

The Annual Training Plan and Annual Procurement Plan are included as annexes.

1.3 Project Objectives

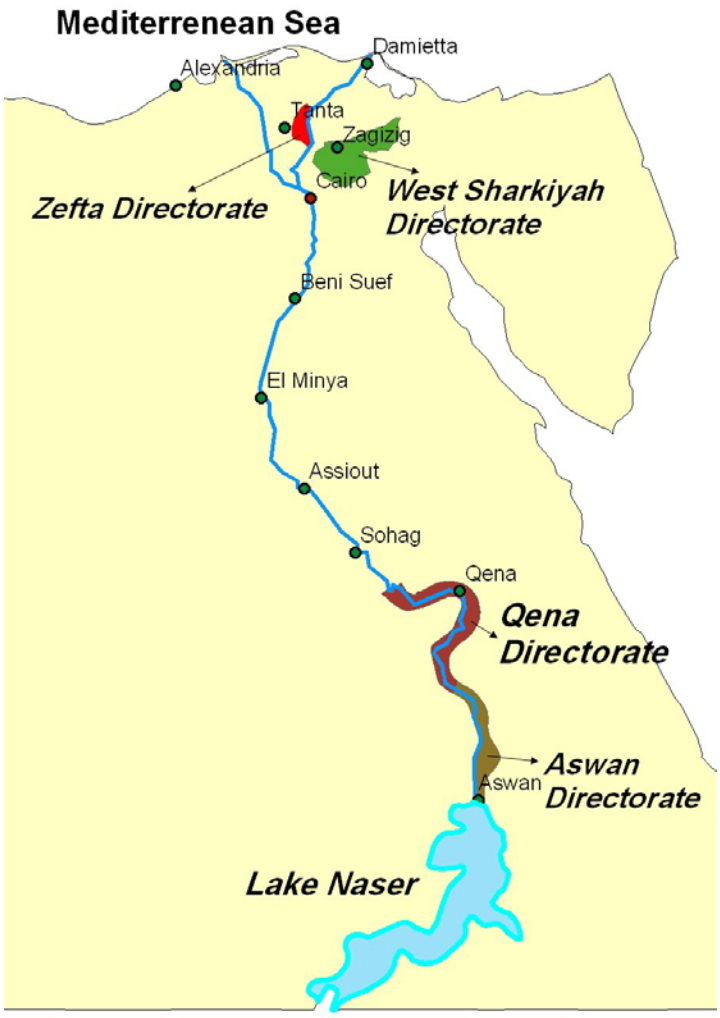
The GOE is implementing an aggressive irrigated agricultural area expansion program. This is in turn reducing the supply of water per feddan. In addition, the high cost of operating and maintaining the water delivery infrastructure is a serious strain on the national budget because farmers pay a very low portion of the actual costs. This is further compounded by decreasing water quality as the water conveyance system is increasingly used for waste disposal.

The objective of LIFE/IWRM is to provide technical assistance, training, commodities, and small grants in support of the decentralization of water management decision-making and an increased participation of all rural inhabitants in such decision-making in two priority geographical areas and four Irrigation Directorates: Zifta and West Sharkiya in the Middle Delta, and Qena and Aswan in Upper Egypt, as shown in figure 1.

Figure 1 LIFE/IWRM Project Location Map

With decentralization and participation, USAID expects greater civic responsibility in maintaining the water conveyance infrastructure and improvements in the quality of local water resources through better management of locally generated liquid and solid wastes.

The objectives are expected to be achieved through the formation and development of functional and sustainable Branch Canal Water User Associations (BCWUAs) and Integrated Water Management Districts (IWMDs) and developing the capacity of stakeholders to manage solid and liquid wastes in the targeted directorates.



- SUB-OBJECTIVE 1. Rural inhabitants accrue immediate and long-term economic benefits from participating in water-management decision-making and governance of the water conveyance infrastructure.
- SUB-OBJECTIVE 2. Local communities and private associations participate in water resources decision-making, accept responsibility for maintaining the water conveyance infrastructure, and adopt improved management practices for solid and liquid wastes.

Seven tasks under three performance requirement categories are to be implemented under the LIFE/IWRM Program:

A.1 Performance Requirement I: Decentralized Management of Water Resources

1. Formation of Integrated Water Management Districts
2. Formation of Branch Canal Water Users' Associations
3. Equitable Allocation of Water Resources

A.2 Performance Requirement II: Stakeholder Engagement in Water Resources Management

4. Improved Maintenance and Upgrading of Water Management Equipment
5. Environmental Services for Improving Water Quality Management
6. Improved Wastewater Reuse Practices

A.3 Performance Requirement III: Capacity Building of MWRI staff

7. Graduate Degree Training for MWRI staff

There are also a number of issues that are common to all the tasks. These cross-cutting issues include commodity purchases; workshops and training; monitoring and evaluation; donor coordination; public awareness, information, education, and communications; and gender.

The LIFE/IWRM will work closely with the MWRI Integrated Water Management Unit, the four directorate Undersecretaries and General Directors, the IWMDs, and other key stakeholders.

To facilitate implementation and to resolve any inter-sectoral issues coordination at higher levels will be through a Steering Committee appointed by Minister MWRI. Members of the steering committee include:

- Eng. Gamil Mahmoud, Chairman (MWRI Special Consultant to H.E. Minister)
- Head of Irrigation Department
- Egyptian Public Authority for Drainage Projects
- Chairman of M & E Department
- Head of Sector - Minister's Office
- Director of Technical Office for Technology and Information – Minister's Office
- USAID representative
- LIFE/IWRM representative

2. Work Plan Components

2.1 A.1: Performance Requirement I: Decentralized Management of Water Resources

Task 1: Formation of Integrated Water Management Districts

Four districts have already been restructured into IWMDs in three Directorates (Zifta, West Sharkiya, and Qena). The purpose of this task is to assist MWRI in completing the formation of IWMDs for the remaining districts in the four target Directorates.

The process for forming IWMDs involves the following steps:

- A Ministerial decree initiating the process through the formation of IWMDs;
- Definition of IWMDs through delineation of boundaries, and designation of IWMD directors (both achievements will be confirmed through decrees);
- Preparation of organizational plan and assignment of staff;
- Transfer of facilities and equipment;
- Preparation and implementation of action plans such as maintenance plan (also water monitoring and water distribution plan, see Task 3).

Figure 2 is a Gantt chart showing the activity schedule for Year 1.

The expected outputs for Task 1 are:

- Decrees authorizing the establishment process of IWMDs for each of the four target Directorates
- Decrees to establish, and confirm boundaries and responsibilities for each IWMD
- Decrees designating IWMD directors
- Guidelines for preparation of organizational plans for IWMDs (organization chart, staff assignment, mandates, etc.)
- Approved organizational plan for each IWMD
- Actual transfer of staff, equipment and facilities to IWMDs (decrees and/or equivalent administrative decisions)
- Guidelines for preparation of annual maintenance plans and budget requests
- Maintenance plan and budget request annually prepared by each IWMD
- Revised roles and responsibilities both at district and directorate levels
- Updated process for IWMD establishment and strengthening, and corresponding training modules.

Figure 2 Year 1 Schedule for Task 1: Formation of IWMDs

Task No. 1: Establishment of IWMDs - Year 1 Schedule

Task No. 1: IWMDs	Activities		Sub-Activities	Year 1 Q1	Year 1 Q2	Year 1 Q3	Year 1 Q4	Progress indicators	Targets Y1
	1. Support to definition of IWMD boundaries	1.1	Provision of guidelines for IWMD definition					One decree per directorate to officialize IWMDs	100%
		1.2	Procurement of base maps						
		1.3	Facilitation until finalization through decrees						
	2. Support to preparation of organizational plans and transfer of staff	2.1	Facilitation of IWMD Director selection					Organizational plans approved	100%
		2.2	Provision of guidelines for preparation of organizational plan						
		2.3	Support/training for preparation of organizational plans						
		2.4	Facilitation of transfer of staff and trainings						
	3. Support to transfer of facilites and equipment	3.1	Awareness raising at different levels of ID, EPADP, MED					Equipment /facilities transferred	30%
		3.2	Support to inventory of facilities/equipment						
		3.3	Facilitation of transfer						
	4. Support to preparation of maintenance plans and budget requests	4.1	Provision of guidelines for preparation of maintenance plans					Maintenance plans prepared by IWMDs	100%
		4.2	Trainings on preparation of maintenance plans						
		4.3	Support for preparation of maintenance plans						
		4.4	Monitoring and Evaluation						
	5. Revision/clarification of roles and responsibilities	5.1	Inventory of existing roles and responsibilities					Number of IWMDs with clear mandates	30%
		5.2	Revision and clarification of mandates						
	6. Training and capacity building activities	6.1	Preparation of annual training plan					Number of training courses delivered	30%
		6.2	Revision of training modules						
		6.3	Implementation						
		6.4	Monitoring and Evaluation						
	7. Awareness/Promotion of IWMDs and IWRM	7.1	Preparation of practical examples of IWRM benefits					Number of material prepared and distributed	30%
		7.2	Compilation of success stories						
		7.3	Dissemination of examples and success stories						

Direct activity
Facilitation, capacity-building, follow-up

Percentages represent coverage of the four target directorates, the actual number of IWMDs formed will depend on the merging of existing districts.

The primary cooperating partners for this activity will be the MWRI/IWMU, the target Directorates, and the newly formed IWMDs. Most of this work will be done by MWRI with the TA team providing training, strengthening processes, promoting systematized approaches, and assisting with process documentation.

Because the primary focus of the work is in the MWRI Directorates, IRG has recruited two experienced long-term senior water resource management specialists to serve as regional advisors. An advisor for Lower Egypt will be stationed in Zagazig; an advisor for Upper Egypt will be stationed in Qena. MWRI has provided offices on the MWRI premises for the advisors and IWMU has provided one engineer in Zagazig and another in Qena to support the regional advisors.

Task 2: Formation of Branch Canal Water Users' Associations

Ninety-six BCWUAs covering all the branch canals in four IWMDs (Ibrahimiya, South Zifta, West Esna, Luxor) have already been formed. The Project will complete the formation of BCWUAs covering all branch canals within all the remaining districts in the target directorates.

The process for establishing a BCWUA involves the following steps:

1. Recruitment of district field staff
2. Field Staff training
3. Initiate awareness campaigns and public participation for water users
4. Branch Canal inventory and data collection
5. Identify key stakeholders
6. Conduct farmers training on Participatory Irrigation Management (PIM) approach and objectives
7. Determine final canal groupings
8. Divide the canal into basic agricultural and residential units (blocks)
9. Elect members of representative assembly (RA)
10. Conduct preparatory meeting for election of BCWUA board
11. Elect members of BCWUA board
12. Issue ministerial decree for BCWUA establishment
13. Conduct visits to model BCWUAs
14. Present and discuss MOU with BCWUA board and RA
15. Present and discuss MOU with MWRI Directorate Committee
16. Workshop for finalizing MOU
17. Signature of MOU between MWRI and BCWUA

After forming the BCWUAs a number of activities will be carried out to strengthen these organizations (includes the 96 formed under RSC/WP):

1. Select project staff required for this phase

2. Train project staff and enhance their capabilities
3. Identify training needs for BCWUA members (board & RA members)
4. Implement training program, including classroom and on-the-job training
5. Provide guidelines and trainings for BCWUA administrative and financial management
6. Provide guidelines and trainings for preparation of BCWUA internal regulations, annual plans and conflict resolution rules
7. Provide advisory support for administration, finance, O&M activities

Finally, a number of different pilot BCWUA activities will be implemented on select branch canals. The objective will be to demonstrate that BCWUAs can bring actual tangible benefits to their members. The revision of Law 12 would provide opportunities in that regard. These pilot activities will include procedures for monitoring water distribution, reporting cropping patterns, prioritizing canal maintenance, and providing environmental services for improving water quality management. Grants will be allocated by the project to support these activities.

The expected outputs for Task 2 are:

- Decrees recognizing BCWUAs in four directorates;
- BCWUA Boards and RAs elected;
- MOUs signed with the MWRI;
- Internal regulations and branch canal assessments prepared by BCWUAs;
- Administrative and financial management procedures developed by some BCWUAs;
- Effective water management due to the implementation of pilot activities;
- Raised awareness within MWRI and among waters users of BCWUA benefits
- Fee collection by some BCWUAs and potential co-management of branch canals with MWRI (revision of Law 12 permitting); and
- Updated process for MWRI to establishment and strengthen BCWUAs.

Figure 3 is a Gantt chart showing the activity schedule for Year 1.

Based on lessons learned in forming BCWUAs under the USAID RSC/WP a number of innovations will be introduced. These include: (i) establishing an IAS office in each target directorate, (ii) appointing full-time IWMD staff as field teams to assist the IAS, (iii) using IWMD district staff to conduct field surveys, (iv) using water users and board members from established BCWUAs as trainers, and (v) subject to availability of funds, providing grants to support pilot activities and to help BCWUA leaders to establish viable organizations.

Figure 3 Year 1 Schedule for Task 2: Establishment of BCWUAs

Task No. 2: Establishment of BCWUAs - Year 1 Schedule

Task No. 2: BCWUAs	Activities		Sub-Activities	Year 1 Q1	Year 1 Q2	Year 1 Q3	Year 1 Q4	Progress indicators	Targets Y1
	1. Entry phase: IAS staff	1.1	Orientation for IAS management staff					IWMDs with IAS staff	Delta: 50% Upper Egypt: 25%
		1.2	Guidelines for selection, roles and responsibilities of IAS staff						
		1.3	Recruitment of local IAS staff						
		1.4	Training of local IAS staff						
	2. Establishment of BCWUAs	2.1	Guidelines for data collection/canal inventory					Elected boards of BCWUAs	Delta: 40% Upper: 20%
		2.2	Data collection/inventory of canals						
		2.3	Guidelines for election of RAs and BCWUA boards						
		2.4	Election of RAs and Boards						
		2.5	Training/awareness of WUs and WU representatives					Signed MOUs	(Yr 2)
		2.6	Maintenance/updating of BCWUA database						
		2.7	Guidelines for preparation of MOU						
		2.8	Signature of MOUs between MWRI-IWMDs and BCWUAs						
	3. Strengthening of BCWUAs	3.1	Updating of training courses for strenghtening BCWUAs					BC assessments prepared by BCWUAs	(Yr 2)
		3.2	Guidelines for BCWUA internal regulations/conflict resolution						
		3.3	Guidelines for BC assessments (issues identified & prioritized)						
		3.4	Guidelines for BCWUA admin/financial management					BCWUAs with financial/admin rules	(Yr 2)
		3.6	Training to WU representatives/ BCWUA board members						
		3.7	Monitoring of BCWUA achievements						
	4. Pilot activities (with grants)	4.1	Provision of guidelines for grant application/selection					Number of grants allocated	(Yr 2)
		4.2	Evaluation of applications/allocation of grants						
		4.3	Implementation of grants						
		4.4	Monitoring and Evaluation						
	5. Training and capacity building activities	5.1	Preparation of annual training plan					Number of training courses delivered	20%
		5.2	Revision of training modules for BCWUA establishment						
		5.3	Training activities for establishment						
		5.4	Revision of training modules for BCWUA strengthening						
		5.5	Training activities for strengthening						
		5.6	Monitoring and Evaluation						
	6. Awareness/Promotion of WU participation	6.1	Preparation of practical examples of BCWUA benefits					Number of material prepared and distributed	30%
		6.2	Compilation of success stories						
		6.3	Dissemination of examples and success stories						

Direct activity
Facilitation, capacity-building, follow-up

Percentages represent coverage of the four target directorates, the actual number of BCWUAs formed will depend on BC inventories and canal grouping.

The approach and priority for implementation will be agreed upon by MWRI and USAID during the work planning process.

The primary cooperating partner for this activity will be the MWRI IAS and IWMU. The MWRI Water Communication Unit will assist with public awareness activities.

Task 3: Equitable Allocation of Water Resources

LIFE/IWRM will provide technical assistance and other support to train MWRI staff in the four Directorates to collect water quality and water quantity data and to record, analyze, and report the information to managers of the water delivery systems. The Project will fund a portion of the costs for equipment required to achieve results, e.g., purchase of equipment/instruments for field calibration of control structures. Several pilot projects involving water users will be conducted on select branch canals where BCWUAs have been established.

In each IWMD:

- Water management teams will be selected, organized, and trained
- Water quality and quantity monitoring programs that cover groundwater, canals, and drains will be established
- Water resource inventories and management plans will be developed
- Matching Irrigation Supply and Demand (MISD) program will be implemented
- A computerized water resource management information office will be setup, and a GPS based mapping effort will be supported

Expected outputs for each IWMD will include:

- Organizational plans for each IWMD (jointly with Task 1);
- Water monitoring equipment and trained staff in each IWMD;
- IWMD water monitoring networks and plans;
- IWMD water resource inventories;
- IWMD water allocation plans and volume-based water allocation processes; and
- Improved water management decision-making based on real data.

Figure 4 is a Gantt chart showing the activity schedule for Year 1.

Several pilot activities will be carried out for calibrating and measuring branch canal inflow, and involving water users in participatory water management at the branch canal level.

Major partners for this activity will include IWMU, Water Quality Unit, Telemetry, ground water sector, regional water distribution staff, Central Ministry Information Center, Directorate staff, IWMD staff, MALR, and the BCWUAs.

Figure 4 Year 1 Schedule for Task 3: Equitable Allocation of Water Resources

Task No. 3: Equitable Allocation of Water Resources - Year 1 Schedule

Task No. 3: Equitable Allocation of Water Resources	Activities		Sub-Activities	Year 1												Progress indicators	Targets
				Q1			Q2			Q3			Q4				Y1
	1. Institutional arrangements	1.1	Support to definition of IWMD boundaries				■									IWMD distribution staff assigned	100%
		1.2	Selection of water distribution staff					■	■								
		1.3	Guidelines for responsibilities of water distribution staff					■	■								
	2. Water monitoring	2.1	Guidelines for definition of water monitoring networks					■	■							Monitoring netowrks and plans	30%
		2.2	Procurement of water measurement equipment							■	■						
		2.3	Trainings on water measurement									▒	▒	▒	▒		
		2.4	Procedures for data-based water management									▒	▒	▒	▒		
	3. Integrated water management planning	3.1	Guidelines for water resource inventories								■	■				Water resource inventories	(Yr 2)
		3.2	Support to preparation of water resource inventories										▒	▒	▒		
	4. MISD	4.1	Installation of MISD database										▒	▒	▒	Water requests and allocation plans prepared by IWMDs	(Yr 2)
		4.2	Guidelines for water requests and allocation plans										■	■	■		
		4.3	Support for preparation of allocation plans														
		4.4	Monitoring and Evaluation														
	5. Water resource databases	5.1	Revision of water resource databases				■	■	■							Computer water management systems in IWMDs	30%
		5.2	Procurement and installation of computer systems							■	■	■					
		5.3	Training for database management and monitoring							▒	▒	▒	▒	▒	▒		
	6. Digital mapping	6.1	Procurement of computers						■	■						Digital mapping systems in Directorates	30%
		6.2	Provision of support maps								■	■					
		6.3	Training and monitoring										▒	▒	▒		
	7. Pilot activities	7.1	Test and guidelines for BC flow monitoring													Pilot activities implemented	(Yr 2)
		7.2	Implementation of BC monitoring														
	8. Training and capacity building activities	8.1	Preparation of annual training plan			■									■	Number of training courses delivered	30%
		8.2	Revision of training modules				■	■	■								
		8.3	Implementation				▒	▒	▒	▒	▒	▒	▒	▒	▒		
		8.4	Monitoring and Evaluation				▒	▒	▒	▒	▒	▒	▒	▒	▒		
	9. Awareness/Promotion of IWMDs and IWRM	9.1	Preparation of practical examples of IWRM benefits				■	■	■							Number of material prepared and distributed	30%
		9.2	Compilation of success stories							▒	▒	▒	▒	▒	▒		
		9.3	Dissemination of examples and success stories							▒	▒	▒	▒	▒	▒		

■ Direct activity
▒ Facilitation, capacity-building, follow-up

Percentages represent coverage of the four target directorates, the actual number of IWMDs formed will depend on the merging of existing districts.

2.2 A.2: Performance Requirement II: Stakeholder Engagement in Water Resources Management

Task 4: Improved Maintenance and Upgrading of Water Management Equipment

The purpose of this Task is to assess the capacity of the Governorate technical schools administered by the Central Department of Technical Education within the Ministry of Education (MOE) to provide training in the repair and maintenance of agriculture and irrigation tools and equipment and in business management. A rapid assessment of both vocational and technical schools in each of the project's priority Governorates will be conducted. The assessment will focus on the needs of the private sector primarily the BCWUAs being formed under Task #2. It will also consider the potential of these institutes for training BCWUA members in such areas as computer training, basic business management, and basic personnel management.

The Task 4 team will:

- Conduct focus groups with BCWUA members from target Governorates to verify need for qualified mechanics.
- Investigate training opportunities offered by agricultural and industrial vocational schools, as well as alternative institutions such as Agricultural Engineering Stations, NGO and Ministry of Labor Force training centers, and private sector workshops in each of the target Governorates.
- Determine what training is needed, what offerings are available through existing local institutions, and the quality or relevance of the training toward strengthening the performance of BCWUA members.
- Based on the results of the assessment, subject to availability of funds and USAID approval, initiate cooperative training programs

Outputs subject to funding and the results of the assessment have the potential to:

- Increase the number of qualified technicians if needed
- Link BCWUA members to existing training institutions,
- Improve the quality of instruction through development of learning supplements
- Introduce the learning supplements through training for instructors.

Figure 5 is a Gantt chart showing the activity schedule for Year 1.

A recent USAID funded study carried out by Michael Ross from Sandia National Labs, USA, found that farmers have no problem finding mechanics to come to the field and repair pumps. This indicates that pump repair may be a non-issue. The study also found that is was not economically sound—with the type of pumps in use and the low cost of diesel fuel—to introduce alternative power sources for low-head/low-volume pumping installations used in Egypt by most farmers.

Figure 5 Year 1 Schedule for Task 4: Improved Maintenance and Upgrading of Water Management Equipment

Task No. 4: Improved Maintenance and Upgrading of Water Management Equipment

	Activities		Sub-Activities	M&E		Year 1											
				Progress Indicator	Target	Q1			Q2			Q3			Q4		
Task No. 4	1. Verify Findings on Pump Maintenance	1.1	Conduct BCWUA focus group meetings	Pump Maintenance needs determined	100%												
		1.2	Analyze findings														
		1.3	Recommend next steps														
	2. Determine Training Needs of BCWUA	2.1	Conduct BCWUA focus group meetings	Needs Assessment completed	100%												
		2.2	Specify BCWUA training needs														
	3. Conduct Rapid Assessment of Training Facilities	3.1	Meet with Ministry of Education & other partners	Rapid Assessment Completed	100%												
		3.2	Develop research plan & tools														
		3.3	Select schools & training centers (3 per Governorate)														
		3.4	Conduct site visits of Agr & Industrial Vocational Schools														
		3.5	Conduct site visits of Technical Schools														
		3.6	Conduct site visits of other training centers														
		3.7	Review available training materials collected														
		3.8	Analyze findings														
		3.9	Recommend next steps.														

The primary cooperating partners for this activity are BCWUAs, IWMDs, Integrated Water Management Unit, Water Communication Unit (WCU), IAS, Vocational & Technical Schools (Central Department of Technical Education, Ministry of Education); Agricultural Engineering Stations, NGO and Ministry of Labor Force training centers, and private sector workshops.

Task 5: Environmental Services for Improving Water Quality Management

The extent of the problem of solid and liquid wastes and their adverse affect on the water quality of irrigation, drainage, and groundwater systems in the four target Directorates is well documented ("Management of Solid and Liquid Wastes for IWMD and General Directorates", H. Dorrah and H. El-Zonfely, September 2004). LIFE/IWRM will implement a pilot activity to address this problem. This will be done using guidelines established under the MWRI policy for stakeholder participation in decision-making (EPIQ Report # 50, Public Participation in Decision-Making, Dec. 2001) and will include the following steps:

- Stakeholder Mobilization
- Data Collection and Problem Definition
- Assessment of Alternative Methods for Wastewater Treatment and Re-use and Solid Waste Management
- Formation of Management Consortia
- Training and Awareness Raising

Initially one target branch canal in an existing IWMD where a BCWUA has already been established will be selected. Based on the success of the initial pilot, the program will be extended to a second pilot area as agreed upon with the MWRI and USAID.

The expected outputs for Task No. 5 are:

- Analysis of existing solid and liquid waste disposal practices and assessment of alternative disposal/re-use methods.
- Survey pilot area to establish trends in solid and liquid waste disposal/re-use behavior as a result of pilot activities.
- Hold stakeholders (including women) focus group meetings at each of the selected areas to introduce the project, and to enhance approval and support of project activities.
- Workshops:
  - Hold stakeholder inception workshop in the pilot area.
  - Hold a public hearing in the pilot area.
  - Hold awareness workshop to introduce solid and liquid waste disposal options to the stakeholders in the pilot area.
  - Hold training workshops to encompass managerial as well as technical training.
- Establish stakeholder consortia.

- Develop a tracking system to determine qualitative solid waste quantities over time to track waste reductions.
- Final report with recommendations and lessons learned.

Figure 6 is a Gantt chart showing the activity schedule for Year 1.

Key partners will include IWMU, BCWUA, local community, IWMDs, Governorate and central officials of the MOH, MWRI and MALR.

Task 6: Improved Wastewater Reuse Practices

The Project will provide technical assistance, guidelines, and commodity support for the design, installation, operation, and monitoring of a demonstration wastewater use site producing a variety of approved commercial plant species in accordance with the recently prepared "Egyptian Manual as Guidelines for Treated Wastewater Reuse in Agriculture."

The steps for implementing this task include:

1. Site selection
2. Crop selection and cropping layout
3. Irrigation and crop management plant
4. Environmental monitoring plan
5. Field implementation and follow-up
6. Private sector participation
7. Preliminary economic evaluation of water reuse in Luxor

The expected deliverables for Task No. 6 are:

- List of crops and crop layout
- Irrigation and Crop Management Plan
- Environmental Monitoring Plan
- Issues and Options paper on how to engage the private sector in water reuse in Luxor
- Seminars/workshops with the private sector (farmers and industries)
- Operational demo site for water reuse in Luxor.

Figure 7 is a Gantt chart showing the activity schedule for Year 1.

MSEA will be the primary partner for this activity. MSEA has suggested that this activity be postponed until the Waste Water Reuse Code has been signed.

Figure 6 Year 1 Schedule for Task 5: Environmental Services for Improving Water Quality Management

Task No. 5: Environmental Services for Improving Water Quality Management

Task No. 5: Water Quality Management	Activities		Sub-Activities	Year 1 Q1	Year 1 Q2	Year 1 Q3	Year 1 Q4	Progress indicators	Targets Y1
	5.1 Collect and Review Data on Existing Solid and Liquid Waste Disposal/Re-use Practices	5.1.1	Collect and review secondary data					Waste Water Reuse Profile Prepared	100%
		5.1.2	Collect and review field data						
		5.1.3	Identifying areas requiring intervention and plan of action						
	5.2. Stakeholders Mobilization	5.2.1	Identify and develop cooperative linkage with key players					Working Groups Formed	100%
		5.2.2	Stakeholder focus group meetings and formation of working groups						
	5.3 Assess Alternative Methods for Treatment and Disposal/Re-Use of Solid Waste and Wastewater	5.3.1	Identify disposal, treatment and re-use methods					Waste Water Reuse Alternatives Selected	100%
		5.3.2	Analysis of alternative and selection of methods						
	5.4 Pilot Projects	5.4.1	Selection of pilot project areas					Pilot Project Implemented	50%
		5.4.2	Implementation of pilot activities						
	5.5 Formation of Management Consortia	5.5.1	Selection of members and setting up the institutional structure					Management Consortium Formed	50%
		5.5.2	Formalization of the consortia						
	5.6 Training and Awareness Raising	5.6.1	Inception workshop					Public Awareness Workshops held	25%
		5.6.2	Public Hearing						
		5.6.3	Training workshops						
		5.6.4	Public Awareness workshops						

Direct activity
Facilitation, capacity-building

Figure 7 Year 1 Schedule for Task 6: Improved Wastewater Reuse Practices

Task 6: IMPROVING WATER REUSE PRACTICES Year 1 Schedule [1]

Task No. 6: Improving Water Reuse Practices	Activities		Sub-Activities	Indicator	Target	Year 1 Q1	Q2	Q3	Q4
	1. Site Selection	**1.1**	Identify candidate reuse areas	Demo site and project office identified	100%				
		1.2	Visit reuse area and identify potential demo sites						
		1.3	Reach agreement on demo site of choice						
		1.4	Find suitable project office in reuse area of choice						
		1.5	Obtain necessary approvals to use demo site, project office and storage area						
	2. Crop Selection and Croping Layout	**2.1**	Review existing water reuse crops in Egypt and the reuse area	Crops selected and approved	100%				
		2.2	Review draft Water Reuse Code (MSEA)						
		2.3	Reach agreement on crop selection (inc. MSEA approval)						
		2.4	Prepare croping layout (inc. spacing and number)						
	3. Irrigation and Crop Management Plan	**3.1**	Evaluate infrastructure needs based on what is already in place	Irrigation and Crop Mgt Plan completed	100%				
		3.2	Prepare irrigation plan (inc. BOQs, specifications)						
		3.3	Prepare crop management plan based on crop selection						
	4. Environmental Monitoring Plan	**4.1**	Conduct a baseline environmental survey of the target site	EMP developed and approved	100%				
		4.2	Prepare draft Environmental Monitoring Plan (inc. sampling protocols and H&S issues)						
		4.3	Seek EMP approval from USAID and MSEA						
	5. Field Implementation	**5.1**	Provide shelter and storage room	Irrigation network installed and tested; Crops planted	100%				
		5.2	Procure irrigation supplies and other ancillary equipment, if any						
		5.3	Execute land preparation works (e.g., leveling, deep tilling)						
		5.4	Install irrigation system						
		5.5	Purchase seeds/seedlings and plant them						
		5.6	Irrigate and grow crops according to Irrigation and Crop Management Plan						
		5.7	Sample and analyze soil, water and plants according to EMP						
	6. Private Sector Participation	**6.1**	Organize consultation workshops/seminars to discuss wwr with the private sector	Draft MOU	(Yr2)				
		6.2	Identify market outlets for existing water reuse crops						
		6.3	Present and discuss findings of market survey with the private sector (farmers, industries)						
		6.4	Draft a multi-stakeholder MOU between wwr stakeholder groups						
	7. Preliminary economic evaluation of water reuse in Luxor	**7.1**	Review yield results of MOA water reuse project in project area	Economic Evaluation Complete	(Yr 2)				
		7.2	Estimate economic returns from the sale/processing of water reuse crops						
		7.3	Prepare report on the economic evaluation of wwr in the target area						
						Oct 04	Jan 05	Apr 05	Jul 05

[1] **Subject to Approval by MSEA and USAID**

2.3 A.3: Performance Requirement III: Capacity building of MWRI staff

Task 7: Graduate Degree Training for MWRI Staff

Funds have been obligated to LIFE/IWRM by USAID to provide academic degree training to MWRI staff. It is expected that both US and Egyptian institutions will be used to provide the degree training.

The Project will assist MWRI in:

- Designing and overseeing procedures for the selection of trainees
- Selecting training institutions to match MWRI needs
- Application processing for perspective trainees
- Pre-departure orientation in the case trainees going to the US and assistance with such formalities as obtaining visas
- Monitoring of trainee progress

Figure 8 is a Gantt chart showing the activity schedule for Year 1.

The key partners for this activity will be IWMU, USAID, and the selected universities.

Details of this activity will be finalized after review and approval of MWRI and USAID.

Figure 8 Year 1 Schedule for MWRI Staff Graduate Degree Training

Task No. 7. Year 1 Work Plan Schedule - Graduate Degree Training for MWRI Staff [1]

task No. 7	Activities		Sub-Activities	M&E		Year 1											
				Process Indicator	Target	Q1			Q2			Q3			Q4		
	1. Determine MWRI Training Priorities	1.1	Review Training Needs Assessment	MWRI Priorities for graduate degree training established		■	■										
		1.2	Meet Senior MWRI Personnel					■	■								
	2. Design Procedure for Selection of Trainees	2.1	Screening Candidates for Academic Training		100%				■								
		2.2	Organize Selection Panel	MWRI Selection Panel Convened						■							
		2.3	Selection of Candidates	Candidates Selected						■							
	3 Selection of Training Institutes in USA & Egypt			Instituion selected for prospective trainees	100%						■						
	4. Assist Trainees with Applicaton Process			Candidates applications to US and Egyptian institutions submitted	50%						■						
	5. Assist US bound Trainees	5.1	Provide English Language Courses to the candidates to pass TOEFL exams	Pass TOEFL Exams	50%						■	■					
		5.2	Pre-departure Orientation for US-bound Candidate	Pre-Departure Orientation sessions(s) hold	50%								■				
		5.3	Assistance with Formalities e.g. Visa	US Bound trainees depart Egypt	50%								■	■	■	■	
	6. Monitor Progress of Trainees in USA & Egypt			Transcripts from Training Instituions, Degreed candidates return to MWRI	50%												■

[1] Details of this activity will be finalized after review and approval of MWRI and USAID.

2.4 Cross-Cutting Components

Monitoring and Evaluation

The purpose of the Monitoring and Evaluation (M&E) component of the project is to provide LIFE/IWRM Project stakeholders with the information needed to follow and manage the project's progress and assess its outcomes and impacts.

The following steps will be used to establish an effective project monitoring and evaluation program:

- Review the applicable USAID SO results statements
- Identify new or refine existing and illustrative indicators to measure results, collect baseline data, and establish actual targets based on collected baseline data.
- Update targets as required during the course of Project
- Develop a comprehensive M&E Plan that identifies monitoring parameters with clear indicators and benchmarks for determining progress against applicable SO results statements.

Establish indicators and performance targets for years 1, 2, 3, and 4 of the contract with clear responsibilities delineated for data collection against targets and reporting mechanisms.

The key partners will include USAID, IWMU, the IWMDs, and the four Directorates.

Public Awareness, Education, and Communication Support

To achieve success in the core activities of the project, namely formation and strengthening of both IWMD and BCWUA, public awareness, education and communication support is essential. Beginning with project start-up a modest materials package is being developed to present the overall project and provide general information regarding project objectives and activities.

Also to support the overall project a website will be designed, constructed, and deployed in support of public awareness and information activities. All materials (i.e., reports, brochures, videos, fact sheets, newsletters, and maps) produced under the project will be available via the website.

In support of Task 1: Formation of the IWMDs, a communication package or "tool kit" will be designed to increase understanding and encourage adoption of integrated water resource management (IWRM) within the MWRI. The objective is to promote IWRM within the MWRI by focusing on the practical application of the concept at the district level. To enhance acceptance, support implementation and improve performance materials that explain IWRM and IWMD, support IWMD training courses, highlight both benefits and success stories, as well as foster quality performance among IWMD staff will be developed.

In support of Task 2: Formation of BCWUAs, a communication strategy and campaign to inform stakeholders about WUAs and to support BCWUAs at all stages of development from formation to activation will be produced. The objective is to promote the WUOs on a practical basis both within the MWRI and within the community. For BCWUAs to be established and active, MWRI staff and water users have to be convinced of the benefits these new entities and of participation through practical examples, success stories and actual achievements. To encourage participation, support formation, and improve performance of the BCWUAs, we will develop a campaign strategy, implement a phased campaign designed to explain, promote, strengthen and encourage participation, enhance BCWUA training modules with support materials, highlight benefits, and share success stories with other BCWUAs.

Other: Public awareness, education, and communication activities and materials will also be developed and implemented to support Tasks 3, 4, 5 and 6 as these activities are implemented. It is envisioned that of these, Task 5 will require a significant public awareness campaign to successfully engage members of a BCWUA and their community in improved solid and liquid waste management on their branch canal. Task 6, at a minimum, will require a press kit promoting water reuse as demonstrated in the implementation of this task.

Gender

In keeping with USAID and the GOE's plan, as described in "Egypt & the 21st Century," the gender component of this project will address the need for increased participation and involvement of women in the water resources management and irrigation sector. Specifically, the approaches taken in this project will:

- Increase awareness as to the importance of gender equitable approaches in all aspects of water resources management and irrigation and among all users.
- Establish a baseline of information, disaggregated by gender, to create a foundation of measurement from which to monitor increased participation among female stakeholders.
- Measure the impact of specific actions taken to increase participation and training among female participants.
- Strengthen capacity of Ministry representatives (including gender focal points at the top levels, as well as directorate levels) through Training of Trainers sessions and recommended resources.
- Develop and train stakeholders in specific actions that will ensure gender equitable opportunities in all tasks outlined in the project.
- Develop training materials to increase awareness and understanding of the importance of gender equitable approaches in all aspects of water resources management and irrigation.

3. Training

Training will be an important component of the LIFE/IWRM and will be used to support all the task activities. IRG has hired a full time training/workshop coordinator to support this effort. Annual training plans will be prepared and updated to identify and track training programs. Data for all training will be entered into the USAID TraiNet system.

Training partners will include IWMU staff, Irrigation Advisory Service, MWRI organizations, and where required, local training service providers.

Table 1 presents an initial list of training activities that have been identified as necessary to support the Project. Some of these training activities are tentative and indicative and will be adjusted throughout the course of implementation.

Table 1: Training Plan Year 1

ID Code	Course Title	Type	Target Group	Dur. Days	Events	Number Trainees	Date	Venue
Task# 1 Formation of Integrated Water Management Districts {Year 1}								
1.1	District's Establishment (IWMD Organization)	Class Room	IWMD	3	6	120	Q.2	Each Directorate (2 Lower / 4 Upper)
Task# 2 Formation of Branch Canal Water Users' Association (BCWUAs) {Year 1}								
2.1	Field Staff Orientation 1	Class Room	IWMD-IAS Field Staff	3	4	200	Q.2	Each Directorate
2.2	Field Staff Orientation 2	Class Room	IWMD-IAS Field Staff	3	4	200	Q.2	Each Directorate
2.3	Water Users Orientation	OJT	Water Users	10	4	200	Q.2	Each Directorate
2.4	Data Collection & Stakeholders Analysis	Class Room & Field Visit	IWMD-IAS Field Staff	3	4	200	Q.2	Each Directorate
2.5	Data Collection & Stakeholders Analysis	OJT	Water Users	10	4	200	Q.2	Each Directorate
2.6	Canal Grouping	Class Room & Field Visits	IWMD-IAS Field Staff	3	4	200	Q.3	Each Directorate
2.7	Canal Grouping	OJT	Water Users	10	4	200	Q.3	Each Directorate
2.8	Election & Roles & Responsibility of RA	Class Room & Field Visits	IWMD-IAS Field Staff	3	4	200	Q.4	Each Directorate
2.9	Election & Roles & Responsibility of RA	OJT	Water Users	10	4	200	Q.4	Each Directorate
2.10	Election & Roles & Responsibility of BCWUA Board	Class Room & Field Visits	IWMD-IAS Field Staff	3	4	200		
2.11	Election of BCWUA Board	OJT	Water Users	10	4	200	Q.4	Each Directorate
2.12	Roles & Responsibility of BCWUA Board	OJT	Water Users	10	4	200	Q.4	Each Directorate
2.13	Conflict Management & Development of Internal Regulations	Class Room	IWMD-IAS Field Staff	4	4	200	Q.2	Each Directorate
2.14	Conflict Management & Development of Internal Regulations	OJT	Water Users	10	4	200	Q.2	Each Directorate
2.15	BC Identification & Prioritization of Issues and O&M of Canal Systems	Class Room	IWMD-IAS Field Staff	4	4	200	Q.2	Each Directorate
2.16	BC Identification & Prioritization of Issues and O&M of Canal Systems	OJT	Water Users	10	4	200	Q.3	Each Directorate
2.17	Legal Awareness, Administrative and Financial Management	Class Room	IWMD-IAS Field Staff	4	4	200	Q.3	Each Directorate
2.18	Legal Awareness, Administrative and Financial Management	OJT	Water Users	10	4	200	Q.4	Each Directorate
Task# 3 Equitable Allocation of Water Resources {Year 1}								
3.1	Orientation-IWMD organization (Jointly with task 1)	Class	DGs,Dis. Eng.	3	6	120	Q.2	Each Directorate
3.2	Water Flow Monitoring	Class/Field	DGs,Dis. Eng.	5	6	120	Q.3	Each Directorate
3.4	Integrated Water Resource Planning	Class	DGs,Dis. Eng.	3	12	240	Q.3	Each Directorate
3.5	Basic Computer Use	Class	Eng.+Techn.	5	12	240	Q.3	Each Directorate
3.6	Computer Maintenance	Class	Eng.+Techn.	5	6	72	Q.3	Each Directorate
Task# 5 Environmental Services for Improving Water Quality Management {Year 1}								
5.1	Solid Waste Management "SWM" Part 1	Class Room	BCWUA Stakholder	3	1	20	Q.4	Gharbeya
5.2	Solid Waste Management "SWM" Part 2	Class Room	BCWUA Stakholder	3	1	20	Q.4	Gharbeya
5.3	Waste Water Management "WWM" Part 1	Class Room	BCWUA Stakholder	3	1	20	Q.4	Gharbeya
5.4	Waste Water Management "WWM" Part 2	Class Room	BCWUA Stakholder	3	1	20	Q.4	Gharbeya
5.5	Water Quality Management	Class Room	BCWUA Stakholder	3	1	20	Q.4	Gharbeya
Task# 6 Improving Water Reuse Practices {Year 1}								
6.1	Improving Water Reuse Practices	Workshop	Private Sector	1	1	25	Q.2	Luxor
6.2	Improving Water Reuse Practices	Seminar	Private Sector	1	1	25	Q.2	Luxor
6.3	Improving Water Reuse Practices	Study Tour (Field Visit)	Private Sector	1	1	25	Q.4	Luxor

N.B The following Graduate Degree Training for task # 7 is determined for the 4 years work plan

Task# 7 Graduate Degree Training for MWRI Staff {Year 1} - Subject to MWRI/USAID Approval

ID Code	Course Title	Type	Target Group	Dur. Days	Events	Number Trainees	Date	Venue
7.1	Integrated Water Resources Management	Graduate Degree	MWRI Staff	2 Years	1	1	Based on the Training Process	U.S Institution
7.2	Environmental Engineering & Water Quality	Graduate Degree	MWRI Staff	2 Years	1	1		U.S Institution
7.3	Participatory Irrigation Management	Graduate Degree	MWRI Staff	2 Years	1	1		AUC
7.4	Human Resources Development	Graduate Degree	MWRI Staff	2 Years	1	1		AUC
7.5	Institutional Reform	Graduate Degree	MWRI Staff	2Years	1	1		Egyptian Institution
7.6	Leadership and Business Administration	Graduate Degree	MWRI Staff	2 Years	1	1		Egyptian Institution
7.7	Financial Administration	Graduate Degree	MWRI Staff	2 Years	1	1		Egyptian Institution
7.8	Data Collection & attending graduate courses	Graduate Degree	Ph.D. Candidate /MWRI Staff	3 Months	1	2		U.S Institution

Cross Cutting Task {Year 1}

ID Code	Workshop Title	No. of Events	Venue
8.1	Coordination Meeting for Integrated Water Management Directorate Undersecretaries & General Directors	4	MWRI Building
8.2	Orientation	6	Each Directorate
8.3	Mobilization Plannin Retreat Workshop	1	J.W.Marriott
8.4	Annual Work Plan Workshop	1	Ain Soukhna

4. Procurement Plan

LIFE/IWRM will undertake selected procurement of project and MWRI commodities and equipment. All equipment will be procured in accordance with USAID, GOE, and IRG standard procurement regulations. USAID must approve the list in advance before procurement can proceed.

A Life of Project (LOP) commodity procurement plan has been prepared and is summarized in table 2. These commodities are primarily intended to meet the logistical requirements of the technical assistance team and the GOE counterparts. The total estimated budgets are $265,500 and LE3,966,710, including costs for management, shipping, and internal transport. This LOP procurement plan shall be updated annually to indicate actual progress in relation to the established milestones, and any additional information that may be useful. The LOP procurement plan also includes an estimated budget for commodities and services to be procured. Actual procurement of commodities and services against the budget will be reported in the annual updates to the procurement plan, emphasizing any possible shortage of funding, and reporting on the progress of the contractor and any subcontractors against the plan.

Table 1 LOP Procurement Plan Summary

Item	Description	Sets
Project Office Set-Up and Equipment		
Cairo; Zagazig, Qena	Phone, fax, furniture; computers and peripherals, photocopier, training equipment, digital cameras, data projector	3
Performance Requirement I: Decentralized Management of Water Resources (Task #1, 2, 3)		
District Computer Equipment and Peripherals Set	Desktop computer(s), UPS, table/chair(s), scanner and printers	30
District Office Equipment Set	Photocopier, fax, and air conditioner	30
District Training Equipment Set	Flipchart, overhead projector, screen, flipchart stand, digital camera and VCR with monitor	30
District Internet Access and LAN Installation	LAN installation, internet line	30
District Field Mapping Equipment Set	GPS, digital and paper maps	30
District Water Monitoring Equipment Set	Boat, current meter, and water monitoring equipment	30
Directorate Water quality equipment Set	DO, turbidity, Ph, Conductivity, temperature	4
Performance Requirement II: Stakeholder Engagement in Water Resources Management		
Task 4: Improved Maintenance and Upgrading of Water Management Equipment	To be determined	Lump Sum
Task 5: Environmental Services for Improving Water Quality Management	To be determined	Lump Sum
Task 6: Improved Wastewater Reuse Practices	To be determined	Lump Sum

5. Organization of Long- and Short-term Staff

A summary of the level of effort (LOE) approved under the contract for LIFE/IWRM for Year 1 is presented in table 3. LOE identified in the implementation plans presented in the Annexes are indicative and will be finalized after the work plan has been approved.

Table 2 LIFE/IWRM Year 1 Level of Effort (LOE)

Labor Detail Schedule	Position Title
Expat LTTA	
Dr. Jeff Fredericks	Chief of Party
Eric Viala	Water Resource Mgt Expert
Greg Olson	Project Administrator
Local LTTA	
Dr. Ibrahim El Assiouty	Deputy Chief of Party
Nabil Fawzi	Water Resource Mgt Specialist (Upper Egypt)
Maher Khodary	Water Resource Mgt Specialist (Lower Egypt)
Mahmoud Said	Administration and Procurement Coordinator
Dahlia Hamdy	Workshop/Training Coordinator
Nermine Moktar	Accountant/Financial Manager
Amany Mahmoud	Administrative Assistant

Category	Position	LOE (days)
IRG STTA Staff		
Home Office Staff – US	Home Office Management (technical and admin)	26
Consultant STTA – Expat	Other Technical Expertise	70
Consultant STTA - CCN (local)	Water Resources Mgt. Experts	900
	Org dev/M&E/ Specialists	500
	Other Technical Expertise	200
Subcontractors (International Firms)		
AED		
Consultant STTA - Expat	Sr. Env. Education and Awareness Specialist	80
Consultant STTA - CCN (local)	Other Technical Expertise	240
TRG		
Consultant STTA – Expat	Training/HRD Specialist	15
ECODIT		
Consultant STTA – Expat	Other Technical Expertise	60
Consultant STTA - CCN (local)	Other Technical Expertise	200
MWH		
Consultant STTA - Expat	Other Technical Expertise	10
DAI		
Consultant STTA - Expat	Other Technical Expertise	88
Subcontractors (Local Firms)		
EQI		
Consultant STTA – CCN (local)	Environmental Expert	50
	Other Technical Expertise	143

6. Annual Reporting

A list of reports to be prepared to support the Project is presented in table 4.

Table 3 Year 1 Report Requirements

Report	Frequency
1st Annual Work Plan	o/a 60 days after the contract start up date.
2nd Annual Work Plan (draft)	NLT September 1st each year
Monitoring and Evaluation Plan (M&E)	o/a 90 days after the contract start up date.
1st Annual Training Plan	o/a 60 days after the contract start up date.
1st Annual Procurement Plan	o/a 60 days after the contract start up date.
Quarterly Progress Reports	30 days after the end of each quarter.
Quarterly Financial Report	10 days after the end of each calendar quarter
Annual Progress Reports	On November 1st.
Annual Financial Reports	10 days after the end of 4th quarter
Other Special Reports –TraiNet; trip and consultant reports; technical reports; and seminar reports and evaluation.	As required in Work Plan
Progress Reporting Requirements – Frequent briefings and discussions on progress and implementation issues	As required in Work Plan

7. References

The following documents were consulted in the preparation of the LIFE IWRM work plan.

Author	Title	Date
ARCADIS Euroconsult	Users Manual Automated Administration for Channel Maintenance	Feb 2003
ARCADIS Euroconsult	Channel Maintenance Project Technical Notes	
Egypt Water Policy Reform Project Report # 69	Water Allocation Policy And Data System Options	June 2003
Egypt Water Policy Reform Project Report # 74	Findings Of The Integrated Water Management Districts Workshops (May 2003)	July 2003
EEPP RSC/WP	IWRM Component Final Report	Sep 2004
EEPP RSC/WP	A District Consolidation Task Group Report (Eng. Sarwat Fahmy, Dr. Ibrahim Elassiouti,Dr. Ragab Abdel Azim)	Sep 2004
EEPP RSC/WP	Water Monitoring System for Integrated Water Management Districts (Eng. Hisham Saber Hassan Ali Shehab)	Sep 2004
EEPP RSC/WP	Stakeholder Participation for Integrated Water Management Districts (Eng. Moamen El Sharkawy, Eng. Amira Abdel Hady)	Sep 2004
EEPP RSC/WP	Knowledge Base for BCWUAs Establishment (Arabic) (Dr. Khaled M. Wassif)	Sep 2004
EEPP RSC/WP	Information Systems for Integrated Water Management Districts (Dr. Tom S. Sheng, Eng. Alaa Abbas Helmy Hassan)	Sep 2004
EEPP RSC/WP	A Performance Monitoring And Evaluation System For Integrated Water Management Districts (Dr. Mark Svendsen, Dr. Ibrahim El Assiouti)	Sep 2004
EPIQ Report # 17	Establishment of Branch Canal Water User Associations in the Egyptian Irrigation System	June 1999
EPIQ Report # 20	Intermediate Drainage Reuse in Bahr Bagar Drain Basin	June 1999
EPIQ Report # 21	Revision of Law 48 of 1982 for the Protection of the Nile River and its Waterways from Pollution	June 1999
EPIQ Report # 33	**Reducing Mismatch of Irrigation Deliveries, Phase I: Pilot Program**	November 2000
EPIQ Report # 34	Policies and Procedures for Improved Urban Wastewater Discharge and Reuse	November 2000
EPIQ Report # 35	Water Management at the Directorate Level	November 2000
EPIQ Report # 36	MWRI Policy on Irrigation Management Transfer (Phase I)	December 2000
EPIQ Report # 37	Analysis and Review of Modifications in Law 12 of 1984 on Irrigation and Drainage	December 2000
EPIQ Report # 39	**Irrigation Management Transfer Public Awareness Campaign Phase 1: Strategy**	June 2001
EPIQ Report # 42	IMT Public Awareness Campaign: Phase II	
EPIQ Report # 43	PPDM User's Manual	October 2001
EPIQ Report # 45	Matching Irrigation Supplies and Demands	Nov. 2001
EPIQ Report # 45e	Matching Irrigation Supplies and Demands (Pilot District Data Report) Luxor District	February 2002
EPIQ Report # 46	Application of Policies and Procedures for Improved Urban Wastewater Discharge and Reuse with Appendices	Nov. 2001
EPIQ Report # 47	MWRI Policy on Irrigation Management Transfer with Appendices	Dec. 2001
EPIQ Report # 48	Revised Law 12 of 1984 on Water Resources and its	Nov. 2001

	Executive Regulation with Appendices	
EPIQ Report # 49	Integrated Water Management District with Appendices	Dec. 2001
EPIQ Report # 50	Public Participation in Decision-Making with Appendices	Dec. 2001
EPIQ Report # 51	Environmental Management at MWRI with Appendices	Dec. 2001
EPIQ Report # 54	Knowledge, Attitudes and Practices of Egyptian Farmers towards Water Resources, National Survey 2001	March 2002
EPIQ Report # 55	Matching Irrigation Supplies and Demands – Potential Impact on Water Conservation	March 2002
EPIQ Report # 57	Economic Instruments for Improved Water Resources Management in Egypt	April 2002
EPIQ Report # 59	IMT – Proposed Framework for Monitoring & Evaluation	July 2002
EPIQ Report # 60	Public Participation Policy Implementation Study	August 2002
EPIQ Report # 61	IMT – Transfer of Assets and Infrastructure: A Review and Recommendation	May 2002
EPIQ Report # 62	IWMD – Plan for Pilot Implementation	September 2002
IRG	Technical Proposal No. 263-04-025 EPIQ II: Contract No. EPP-00-03-00013-00 – LIFE Improved Water Resource Management	July 2004
MWRI Water Quality Management Unit	Inception Report Technical Assistance Strengthening the Water Quality Management Unit Project	April 2003
MWRI	National Conference on Water Boards Briefing Notes	Feb 2003
USAID, Cairo	Contract No. EPP-I-802-03-00013-00 Task Order 802 between International Resource Group (IRG) and USAID/Egypt under Livelihood and Income from the Environment (LIFE) Integrated Water Resources Management Project	Sep 2004