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# IDARA (INSTITUTING WATER DEMAND MANAGEMENT IN JORDAN)

ANNUAL WORK PLAN – YEAR I  
(APRIL 2007 – AUGUST 2008)

JUNE 2007

This publication was produced for review by the United States Agency for International Development. It was prepared by Development Alternatives Inc.

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## LIST OF ACRONYMS

ADC:	Aqaba Development Corporation
ASEZ:	Aqaba Special Economic Zone
AWC:	Aqaba Water Company
BMP:	Best Management Practice
CBIGP:	Community Based Initiative Grants Project
CBO:	Community Based Organization
CSBE:	Center for the Study of the Built Environment
CVDB:	Cities and Villages Development Bank
DCA:	Development Credit Authority
DOS:	Department of Statistics
EU:	European Union
GAM:	Greater Amman Municipality
GDA:	Global Development Alliance
GIS:	Geographic Information System
GOJ:	Government of Jordan
GPOBA:	Global Partnership for Output Based Aid
GTZ:	Deutsche Gesellschaft Fur Technische Zusammenarbeit
IAMPO:	International Association of Mechanical and Plumbing Officials
IWDMJ:	Instituting Water Demand Management in Jordan
JEA:	Jordan Engineers Association
JFBPW:	Jordan Forum for Business and Professional Women
JIB:	Jordan Investment Board
JIEC:	Jordan Industrial Estates Corporation
JISM:	Jordan Institute for Standards and Metrology
JNBC:	Jordan National Building Council
JOHUD:	The Jordanian Hashemite Fund for Human Development
JU:	Jordan University
JUST:	Jordan University for Science and Technology
JVA:	Jordan Valley Authority
KPI:	Key Performance Indicator
LOE:	Level of Effort
LTTA:	Long-Term Technical Assistance
M&E:	Monitoring and Evaluation
MIT:	Ministry of Industry and Trade
MOMA:	Ministry of Municipal Affairs
MOA:	Ministry of Agriculture
MOE:	Ministry of Environment
MOEd:	Ministry of Education
MOF:	Ministry of Finance
MOH:	Ministry of Health
MOL:	Ministry of Labor
MOSD:	Ministry of Social Development
MOPIC:	Ministry of Planning and International Cooperation
MPWH:	Ministry of Public Works and Housing
MWI:	Ministry of Water and Irrigation
NA:	Not Available
NCARTT:	National Center for Agricultural Research and Technology Transfer
NGO:	Non-governmental Organizations
NGWA:	Northern Governorate Water Authority
NHF:	Noor Al Hussein Foundation

NWA:	National Water Alliance
NWMP:	National Water Master Plan
PHCC:	Plumbing-Heating-Cooling Contractors Association
PMU:	Program Management Unit
PPP:	Public-Private Partnership
PSA:	Public Service Announcement
RSCN:	Royal Society for Conservation of Nature
RSS:	Royal Scientific Society
STTA:	Short-Term Technical Assistance
TA:	Technical Assistance
TBD:	To Be Determined
UNRWA:	United Nations Relief and Works Agency for Palestine Refugees in the Near East
USAID:	United States Agency for International Development
VTC:	Vocational Training Corporation
WAJ:	Water Authority of Jordan
WDM:	Water Demand Management
WDMU:	Water Demand Management Unit
WEPIA:	Water Efficiency and Public Information for Action
WIS:	Water Information System

## INTRODUCTION

Jordan is considered to be one of the ten most water deprived countries in the world. It is making every effort to cooperate with neighboring countries that control or share much of the available water resources. As Jordan aspires to raise the quality and standard of living of Jordanians, it must expand the commercial, industrial and tourism sectors thereby putting additional stress on the already stretched water resources of the country. There are very limited options in what can be done to augment its inadequate water supply for its rapidly growing population and to keep pace with its ambitious economic development goals.

The most viable short-term option available to the country is managing its water demand to more effectively use the current water supply embracing water use efficiency throughout the country. Past attempts in water demand management by the government, USAID, and other donors have had an undeniable impact and yielded many lessons, but have not been sustained by the government or the private sector. Limited resources and commitment were among the reasons, but the lack of integration of water demand management into an institutional context was their undoing.

IDARA, the Instituting Water Demand Management in Jordan program, directly tackles that weakness. It focuses on three areas of intervention—building institutional capacity, creating an enabling environment, and conducting activities that demonstrate effective water demand management. These activities will change standard operating procedures, create a critical mass of expertise, revise public thinking about what can be achieved through the effective management of water, and promote public-private initiatives for the implementation of best water saving practices.

### **Contents of the First Year Work Plan**

This First Year Work Plan is made up of a compilation of **Task Descriptions** developed for every task and sub-task. Each Task Description provides a Scope of Work, inputs and outputs contributing to achievement of each objective or milestone, individual responsibilities for task completion with LOE, task durations, a table of task elements to be accomplished, a notation of Challenges and Issues associated with successful accomplishment of the task, and a notation on possible Mitigation actions or strategies that will be taken to control them.

A **Timeline** setting out all the tasks and the individual elements of each task and illustrating the relationship of the time required to accomplish the tasks and elements, is compiled immediately after the Task Descriptions.

The **Annual Training Plan** is included as **Annex I**. It consists of an Excel spreadsheet listing all of the proposed Project training and workshop activities. First Year activities are detailed with a month by month timeline, the type of activity, location of the activity, names of training providers, and estimated number of trainees. Other annexes follow the Annual Training Plan.

### **Stakeholder Participation and Consensus Approval of Work Plan**

This First Year Work Plan for the IDARA Project (Instituting Water Demand Management in Jordan) was finalized with the active participation and agreement of a large representation of various stakeholders and participating organizations.

The process of presentations, discussions, and revisions of the draft Work Plan with individuals and organizations, including GOJ partners, interspersed with five days of highly participatory workshops, took place over more than 60 days from April to June 2007. A two-day workshop attended by about 34 core stakeholders was held on April 30<sup>th</sup> and May 1<sup>st</sup> (attendees are listed in Annex III). The entire set of activities and tasks included in the Project contract were presented and discussed, and general comments were received. These comments, along with comments and observations gathered before and after this core workshop, were considered and incorporated into a draft Work Plan.

The draft Work Plan was presented and discussed in great detail during a series of three workshops held on June 13, 14 and 17 (attendees are listed in Annex IV). The workshops consisted of individual presentation and open discussion of every one of the 31 tasks that make up the Project. After discussion of each task, the participants were asked for their approval of the consensus design of the scope of work and deliverables of that task. Approval of the participants was received for every task. The consensus scopes of work and deliverables were considered carefully and incorporated into the First Year Work Plan.

## **PROPOSED SCOPE AMENDMENTS FOR IWDMJ USAID PROJECT**

**The following scope amendments have been recommended in meetings with MWI, USAID, and stakeholders.**

Where the amendment fits with an existing task, it is presented with that task number(s). Where there is no existing task, a new task number has been suggested. Tasks that fall within the existing SOW but for which no resources currently exist are listed first. If resources become available from other tasks these tasks may be funded from those released resources. Tasks which are outside the current SOW are listed separately. These latter tasks will require new funding.

### **Tasks that fall within the existing SOW but for which no resources currently exist:**

Tasks 1.4, 1.5.3, & 1.7: Conduct 3 day training workshop, including field work, for private sector on End Use Analysis.

Task 2.2: Additional technical assistance from IAMPO to draft the National Standardized Plumbing Code. Funding is already included for technical assistance for this task but some additional funding may be required.

Task 2.6: Assess adequacy of any existing water use regulations that have been adopted by WAJ and utilities in Aqaba, Amman and NGWA and if needed, develop revised regulations for adoption.

Task 3.1.1: Revise and reprint CSBE's water wise landscaping materials.

Task 3.1.4: Provide a marketing expert to work with nurseries. The lack of an adequate marketing plan was a primary reason that nurseries developed under WEPIA did not succeed.

Task 3.3: Include a Water Activity Workbook in each schoolbag.

### **Tasks which are outside the current SOW and which will require new funding:**

Task 1.5.4 (new): Plan and develop curriculum and training for water utility field workers on all aspects of water line installation, repair and maintenance.

Task 1.8.1 (new): Plan and hold a two day workshop, including both local and international experts, on Drought Response Lessons and Principles.

Task 2.2.1 (new): Develop regulations for water supply for high rise buildings including metering of individual apartments, storage requirements, water quality requirements for stored water, water-wise landscape for park areas. In addition, investigate the feasibility of onsite treatment of domestic water for reuse in landscape areas.

Task 2.3.1 (new) and 2.7: Design and assist in building a plumbing and appliance testing facility to test products to be sure they meet Jordanian Standards. Train RSS or other organization to run this facility.

Task 2.5.1 (new): Set up a stakeholder group to develop and propose for adoption mandatory efficiency standards for clothes washers, dishwashers, commercial kitchen equipment and medical equipment.

Task 2.8 (new): Evaluate specifications of water meters currently being used, evaluate the practicality and feasibility of automatic meter reading technologies and prepare a plan for a meter acquisition, replacement and installation program for Aqaba, Amman and NGWA.

Task 2.9 (new): Evaluate the current water rate structure for effectiveness in promoting efficient use of water.

Task 2.10 (new): Develop landscape regulations for parks, commercial building landscaping, street medians and shoulders, sidewalks, and parks that incorporate water wise landscaping principles. In addition, requirements for sidewalk width, planting requirements and maintenance requirements could be developed so that sidewalks could be used by pedestrians. This task could benefit by being done in junction with the current amendment being developed to the beautification code in Amman.

Task 2.11 (new): Develop a requirement that new houses and commercial buildings include a rainwater harvesting system in order to capture and store for later use a quantity of rainwater based on the roof area of the new structure.

Task 3.3.1 (new): Partner with an NGO to develop an educational program including workshops, forums and other activities to educate youth on water efficiency.

Task 3.5 (new): In conjunction with MWI, Aqaba, Amman and NGWA, develop, implement and monitor an extensive education campaign on water efficiency.

Task 3.6 (new): Assist in planning and holding the Efficient 2011 Conference in Jordan. This conference will provide an excellent opportunity for further training of staff in both the public and private sectors as well as provide a mechanism for increasing public awareness about water efficiency. USAID-Jordan has already indicated their financial support for this conference if Jordan is selected for the location.

## CHALLENGES AND RISKS

Jordan water has been undergoing policy and structure reforms for a number of years. The Water Strategy and related policies were adopted by the Jordanian government in 1997 and found wide support from the donor countries and agencies for implementation. The WAJ has achieved higher cost recovery, improved levels of services, opened the sector up for commercialization and corporatisation, and engaged in a serious effort to set out performance indicators to be achieved by utilities. However, the sector is in transition and varied progress has been achieved on establishing autonomous utilities and establishing their targets. Apart from Amman Water Company (Miyahuna) and Aqaba Water Company, the WAJ is still the source for technical expertise in the sector, in control of utilities operations, and has the overall responsibility of the sector. Miyahuna is not responsible for bringing more water into the system or for major capital investment for new projects, which leaves less incentive for operational efficiency.

On planning and regulation, the National Water Master Plan is within MWI and the PMU is taking the lead on sector benchmarking and performance indicators. However, WAJ is still in charge of budgeting, incentives, and monitoring of services.

Permanently installing water demand management in the sector institutions that are still in transition is challenging, as illustrated by the following:

- High level decisions related to the future structure and division of functions between institutions need to be made, announced, and documented. A sector restructuring vision and a clear implementation plan with defined timeframe and resources need to be developed.
- Decentralization of water demand management functions needs to be adopted to match the desired sector reform. The objective of the program is not to enlarge functions of WDMU in the MWI, but to redistribute the functions of WDM to agencies which will do planning and regulation, and to the utilities.
- Where existing economic incentives do not support efficiency improvements, regulatory mechanisms need to be adopted to promote efficient water operation.

**IMPLEMENTATION: Implementing IWDMJ through a Participatory Process**

**TASK:** Develop Yearly Work plans

**Task Leader:** Tony Gregg

**LTTA:** Bil Tucker

**STTA [LOE]:** Narmine Muna [4], Total [4]

**Counterparts:** All stakeholders.

**Scope of Work:** Preparing annual work plan in coordination with stakeholders.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Kick-off project workshop	Hold Workshop	April 2007	May 2007
First Year Work Plan Workshops	Hold Workshops	June 2007	June 2007
Draft First Year Work Plan	Draft Work Plan	May 2007	June 2007
Draft Second Year Work Plan	Draft Work Plan	June 2008	August 2008

**Counterpart Inputs:** Stakeholders to provide input into work plan development.

**Challenges/Issues:** All parties have to be available and committed to attend the workshops and contribute to the work of this task.

**Mitigation:** Establish and maintain good communication with stakeholders and counterparts.

**Logistics:** Coordination for meetings.

**IMPLEMENTATION: Implementing IWDMJ through a Participatory Process**

**TASK:** **Project Management Committee provides overall steering and guidance to IWDMJ**

**Task Leader:** Tony Gregg

**LTTA:** Bil Tucker  
Utility Support Expert (TBD)

**STTA [LOE]:** NA

**Counterparts:** WDMU, WAJ, JVA, Utilities (Miyahuna, AWC, NGWA), MWI Directorate of Planning and NWMP.

**Scope of Work:** Create and functionalize a Project Management Committee, and various Task Forces as necessary or appropriate.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Project Management Committee created and functioning	Committee established and meetings held	June 2007	Continuous for life of the Project.
Creation of Task Forces as needed	Task Forces established and meetings held	August 2007, 1 <sup>st</sup> Task Force established	Year 3

**Counterpart Inputs:** MWI and WDMU to assist in selecting members of committees and Task Forces.

**Challenges/Issues:** Difficulties in selecting the targeted groups. Insuring participation of counterparts.

**Mitigation:** Establish and maintain good communication with stakeholders and counterparts.

**Logistics:** Coordination for meetings.

**IMPLEMENTATION: Implementing IWDMJ through a Participatory Process**

**TASK:** National Water Alliance feedback on the development of WDM policy and program

**Task Leader:** Tony Gregg

**LTTA:** Bil Tucker  
Utility Support Expert (TBD)

**STTA [LOE]:** NA

**Counterparts:** WDMU, WAJ, JVA, NWMP, Utilities (Miyahuna, AWC, NGWA), MWI Directorate of Planning, MOE, MOA, MOH, MPWH, Petra University, VTC, GAM, Chamber of Industry, Chamber of Commerce JEA, JOHUD.

**Scope of Work:** Create a National Water Alliance (NWA) with representatives from all key stakeholders who can gather support from many sectors. NWA should be a venue for the expression of private sector consensus. Members could be drawn from both public and private sectors representing such entities as WDMU, WAJ, JVA, Utilities (Miyahuna, AWC, NGWA), MWI Directorate of Planning, NWMP, MOA, MOE, MOH, MPWH, Chamber of Industry, Chamber of Commerce, universities, and NGOs. The NWA should develop and publicize activities, actions and policies that address water scarcity and water demand management issues.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
NWA created with representatives from all key stakeholders	NWA established and functioning	October 2007	Continuous for life of the Project. Self-sustaining institution after project ends.
Identifying the long-term structure for the NWA and support needed for long-term sustainability	NWA structure and support needed for its sustainability is identified	March 2008	Year 2

**Counterpart Inputs:** Counterparts to assist in establishing a NWA.

**Challenges/Issues:** Difficulties in establishing the NWA. Insuring participation of counterparts. Developing a sustaining strategy.

**Mitigation:** Establish and maintain good communication with stakeholders and counterparts.

**Logistics:** NA

**ACTIVITY 1:**                   **Institutional Capacity for Water Demand Management**

**TASK 1.1:**                   **Build consensus on WDM functions and institutions as part of water sector reform and restructuring**

**Task Leader:**               Bil Tucker

**LTTA:**                         Tony Gregg

**STTA [LOE]:**                Ali Qudah [15], Total [39]  
OSD Policy Expert (TBD) [14], Total [24]

**Counterparts:**            WDMU, WAJ, JVA, Utilities (Miyahuna, AWC, NGWA), MWI Directorate of Planning, NWMP, PMU, ASEZA, universities, professional associations, municipalities and NGOs.

**Scope of Work:**           Develop in collaboration with the WDMU three restructuring scenarios, each with an implementation schedule. Working with MWI and other stakeholders it selects, and in coordination with other donor projects such as GTZ supported projects, develop an institutional framework for WDM planning, regulatory, and service provision. Conduct workshop to develop a consensus restructuring scenario.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Develop three restructuring scenarios with implementation schedules	3 Restructuring scenarios	July 2007	December 2007
Develop an institutional framework for WDM planning, regulatory, and services provisions	Institutional framework	August 2007	January 2008
Conduct a two-day workshop to present scenarios and institutional framework	Restructuring scenarios workshop resulting in a consensus scenario	February 2008	February 2008

**Counterpart Inputs:**   MWI must be willing to support a well reasoned restructuring scenario. Selected Task Force members need to commit to active participation, and support reaching a consensus regarding selection of a most-likely-to-succeed scenario for restructuring.

**Challenges/Issues:**    The knowledge of WDM concepts among all stakeholders, insuring full attendance and participation of stakeholders' representatives, logistical arrangements for conducting the workshop.

**Mitigation:**             Preliminary meetings with concerned stakeholders; ensure good facilitation; invite all stakeholders well in advance.

**Logistics:**                Coordination for a two-day workshop.

<b><u>ACTIVITY 1:</u></b>	<b>Institutional Capacity for Water Demand Management</b>
<b>TASK 1.2:</b>	<b><u>Institute planning, allocation, and monitoring functions at the WDMU</u></b>
<b>Subtask 1.2.1:</b>	<b>Assess the organizational structure of the WDMU within the institution as a whole and propose operating procedures for linkages between the unit and other divisions within the Ministry and its two authorities</b>
<b>Task Leader:</b>	Bil Tucker
<b>LTTA:</b>	Tony Gregg Utility Support Expert (TBD)
<b>STTA [LOE]:</b>	Dima Jamali [10], Total [18] Change Management Specialist [18], Total [42] Philip Giantris [15], Total [15] Ali Qudah [10], Total [10] OSD Policy Expert (TBD) [14], Total [24]
<b>Counterparts:</b>	WDMU, WAJ, JVA, Utilities (Miyahuna, AWC, NGWA), NWMP, MWI Directorate of Planning, PMU, ASEZA, universities, professional associations, donor projects (GTZ, EU), municipalities and NGOs.
<b>Scope of Work:</b>	<p>Work through four steps (Consultative Process, Assessment Process, Strategic Business Planning and Change Management) to understand the perspectives of the WDMU's diverse clientele, reach consensus on the WDMU's mission and activities, and resolve issues related to its status at this time of sector reform.</p> <p>Work with the WDMU to help execute its strategic business plan, including building expertise, developing modern programs based on best management practices, facilitating links within MWI's offices and utilities, and strategizing on how best to establish both operating procedures and productive external relations.</p> <p>Identify and resolve concerns of different types of stakeholders, as well as the WDMU staff, through quarterly change management workshops, duration depending on needs and availability of stakeholders, to build skills and expose them to new ideas and approaches. Conduct side-meetings with core stakeholders during the workshops to develop the core stakeholders as change facilitators.</p>

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Conduct a series of individual interviews and meetings with the WDMU and stakeholders	Assessment report of the WDMU organizational structure within MWI	June 2007	October 2007
Identify WDMU structure and propose linkages with other divisions	None	June 2007	October 2007
Conduct a gap analysis for the WDMU to determine organizational weaknesses and strengths	Gap analysis report	September 2007	December 2007
Develop guidelines for transformation of WDMU	Transformation guidelines	November 2007	January 2008
Develop strategic business plan with water utilities and WDMU	Strategic business plan developed	October 2007	February 2008
Conduct quarterly change management workshops	Workshops conducted	October 2007	Year 4

**Counterpart Inputs:** MWI officials and the WDMU staff to work closely with the IWDMJ team to chart the WDM course, and verify adequate procedures and policies between the WDMU and MWI. Counterparts to provide release time for stakeholders to attend and actively participate.

**Challenges/Issues:** All parties have to be available and committed to attend the workshops and contribute to the work of this task.

**Mitigation:** Obtain early commitment of Ministry and WDMU staff, adequate continued access to the officials and the staff. The actual practical need for change management workshops for some or all stakeholders may be different than proposed and should become evident after the task has started.

**Logistics:** Coordination for the workshops.

- ACTIVITY 1:** Institutional Capacity for Water Demand Management
- TASK 1.2:** Institute planning, allocation, and monitoring functions at the WDMU
- Subtask 1.2.2:** Develop the WDM policy in close cooperation with the WDMU
- Task Leader:** Bil Tucker
- LTTA:** Tony Gregg
- STTA [LOE]:** Dima Jamali [4], Total [4]  
Nancy Diamond [12], Total [12]  
OSD Policy Expert (TBD) [14], Total [34]
- Counterparts:** WDMU, WAJ, JVA, MWI Directorate of Planning, NWMP, MOF, MOPIC, MOA, Water Utilities (Miyahuna, NGWA, AWC), donor projects (GTZ, EU).
- Scope of Work:** Help the WDMU develop the analytical skills needed to enable it to review data, extract the most pertinent points, and envision what can reasonably be achieved within a designated period of time. Equip the unit with the technical capacity to present logical and persuasive arguments about the technical components of WDM policies and with the administrative capacity to implement those policies. Launch the implementation of the approved policy developed by WDMU at later stage.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Provide TA for the development of the water demand management policy	Initial draft policy	August 2007	May 2008
Conduct a workshop for stakeholders to review and discuss policy drafts	Workshop	June 2008	June 2008
Refine policy to reflect stakeholder comments	Final draft policy	July 2008	August 2008
Project Management Committee guides policy to attain final government approval	Policy presented for approval	Year 2	Year 2

- Counterpart Inputs:** MWI, WAJ, JVA, MOF, MOPIC, MOA, and other stakeholders to review and comment on the initial draft policy. Donor projects (GTZ, EU) to share information and transfer knowledge and experience in this field.
- Challenges/Issues:** All parties have to be available and committed to attend the workshops and contribute to the work of this task.
- Mitigation:** Obtain early commitment of different ministries and WDMU staff, and maintain adequate continued access to officials and staff.
- Logistics:** Coordination for the initial workshop and other meetings.

**ACTIVITY 1:** Institutional Capacity for Water Demand Management

**TASK 1.2:** Institute planning, allocation, and monitoring functions at the WDMU

**Subtask 1.2.3:** Identify the external linkages between WDMU and other organizations, propose mechanisms to build these linkages, and develop an action plan to be jointly implemented

**Task Leader:** Tony Gregg

**LTTA:** Bil Tucker

**STTA [LOE]:** Ali Qudah [35], Total [59]

**Counterparts:** WDMU, Water Utilities, GAM, JIB, ADC, DOS, JNBC, MIT, Chamber of Commerce, Chamber of Industry, NGOs, and various U.S water utilities.

**Scope of Work:** Identify external linkages between WDMU and other organizations. Develop an action plan for implementing WDM.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Identify organizations for potential linkages with the WDMU	None	October 2007	June 2008
Develop action plan	Action plan	Year 2	Year 2
Begin joint implementation	Linkages established	Year 2	Year 3

**Counterpart Inputs:** All counterparts have to share information and transfer knowledge and experience they have in efficient water use, in order to develop and implement WDM activities.

**Challenges/Issues:** Timing/scheduling issues between counterparts to make sure of full attendance.

**Mitigation:** Prepare in advance for all meetings and contact all stakeholders.

**Logistics:** Meetings and dialogues with counterparts and stakeholders, possibility of using video conferencing, e.g. with US water utilities.

**ACTIVITY 1:** Institutional Capacity for Water Demand Management

**TASK 1.2:** Institute planning, allocation, and monitoring functions at the WDMU

**Subtask 1.2.4:** Ensure that demand and allocations data developed by units within the Ministry are linked to the National Water Master Plan and appropriate economic analysis is performed

**Task Leader:** Bil Tucker

**LTTA:** Data Design/Analysis/M&E specialist (TBD)

**STTA [LOE]:** Hala Zawati [12], Total [26]  
Water Economist (TBD) [18], Total [18]

**Counterparts:** WDMU, WAJ, JVA, Utilities (Miyahuna, AWC, NGWA), NWMP, ASEZA, and MWI Planning Directorate.

**Scope of Work:** Support the NWMP's efforts to develop and implement procedures for improved collection of water demand and water allocation data (refer to Task 1.3).  
Help the WDMU to evaluate the economic and social value of WDM and train WDMU counterparts to conduct cost-benefit analyses of the BMPs selected for pilot projects (refer to Task 1.5.2).

Milestone	Deliverable	Start Date	Finish/Deliverable Due
Develop and implement procedures for improved collection of water demand and water allocation data	Procedures for collection of WDM and allocation data	January 2008	Year 2
Provide TA to evaluate the economic and social value of WDM	None	January 2008	Year 3
Train WDMU counterparts to conduct cost-benefit analysis	Training session(s) on cost benefit analysis	Year 2	Year 3

**Counterpart Inputs:** Counterparts to attend the training. NWMP and other Departments at MWI to cooperate with IWDMJ on identifying and providing water demand allocation data.

**Challenges/Issues:** Timing conflict between stakeholders in attending the training, repetition of efforts in allocating water demand management data among MWI directorates.

**Mitigation:** Meet with stakeholders in advance and discuss with them the importance of this task, denote the objectives of attending the cost-benefit analysis training.

**Logistics:** Arrange for training sessions, training venues and prepare training material.

**ACTIVITY 1:** Institutional Capacity for Water Demand Management

**TASK 1.2:** Institute planning, allocation, and monitoring functions at the WDMU

**Subtask 1.2.5:** Design and build appropriate databases under WDMU as integral components of the Water Information System deployed at the MWI

**Task Leader:** Bil Tucker

**LTTA:** Data Design/Analysis/M&E specialist (TBD)

**STTA [LOE]:** Hala Zawati [12], Total [28]  
Bedwan Gammoh [20], Total [40]  
Robert Bouvier [24], Total [24]

**Counterparts:** WDMU, WAJ, JVA, NWMP, AWC, ASEZA, DOS, WIS and GTZ.

**Scope of Work:** Support WDMU in designing and developing a comprehensive, user-friendly database fully integrated with the WIS. Help the WDMU collect relevant spatial data and integrate them into the WIS database. Incorporate GIS and spatial data into the above mentioned database.

Milestone	Deliverable	Start Date	Finish/Deliverable Due
Provide TA to streamline WDMU data collection and data management	None	July 2007	March 2008
Design and develop a comprehensive database	Operating Database	January 2008	Year 2
Integrate GIS technology into databases	None	April 2008	Year 2

**Counterpart Inputs:** NWMP and WIS to assist in identifying and collecting needed data.

**Challenges/Issues:** Missing data, inconsistency of information, lack of cooperation of MWI directorates and utilities.

**Mitigation:** Meet with all stakeholders and scan all the needed information to build the data base, assign different working groups responsibility for each separate type of needed information.

**Logistics:** Initial meeting with the concerned stakeholders.

- ACTIVITY 1:** Institutional Capacity for Water Demand Management
- TASK 1.3:** **Strengthen the MWI Planning Directorate by establishing a national water use information program**
- Task Leader:** Data Design/Analysis/M&E specialist (TBD)
- LTTA:** Bil Tucker
- STTA [LOE]:** Mohammed Chebaane [16], Total [36]  
 Craig Caldwell [12], Total [12]  
 Hala Zawati [12], Total [18]  
 Bedwan Gammoh [16], Total [32]  
 Water Use Forecaster (TBD) [20], Total [20]
- Counterparts:** WDMU, WAJ, JVA, WIS, NWMP, MWI Planning Directorate, ASEZA, DOS, water utilities (Miyahuna, AWC and NGWA), and water vendors.
- Scope of Work:** Work with NWMP to establish a national water use information program that includes data collection and analysis, procedures for estimating water purchased via tankers, and a database integrated with WIS. Strengthen the capacity of MWI Planning Directorate to calculate water balances, savings, forecast changes, and impacts of alternative WDM scenarios (Refer to Task 1.2.4).

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Assess current and available data and determine deficiencies	Assessment report	July 2007	January 2008
Develop National Water Use Information Program Plan	National water use information program plan	February 2008	Year 2
Implement data collection, management, and analysis	Functioning National water use information program	Year 2	Year 2

- Counterpart Inputs:** NWMP, MWI Planning Directorate, WIS, utilities and water vendors to cooperate in locating and providing available data and facilitate the timely flow of information.
- Challenges/Issues:** Missing data, inconsistency of information, lack of cooperation of MWI directorates and utilities in providing the needed information for the data base.
- Mitigation:** Meet with all stakeholders and assure the availability of the needed information to build the data base.
- Logistics:** NA

**ACTIVITY 1:**                   **Institutional Capacity for Water Demand Management**

**TASK 1.4:**                   **Perform end-use analyses**

**Task Leader:**               Tony Gregg

**LTTA:**                       Bil Tucker  
Data Design/Analysis/M&E specialist (TBD)

**STTA [LOE]:**               Russell Horner [25], Total [25]  
Peter Mayer [21], Total [21]  
Water Use Forecaster (TBD) [12], Total [12]

**Counterparts:**           WDMU, MWI, utilities (Miyahuna, AWC, NGWA), WAJ, PMU, GAM, ASEZA, DOS, Chamber of Industry, Chamber of Commerce, JIB, JIEC, JUST, JU and other Jordanian universities, Jordan Hotel and Restaurant Associations, NGOs.

**Scope of Work:**           Conduct end-use analyses for large consumers and residential users to develop water use forecast models. Offer JUST and JU the opportunity to participate in the end-use analyses (Refer to Task 1.7). For large consumers, IWDMJ will work with the WDMU and universities to select five categories for detailed analysis using auditing methods including metering, engineering estimates, and equipment usage rates. For residential users, IWDMJ will install meters in three types of residences—urban villa with garden, urban apartment, and rural house with small yard area—taking into account geographic distribution, frequency of supply, and income variables.

Ensure accuracy of the existing utility meters before beginning end-use analysis. Examine leakage caused by overflows or cracks in rooftop tanks to determine the extent of water loss. Conduct surveys of participants to obtain in-depth understanding of the social make-up of the households in terms of wealth, gender, and age groups. Conduct focus groups to assess how the demographic factors affect water use and demand.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Profile and select large water consumers and residential users for end-use studies	Large consumers and residential users identified for analysis	July 2007	November 2007
Conduct end-use analyses for large consumers and residential users	End-use analyses performed	October 2007	August 2008
Analyze municipal consumption patterns and evaluate water demand forecasts	Water demand forecasts completed	Year 2	Year 2

- Counterpart Inputs:** MWI and WDMU to assist in selecting the large consumers and residential users; WDMU staff, universities to participate in conducting end-use analyses, focus groups and surveys of participants.
- Challenges/Issues:** Lack of municipal data, difficulties in selecting the targeted groups. Residential meter analysis may not be possible due to lack of continuous supply of water. The water stored in roof top tanks is delivered under low pressure (gravity flow) so that accurate metering may not be possible.
- Mitigation:** Early discussion and consensus among counterparts regarding selection criteria. Select subjects with 24/7 utility service that do not have storage tanks. Another option might be to use a daily-use diary method.
- Logistics:** NA

**ACTIVITY 1:** Institutional Capacity for Water Demand Management

**TASK 1.5:** Assist in the establishment of a decentralized system for WDM functions

**Task Leader:** Bil Tucker

**LTTA:** Tony Gregg

**STTA [LOE]:** OSD Policy Expert (TBD) [14], Total [14]

**Counterparts:** WDMU, WAJ, PMU, Utilities (Miyahuna, AWC, NGWA), ASEZA, Water Sector Audit Unit.

**Scope of Work:** Prepare a vision for implementing a decentralized system for WDM functions based on a stakeholder consultative process.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Develop decentralization vision	Vision developed	July 2007	January 2008

**Counterpart Inputs:** All counterparts to participate in the consultative process

**Challenges/Issues:** Insuring participation of counterparts.

**Mitigation:** Adequate communications with counterparts.

**Logistics:** NA

**ACTIVITY 1:** Institutional Capacity for Water Demand Management

**TASK 1.5:** Assist in the establishment of a decentralized system for WDM functions

**Subtask 1.5.1:** Introduce regulatory incentive mechanisms to encourage utilities to adopt demand management measures

**Task Leader:** Bil Tucker

**LTTA:** Tony Gregg

**STTA [LOE]:** Matthew Hensley [30], Total [60]

**Counterparts:** MWI, WDMU, WAJ, PMU, Utilities (Miyahuna, AWC, NGWA), ASEZA, and the Water Sector Audit Unit.

**Scope of Work:** Review and identify KPIs that promote WDM. Design and develop regulatory mechanisms and incentives to promote the implementation of WDM.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Develop KPIs for demand management in utilities	WDM KPIs	August 2007	August 2008
Develop regulatory incentives tied to WDM programs	Regulatory incentives	Year 2	Year 2

**Counterpart Inputs:** All counterparts to provide data and feedback in a timely manner.

**Challenges/Issues:** Inconsistency of data from water utilities.

**Mitigation:** Establish and maintain good communication with counterparts.

**Logistics:** NA

<b><u>ACTIVITY 1:</u></b>	<b>Institutional Capacity for Water Demand Management</b>
<b>TASK 1.5:</b>	<b><u>Assist in the establishment of a decentralized system for WDM functions</u></b>
<b>Subtask 1.5.2:</b>	<b>Assist the utilities in establishing WDM functions</b>
<b>Task Leader:</b>	Tony Gregg
<b>LTTA:</b>	Bil Tucker Utility Support Expert (TBD) Outreach/Training Specialist (TBD)
<b>STTA [LOE]:</b>	Kristi Ragan [24], Total [24] Philip Giantris [15], Total [15] Cooperative Alliance Specialist (TBD) [10], Total [10]
<b>Counterparts:</b>	WDMU, WAJ, MWI media department, Utilities (Miyahuna, AWC, and NGWA), Chamber of Industry, Chamber of Commerce, JOHUD, US water utilities, hardware suppliers and manufacturers.
<b>Scope of Work:</b>	<p>Work with utilities to build on the strategic business plan, and explore the following options:</p> <ul style="list-style-type: none"> <li>• Obtaining wholesale prices on efficiency devices (aerators, reduced flow showerheads) that utilities would buy for resale at cost to customers</li> <li>• Establish customer side of meter leak detection program (leak detection, repair, and installation of efficiency devices with customer paying cost of service)</li> <li>• Establish annual insurance program to accomplish above actions for fixed fee</li> </ul> <p>Help public and private sector entities to acquire the basic knowledge and skills needed to conduct effective commercial audits. Lead a training program for utilities, MWI, and other stakeholders on cost-benefit analyses based on total water saved on average, per day, month, and year (the cost-benefit training will be done in conjunction with Task 1.2.4).</p> <p>Review existing communication tools and if needed develop and implement additional tools for communicating water efficient measures to consumers.</p>

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Provide TA to utilities to identify priority consumers and suitable incentives	None	July 2007	December 2007
Develop cooperative alliances between Jordanian and U.S. utilities	None	January 2008	June 2008
Identify DCA and GDA deals	None	Year 2	Year 2
Refine strategic business plans	None	Year 2	Year 2
Train utilities in water audit and code enforcement implementation	Training sessions delivered	Year 2	Year 4
Assist utilities to conduct regular analysis of water consumption patterns	None	Year 2	Year 4
Develop tools for communicating with consumers	Training sessions on communication tools developed	Year 2	Year 4

**Counterpart Inputs:** Timely input from utilities to identify priority consumers. Utilities to cooperate in establishing linkages with US utilities.

**Challenges/Issues:** There is a need for coordinated approach to public outreach, education, and communication between the US and Jordanian utilities.

**Mitigation:** Establish and maintain good communication with counterparts. Provide facilitation of initial contacts and interchanges between US and Jordanian utilities.

**Logistics:** Possible video conferencing with US water utilities.

**ACTIVITY 1:** Institutional Capacity for Water Demand Management

**TASK 1.5:** Assist in the establishment of a decentralized system for WDM functions

**Subtask 1.5.3:** Assist the private sector in each utility area to establish WDM functions and services

**Task Leader:** Bil Tucker

**LTTA:** Tony Gregg  
Utility Support Expert (TBD)

**STTA [LOE]:** Russell Horner [18], Total [29]

**Counterparts:** WDMU, WAJ, Utilities (Miyahuna, AWC, NGWA), ASEZA, PMU, JEA, Industrial and Commercial Associations, Chambers of Commerce, JISM, JOHUD and other NGOs, manufacturers and retailers, private entities and engineering firms.

**Scope of Work:** Assess barriers and opportunities to increase the private sector participation in water-efficient markets and propose strategies for the WDMU to build and strengthen linkages with the private sector.  
Investigate the availability of financial incentives for firms to operate in these markets. Work with the private-sector entities, including engineering firms, to improve their ability to conduct commercial audits. Assist at least two private-sector entities in providing WDM services.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Assess barriers and opportunities to participation in water-efficient markets	Assessment report	October 2007	July 2008
Assist at least two private entities in providing WDM services	2 private entities assisted	Year 2	Year 4

**Counterpart Inputs:** WDMU and USAID to assist in selecting two private entities for implementing WDM services

**Challenges/Issues:** Miscommunication between the private sector and the WDMU concerning delivering the WDM concept because it is new to the private sector.

**Mitigation:** Bringing stakeholders to a meeting and clarifying the aim and objectives of this task.

**Logistics:** Initial meeting with WDMU and all stakeholders.

**ACTIVITY 1:**                    **Institutional Capacity for Water Demand Management**

**TASK 1.6:**                    **Develop BMP guides on conservation of nonagricultural water**

**Task Leader:**                Tony Gregg

**LTTA:**                         Bil Tucker

**STTA [LOE]:**                 Mary Ann Dickinson or BMP Expert [18], Total [24]

**Counterparts:**             WDMU, WAJ, JVA, Utilities (Miyahuna, AWC, NGWA), ASEZA, NWA, JEA, small business groups and NGOs, Universities, JISM, JNBC, JIEC, Manufacturers/Suppliers, and Municipalities

**Scope of Work:**            Produce a series of BMP guides that are likely to cover the following areas:

- Plumbing, Appliance, and Commercial Equipment Efficiency Standards.
- Plumbing Code and Technical Specifications (including labeling) Enforcement.
- Residential Audits and Retrofits
- Public Outreach and School Education
- Efficient Water Use Programs for Industrial, Commercial, and Institutional Accounts
- Efficient Water Use Guide for Residential Consumers.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Establish BMP Task Force	BMP Task Force established	July 2007	September 2007
BMPs are drafted for comment	Draft BMPs	July 2007	July 2008
Review and incorporate stakeholder feedback	None	August 2008	Year 2
Series of BMP guides produced	Final BMPs	Year 2	Year 4

**Counterpart Inputs:** Stakeholders to review and comment on the draft BMPs.

**Challenges/Issues:** Coordination and timely response of counterparts.

**Mitigation:** Establish and maintain good communication with counterparts.

**Logistics:** NA.

<b><u>ACTIVITY 1:</u></b>	<b>Institutional Capacity for Water Demand Management</b>
<b>TASK 1.7:</b>	<b><u>Provide training and capacity building to promote water demand management</u></b>
<b>Task Leader:</b>	Bil Tucker
<b>LTTA:</b>	Tony Gregg Utility Support Expert (TBD)
<b>STTA [LOE]:</b>	Training Specialist [22], Total [62] John Koeller [8], Total [8] Kathleen Slattery [36], Total [72] Christopher Brown [0], Total [10] Margaret Livingston [0], Total [10] Harold Senke [0], Total [16] Lonnie Burke [12], Total [12] Mary Ann Dickinson [6], Total [26]
<b>Counterparts:</b>	WDMU, WAJ, JVA, Utilities (Miyahuna, AWC, NGWA), ASEZA, JEA, JFBPW, JOHUD and other NGOs, VTC, Chamber of Commerce, Chamber of Industry, Municipalities, CVDB, JUST, JU and other universities and NWA.
<b>Scope of Work:</b>	<p>Conduct training workshops in Amman, Aqaba, and the Northern Governorates utilities, followed by intensive learning-by-doing and mentoring. Train participants using the BMPs as the basis for training. Work with the remaining six utilities later in the program.</p> <p>Work with utility teams to implement BMPs, drought response initiatives, residential and commercial audits, communications, and other WDM tools.</p> <p>For private sector practitioners and the VTCs, offer training for plumbers, plumbing suppliers, builders, engineers, and architects on plumbing codes, national or utility-based incentive programs, and strategies for improving water efficiency.</p> <p>Assist the WDMU to identify applied research areas tied to BMPs that JUST and other academic institutions could carry out with assistance from the grant pool (Refer to Task 1.4).</p>

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Link JUST WDM M. Sc. curriculum to research and BMPs	None	July 2007	Year 4
Conduct training workshops on BMPs in three utility service areas	Three Workshops	Year 2	Year 2
Work with utilities to implement BMPs	Two Training courses	Year 2	Year 2
Conduct training on demand and supply forecasting	Two Training courses	Year 2	Year 3
Conduct training on economic incentive tools for WDM	Two Training courses	Year 2	Year 3
Conduct training on plumbing code enforcement if enforcement plan has been funded by USAID	Two Training courses	Year 3	Year 4

**Counterpart Inputs:** Stakeholders to assist with reaching commercial enterprises; university faculties to be invited to participate in the end-use study and BMP review, WDMU to identify applied research areas tied to BMPs with the assistance of the grants pool, utility workers and municipalities' officers to attend the training.

**Challenges/Issues:** Timely input from municipalities and stakeholders. Cooperation of university faculties. Coordination of expat STTA.

**Mitigation:** Establish and maintain good communication with counterparts. Liaison with Cities and Villages Development Bank to use training centers located in convenient proximity to municipalities and utilities services areas. Careful planning of time and content of workshops and training in order to maximize probability of expat STTA availability.

**Logistics:** Coordination for the workshops and training sessions. Efficient scheduling of expat STTA.

**ACTIVITY 1:**                   **Institutional Capacity for Water Demand Management**

**TASK 1.8:**                   **Introduce and promote drought response principles in the water community**

**Task Leader:**               Tony Gregg

**LTTA:**                        Bil Tucker  
                                       Outreach/Training Specialist (TBD)

**STTA [LOE]:**                Mary Ann Dickinson [6], Total [6]  
                                       Christopher Brown [6], Total [16]

**Counterparts:**            WDMU, WAJ, JVA, Utilities (Miyahuna, AWC, NGWA),  
                                       MWI Planning Directorate, NWMP, ASEZA, MOA, Farmers  
                                       Association, Water Users Association, GAM and NWA.

**Scope of Work:**           Identify drought response principles and drought response  
                                       guidelines.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Identify drought response principles and drought response guidelines	Guidelines distributed	June 2008	August 2008
Promote best practice drought response guidelines	None	Year 2	Year 4

**Counterpart Inputs:**   Water utilities and stakeholders to contribute to inputs for the  
                                       guidelines.

**Challenges/Issues:**   Timely input from utilities and stakeholders

**Mitigation:**            Establish and maintain good communication with  
                                       counterparts.

**Logistics:**                NA.

**ACTIVITY 1:** Institutional Capacity for Water Demand Management

**TASK 1.9:** Design, administer, and institutionalize a yearly event to recognize individuals, institutions, and industries that help advance water efficiency

**Task Leader:** Bil Tucker

**LTTA:** Outreach/Training Specialist (TBD)  
Utility Support Expert (TBD)

**STTA [LOE]:** NA

**Counterparts:** WDMU, WAJ, JVA, Utilities (Miyahuna, AWC, NGWA), MWI Media department, ASEZA, FAO, UNDP, JOHUD and other NGOs, Professional Associations, small businesses, Chamber of Industry, Chamber of Commerce, Suppliers/Manufactures.

**Scope of Work:** Draw attention to the creative contributions of Jordanians from the public and private sectors in water efficiency management, design and function, and action. Design an award program that considers water efficient activities including retrofit of efficient plumbing fixtures, water-wise landscape designs, water-efficient manufacturing processes, community organizing efforts, and utility management actions, which achieve provable water savings.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Define award categories for water efficiency events	Award categories identified	September 2007	Year 3
Design and hold water efficiency event	Three events	June 2008	Year 3

**Counterpart Inputs:** Propose high level sponsorship.

**Challenges/Issues:** Timely coordination with stakeholders and arrangements of event.

**Mitigation:** Establish and maintain good communication with stakeholders. Invitation letters will be distributed to concerned institutions in a timely manner.

**Logistics:** Coordination for the event.

<b><u>ACTIVITY 2:</u></b>	<b>Enabling Institutional and Legal Environment</b>
<b>TASK 2.1:</b>	<b><u>Assist in creating a stakeholder-driven WDM policy program</u></b>
<b>Task Leader:</b>	Tony Gregg
<b>LTTA:</b>	Bil Tucker Outreach/ Training Specialist (TBD) Utility Support Expert (TBD)
<b>STTA [LOE]:</b>	WDM Specialist [15], Total [15] Mohamed Chebaane or DAI Specialist [8], Total [24] OSD Policy Expert (TBD) [16], Total [24]
<b>Counterparts:</b>	NWA, WDMU, MWI Planning Directorate, NWMP, ASEZA, JEA, MOA, MIT, NCARTT, NGOs and water consumer groups, private sector and governmental bodies.
<b>Scope of Work:</b>	<p>Once WDM policy is endorsed, create a program that encourages stakeholders to adopt the policy and implement sound management practices. Lead stakeholder workshops to develop strategies and interventions that conform to the approved policy. Support the introduction of new WDM policy to the industrial, commercial, agricultural, and tourism sectors and highlight the economic and water-saving benefits of the new policy.</p> <p>Train the utilities on the new policy, and hold workshops in each region. The objective of these workshops will be to demonstrate the advantages of adopting the new WDM policy.</p> <p>Conduct these workshops in tandem with a public education campaign to demonstrate to all Jordanians the advantages of adopting the new WDM policy and assist WDMU in holding follow-up workshops to answer any questions or concerns.</p> <p>Conduct a survey at the end of Year 2 to assess policy implementation and make recommendations to the WDMU and MWI on any amendments that should be made to the policy.</p>

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Facilitate WDM discussions among stakeholders	None	June 2007	March 2008
Conduct stakeholder workshop to develop strategies that conform to WDM policy	Workshop and stakeholder's strategies (could be expanded version of workshops in 1.2.2)	Year 2	Year 2
Hold utility training workshops in each region	Workshops that demonstrate advantages of new WDM policy	Year 2	Year 2
Conduct public education campaign on WDM policy	Public education campaign	Year 2	Year 2
Assist WDMU to hold WDM	Workshops held	Year 3	Year 4

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
workshops			
Conduct survey to assess policy implementation and need for amendments	Survey and recommendations	Year 2	Year 3

**Counterpart Inputs:** The NWA and MWI will be key players.

**Challenges/Issues:** Generating sufficient focus and interest among stakeholders. Designing and implementing a survey.

**Mitigation:** Establish and maintain good communication with stakeholders.

**Logistics:** Coordination for workshops and meetings.

**ACTIVITY 2:**            **Enabling Institutional and Legal Environment**

**TASK 2.2:**            **Develop a national standardized plumbing code**

**Task Leader:**            Tony Gregg

**LTTA:**                    NA

**STTA [LOE]:**            PHCC or IAMPO [18], Total [18]  
John Koeller [12], Total [12]  
Thomas Pape [12], Total [12]

**Counterparts:**        MWI, NWA, VTC, MPWH, JEA, GAM, RSS, ASEZA, AWC, MOL, Universities, JNBC, JISM and municipal entities.

**Scope of Work:**        Review the Jordanian plumbing codes, develop a national plumbing code, including technical specifications/regulations and work with counterparts to build consensus for the adoption of a national plumbing code. A Plumbing Task Force will also be formed as part of this task to advise and inform Activity 2.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Review current Jordanian plumbing codes	None	June 2007	June 2008
Work with JNBC to establish plumbing code working group	Draft code	June 2007	August 2008
Establish Plumbing Task Force	Plumbing Task Force established	July 2007	August 2007
Develop a national standardized Plumbing Code	New Plumbing Code drafted	July 2007	August 2008
	Plumbing Code adopted	Year 2	Year 2
Identify and adopt technical specifications/regulations that will be included in the Plumbing Code	Specifications/regulations identified	July 2007	August 2008
	Adoption of specifications/regulations	March 2008	August 2008
Design and carry out training on the new code to the construction industry, plumbing trade, municipalities, and the public	Training	Year 2	Year 2 (depending on code adoption)
Coordinate outreach efforts with the MPWH	None	Year 2	Year 4

**Counterpart Inputs:**    Counterparts to assist in developing the plumbing code and building consensus for adoption.

**Challenges/Issues:**    Timely progress on drafting and adopting the code. In order to accomplish schedule, additional funding is required for RSS (to be funded by MPWH) and PHCC/IAMPO.

**Mitigation:**            Establish and maintain good communication with stakeholders. High-level support within MPWH is essential.

**Logistics:**              NA.

**ACTIVITY 2:**                   **Enabling Institutional and Legal Environment**

**TASK 2.3:**                   **Implement a plumbing materials certification program**

**Task Leader:**               Tony Gregg

**LTTA:**                         NA

**STTA [LOE]:**               John Koeller [10], Total [20]  
PHCC or IAMPO [10], Total [10]

**Counterparts:**           WDMU, NWA, MWI Planning Directorate, NWMP, JISM, Daman Program, RSS, JNBC, and municipal entities

**Scope of Work:**         Identify rules and codes relating to the manufacture and import of plumbing and appliance equipment. Identify international water efficiency standards, testing procedures, and internationally recognized laboratories for inclusion in the national plumbing code. According to JNBC, adoption of technical specifications/regulations in effect prohibits the importation or sale of products that do not meet the technical specifications/regulations.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Identify rules and codes relating to the manufacture and import of plumbing and appliance equipment	Rules and codes identified	July 2007	August 2008
Provide TA to the WDMU and JISM to identify international water efficiency specifications/regulations, testing procedures, and international recognized labs	Identification of water efficiency specifications/regulations, testing procedures, and international recognized labs	August 2007	August 2008
Develop Jordanian water efficiency technical specifications/regulations	Draft water efficiency technical specifications/regulations	August 2007	August 2008
Implement enforcement mechanism to eliminate noncompliant products from market	Enforcement implemented	Year 2	Year 2
Support local manufactures to produce efficient products	Support provided	Year 2	Year 4
Build capacity of the accredited testing laboratories to test locally manufactured products	None	Year 3	Year 3

**Counterpart Inputs:** High-level support for developing the technical specifications/regulations using the “fast-track” procedure.

**Challenges/Issues:** Coordination and timely response of counterparts.

**Mitigation:** Establish and maintain good communication with counterparts.

**Logistics:** Transportation and arrangement of meetings.

**ACTIVITY 2:**            **Enabling Institutional and Legal Environment**

**TASK 2.4:**            **Establish a “master plumbers” vocational training program at the VTC**

**Task Leader:**            Tony Gregg

**LTTA:**                    NA

**STTA [LOE]:**            Yaqoob Al-Qaisia [26], Total [48]  
Plumbing Specialist [26], Total [48]  
Lonnie Burke [22], Total [42]  
PHCC or IAMPO [10], Total [10]

**Counterparts:**            VTC, JFBPW, WDMU, JEA, UNRWA, plumbing supply stores, JISM, JNBC, water utilities (AWC, Miyahuna and NGWA), and RSS.

**Scope of Work:**            Develop a master plumbing program. Oversee candidate selection, train master plumbers using the VTC facilities. Assess and upgrade one or more of the VTC plumbing training facilities as needed.  
  
Identify Tawjihi (high school) students, plumber candidates, and plumbers for the training sessions, target female plumbers, construction companies and developers that are willing to collaborate with VTC, and combine training with on-the-job experience.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Assess capability of existing VTC and other training facilities	None	June 2007	September 2007
Upgrade training facilities as needed	Upgrade contracts signed	November 2007	March 2008
Develop a "masters plumbers" program	Curriculum designed.	July 2007	August 2008
Train VTC trainers	VTC trainers trained.	Year 2	Year 2
Identify training candidates	None	Year 2	Year 2
Training for "master plumbers" program begins in Amman, Aqaba and Northern Governorates	Training	Year 2	Year 4
Training for "master plumbers" program expanded to other parts of Jordan	Training	Year 2	Year 4

**Counterpart Inputs:**            The VTC to cooperate in upgrading their facilities and providing master plumbing training. The JFBPW to identify female plumbers.

**Challenges/Issues:**            Compressed timeline for assessment and awarding of contracts. Adequacy of funding for VTC upgrade. Cooperation of VTC is critical.

**Mitigation:** Establish and maintain good communication with counterparts.

**Logistics:** Coordinating assessment and upgrades.

**ACTIVITY 2:**                    **Enabling Institutional and Legal Environment**

**TASK 2.5:**                    **Prepare a work plan to implement a labeling program**

**Task Leader:**                Tony Gregg

**LTTA:**                         NA

**STTA [LOE]:**                Thomas Pape [8], Total [8]  
Yaqoob Al-Qaisia [10], Total [10]  
John Koeller [6], Total [6]  
David Hathaway (ICF) [12], Total [12]

**Counterparts:**            WDMU, MOE, ICF Consulting, and the Plumbing Task Force that includes: MWI, JNBC, JISM, RSS, MOF-Customs Department, manufacturers/suppliers, Chamber of Commerce, JEA, engineers and architects.

**Scope of Work:**            Prepare a work plan that covers the following two labeling programs.

1. Label water-saving fixtures and appliances that meet efficiency standards such as shower heads, faucet aerators, toilets, dishwashers, and clothes washers.
2. Establish a high-efficiency labeling program by selecting the top 25 percent most efficient products in each category.

Conduct a market survey of what appliances and fixtures are available, and identify which require labeling.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Prepare and present a work plan for labeling water-saving fixtures and appliances to MWI, USAID and JISM	Work plan	March 2008	May 2008
Conduct market survey	Market survey	January 2008	July 2008
Implement labeling program -- if approved	Labeling program	Year 2	Year 4

**Counterpart Inputs:**      Stakeholders to assist with market survey of appliances and fixtures. Manufacturers and suppliers to provide data in a timely manner.

**Challenges/Issues:**      Survey requires existence of adequate water use data for appliances and fixtures. Timely cooperation of manufacturers and suppliers in the provision of data.

**Mitigation:**                Stakeholder assistance in working with manufacturers and suppliers to provide data.

**Logistics:**                  Coordinating the necessary one-on-one interviews of manufacturers and suppliers to accomplish the survey.

**ACTIVITY 2:**            **Enabling Institutional and Legal Environment**

**TASK 2.6:**            **Identify WDM enforcement mechanisms and recommend the most feasible**

**Task Leader:**            Tony Gregg

**LTTA:**                    Bil Tucker  
Water Utility Expert (TBD) [TBD]  
Data Design/Analysis/M&E Specialist (TBD) [TBD]

**STTA [LOE]:**            Raghida Helou [36], Total [72]

**Counterparts:**        WDMU, WAJ, JVA, PMU, Utilities (Miyahuna, AWC, NGWA), NWA, the Ministry of Industry and Trade, JISM, Daman Program, and focus groups of commercial customers or residential customers.

**Scope of Work:**        After determining the current water use regulations, assess and profile customer understanding of water use regulations in Greater Amman, Aqaba, and the Northern Governorates. Conduct focus groups of commercial operators and residential subscribers to deepen their understanding.

Identify a broad base of stakeholders to help draft the terms of data collection and interpretation, and then collect gender-disaggregated data to better understand men’s and women’s water use, roles, and responsibilities.

Use the findings to begin a sustained dialogue with the NWA, the Ministry of Industry and Trade, JISM, and Daman, as well as other key stakeholders, and prepare a detailed report to be circulated widely for comments.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Engage a diverse group of stakeholders to assist in drafting the terms of the data collection methodology	Meetings	Year 2	Year 2
Assess and profile water users' understanding of water regulations and violations	Focus groups	Year 2	Year 2
Initiate sustained dialogue with key water stakeholders to develop framework for enforcement recommendations	None	Year 2	Year 2
Prepare detailed report on enforcement recommendations and circulate for comment	Report	Year 2	Year 3

**Counterpart Inputs:**    The NWA, the MIT, JISM, and Daman as well as other stakeholders must be willing to accept and support the enforcement recommendations.

**Challenges/Issues:** Difficulties in collecting data from different sources. Enforcement is likely to be sensitive and potentially costly.

**Mitigation:** Establish and maintain good communication with counterparts.

**Logistics:** Coordination of focus group meetings.

<b><u>ACTIVITY 2:</u></b>	<b>Enabling Institutional and Legal Environment</b>
<b>TASK 2.7:</b>	<b><u>Develop mechanisms to finance the implementation of WDM projects</u></b>
<b>Task Leader:</b>	Tony Gregg
<b>LTTA:</b>	Bil Tucker Utility Support Expert (TBD)
<b>STTA [LOE]:</b>	Matthew Hensley [30], Total [60] Financial Expert (TBD) [18], Total [32] Tony Bagwell [22], Total [32]
<b>Counterparts:</b>	WDMU, WAJ, JVA, Utilities (Miyahuna, AWC, NGWA), JIB, DCA partners, GPOBA funds, and Government entities.
<b>Scope of Work:</b>	<p>Feature the following five initiatives to structure and secure transitional funding to support the WDMU and water utilities:</p> <ol style="list-style-type: none"> <li>1. Grants for community-based initiatives – IWDMJ will meet with the Community-Based Initiative Grants Project (CBIGP) to request that the CBIGP consider funding or activities that are consistent with the BMPs.</li> <li>2. BMP Grant Pool – IWDMJ will design guidelines for how grants can be utilized, identify pilot projects for new WDM technologies and activities, and identify opportunities for cofinancing with other donors.</li> <li>3. GPOBA – IWDMJ will work with the WDMU and utilities to prepare a proposal to secure GPOBA funds to implement pilot demand management activities.</li> <li>4. DCA – IWDMJ will develop concept materials for potential DCA credit guarantees with local financial institutions.</li> <li>5. Efficiency requirements for large users – Develop water efficiency requirements for large users.</li> </ol>

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
BMP grant pool program operational	Guidelines and manual developed	July 2007	April 2008
Grants from CBIGP linked to Activity 3 investigated	None	July 2007	November 2007
Work with WDMU and utilities to prepare a proposal to secure GPOBA funds	GPOBA proposal prepared	November 2007	Year 2
Concept materials for potential DCA activities developed	Concept materials	February 2008	Year 2
Develop efficiency requirements for large users	Efficiency requirements	April 2008	Year 2
Implement BMP grant program	Program implemented	May 2008 (contingent on approval of grant manual)	Year 4

**Counterpart Inputs:** Financing agencies and CBIGP to respond, support and finance the implementation of WDM projects.

**Challenges/Issues:** Linking the proposed initiatives with the available grants projects and ensuring that they are consistent with WDM concepts.

**Mitigation:** Establish and maintain effective communications with counterparts.

**Logistics:** NA

- ACTIVITY 3:**            **Demonstrate Selected WDM Initiatives to the Public**
- TASK 3.1:**                **Expand the urban landscape program introduced by WEPIA.**
- Subtask 3.1.1:**        **Explore public conceptions of culturally desirable park space use to inform water-wise landscaping efforts.**
- Task Leader:**            Lara Zureikat [35], Total [35]
- LTTA:**                     Tony Gregg
- STTA [LOE]:**             CSBE STTA [30], Total [30]
- Counterparts:**        MOA, MOMA, Agricultural Engineers Association, DOS, ASEZA, GTZ, NHF, JOHUD, and Municipalities.
- Scope of Work:**        Explore the public’s concept of desirable public parks focusing on disconnect between what people expect from these public spaces and what water-wise landscaping solutions offer. Surveys and focus group sessions will be conducted in four geographic areas of Jordan: the Northern Governorates, the Balqa region, the ASEZ, and the Eastern Badia. Consult with other donors to explore possible areas of collaboration and interface with regards to water-wise landscaping. A Water-wise Task Force will also be formed as part of this sub-task to advise and inform Activity 3.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Identify target groups in geographic focus areas	Target groups identified	July 2007	August 2007
Prepare survey and focus group session content	Survey prepared	July 2007	August 2007
Connect with counterpart outreach organizations/centers	None	July 2007	September 2007
Establish Water-Wise Task Force	Task force established	August 2007	November 2007
Conduct surveys and focus group sessions	Surveys completed	September 2007	January 2008
Hold first meeting for Water-wise Task Force	Meeting held	January 2008	January 2008
Evaluate data	None	January 2008	March 2008
Draft Public Conception of Water-wise Landscaping Report	Draft report	March 2008	April 2008
Incorporate input into the Public Conception of Water-wise Landscaping Report	Final draft report	April 2008	June 2008

- Counterpart Inputs:** JOHUD and/or NHF may partner with IWDMJ to connect to outreach centers and contribute to focus group set up; MOMA to connect IWDMJ to municipal staff and municipal centers.
- Challenges/Issues:** Insuring the right mix of sample populations for surveys and focus groups.

**Mitigation:** Coordinating with counterparts for identification of sample population and use of outreach centers for logistical purposes.

**Logistics:** Transportation to geographic zones. Visual materials for focus group sessions. Venues for focus groups.

- ACTIVITY 3:**                   **Demonstrate Selected WDM Initiatives to the Public**
- TASK 3.1:**                   **Expand the urban landscape program introduced by WEPIA.**
- Subtask 3.1.2:**           **Train personnel from at least 70 of the 99 municipalities on water-wise landscape principles.**
- Task Leader:**               Lara Zureikat [105], Total [165]
- LTTA:**                         Tony Gregg
- STTA [LOE]:**               CSBE STTA [75], Total [155]
- Counterparts:**           MWI, MOA, GAM, MOMA, 70 Municipalities, CVDB, ASEZA, JIEC, RSS, JEA, groundskeepers at factories, schools and universities.
- Scope of Work:**           Training of trainers who will perform the water-wise landscape training for municipal personnel. Identify at least 70 municipalities, obtain information on managers and staff, and invite managers to a one-day seminar promoting the benefits of water-wise landscaping. Work with GAM in the preparation of the seminar content and speaker line-up. Identify 2 trainers, train the trainers, and work out the logistic for carrying out the training. The training will be organized in convenient locations around the country in roughly ten 4-day training sessions covering 70 municipalities. By the end of year one, 4-5 training sessions would be completed.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Visit parks developed by WEPIA (Mansoura, Za'atari, and Shuqairah) and perform assessment	Assessment report on WEPIA parks	July 2007	September 2007
Identify municipalities and obtain information on departments, managers, and technical staff	Municipalities identified	July 2007	September 2007
Identify 2 trainers	Trainers identified	July 2007	September 2007
Enlist the participation of mayors and managers in the one-day seminar	None	July 2007	October 2007
Prepare and hold one-day seminar	One-day seminar	October 2007	November 2007
Mayors and managers to nominate technical staff to be trained	Staff nominated	December 2007	February 2008
Prepare content and format of three-day training sessions for technical staff	Training manuals	January 2008	March 2008
Train trainers	Trainers trained	January 2008	March 2008
Conduct training sessions and field trips	Training sessions	April 2008	Year 2

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Identify municipalities for developing 6 park designs	Municipalities identified	Year 2	Year 2
Provide technical assistance to municipal staff in designing designated parks	None	Year 2	Year 2
Determine cost-sharing strategies for park development	None	Year 2	Year 2
Municipalities to submit maintenance plans	Maintenance plans submitted	Year 3	Year 3
Provide technical assistance for maintenance practices	None	Year 3	Year 4
Monitor maintenance	None	Year 4	Year 4
Assist municipal staff in conducting a water-wise workshop for homeowners in their respective areas	None	Year 4	Year 4

**Counterpart Inputs:** GAM to provide two staff members to work with IWDMJ one day per week (July 1, 2007 – August 31, 2008). Municipal managers to attend one-day seminar and nominate technical staff for training. Technical staff to attend training. CVDB to provide training venues where available.

**Challenges/Issues:** Timely cooperation of municipalities in nominating staff for training. Insuring high attendance for training sessions. Coordinating the logistics and venues for training. GAM to provide two staff members to become trainers.

**Mitigation:** Establish and maintain good communication with counterparts. Work with CVDB or other appropriate organizations to use training centers located in convenient proximity to municipalities. Provide transportation to and from training venues.

**Logistics:** Coordination for seminar and trainings.

**ACTIVITY 3:**                   **Demonstrate Selected WDM Initiatives to the Public**

**TASK 3.1:**                   **Expand the urban landscape program introduced by WEPIA.**

**Subtask 3.1.3:**           **Introduce water-wise landscaping principles in the curriculum of agricultural faculties in at least two universities**

**Task Leader:**               Lara Zureikat [30], Total [40]

**LTTA:**                         Tony Gregg

**STTA [LOE]:**               Margaret Livingston [12], Total [58]  
CSBE STTA [50], Total [90]

**Counterparts:**             Jordan University, JUST, Balqa Applied University, Mu'ta University and Petra University

**Scope of Work:**           Develop modules for existing courses at the Faculties of Agriculture or Architecture in at least two universities such as JU, JUST, and Petra University. Expand these efforts into other universities including Balqa and Mu'ta. Consider supporting JU's plans to develop a master's degree program in landscaping and ornamental horticulture. Develop the syllabus, lecture content and reading materials. By Year 3 of project, IWDMJ would have worked with at least one university to integrate the course into its regular degree programming.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Review courses offered at Agriculture and Engineering Faculties	Report on Water-wise Principles currently offered	June 2008	Year 2
Form committee of professors and IWDMJ	Committee formed	Year 2	Year 2
Hold workshop to determine module content	Workshop held	Year 2	Year 2
Prepare content of module	Module prepared	Year 2	Year 2
Module integrated into course	Module integrated	Year 2	Year 2
Expand activities to other universities	None	Year 3	Year 3

**Counterpart Inputs:** Universities to provide assistance and cooperation in integrating the water-wise landscaping principals in the existing agricultural curricula

**Challenges/Issues:** Cooperation of counterparts.

**Mitigation:** Establish and maintain good communication with counterparts.

**Logistics:** NA

**ACTIVITY 3:**                   **Demonstrate Selected WDM Initiatives to the Public**

**TASK 3.1:**                   **Expand the urban landscape program introduced by WEPIA.**

**Subtask 3.1.4:**           **Expand work with nurseries.**

**Task Leader:**           Lara Zureikat [95], Total [155]

**LTTA:**                    Tony Gregg

**STTA [LOE]:**            CSBE STTA [65], Total [155]

**Counterparts:**        MOA GAM, JOHUD, Business Development Center, NCARTT, NHF, public and private small and large nurseries (possibilities include: MOA and university nurseries,), RSCN, Beit Al Bawadi, JARA, Farmers Market.

**Scope of Work:**        Assess existing nurseries established by WEPIA and determine their need for further assistance such as improving their product range and/or connecting them to outlets in Amman. Identify other suitable organizations, small businesses, or small nurseries interested in specializing in drought tolerant plants. The Water-wise Task Force may help with marketing ideas.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Assess nurseries established by WEPIA	Assessment report	July 2007	January 2008
Identify and assess new organizations	Assessment report	July 2007	March 2008
Provide technical assistance to WEPIA nurseries for improving marketing if need is determined	Documentation of technical assessment provided	January 2008	Year 2
Explore the potential for expanding product line with larger nurseries	Meeting summaries	Year 2	Year 3
Provide technical assistance to new small business and/or WEPIA nurseries	Documentation of technical assessment provided	Year 2	Year 3
Provide technical assistance to large nurseries	Documentation of technical assessment provided	Year 2	Year 3

**Counterpart Inputs:** JOHUD, the Business Development Services Center, and NHF to help with identifying CBOs or other small organizations interested in becoming nurseries. RSCN, Beit Al Bawadi, and JARA to work with project by connecting nurseries to outlets in Amman.

**Challenges/Issues:** Locating new businesses or CBOs may be difficult due to limitation of feasibility of projects in agricultural zoned areas.

**Mitigations:** Identifying potential new enterprises should be as early as possible. Conducting feasibility studies based on each individual case.

**Logistics:** Transportation and lodging for Aqaba sites.

**ACTIVITY 3:**                   **Demonstrate Selected WDM Initiatives to the Public**

**TASK 3.1:**                   **Expand the urban landscape program introduced by WEPIA.**

**Subtask 3.1.5:**               **Determine incentives for water-wise landscaping**

**Task Leader:**               Lara Zureikat [15], Total [45]

**LTTA:**                         Tony Gregg

**STTA [LOE]:**                 CSBE STTA [30], Total [80]

**Counterparts:**             MOMA, MOPIC, GAM, CVDB, Arab Foundation for Sustainable Development, Small Municipalities, Chamber of Commerce, Chamber of Industry.

**Scope of Work:**           Identify financing strategies for smaller municipalities to develop and improve public spaces, other than parks. Grant funds will support the most creative ideas in municipal water-wise landscaping. Identify opportunities for public-private partnerships, such as enlisting the Chamber of Commerce or some of the larger industrial and commercial businesses, to support parks and playgrounds in municipal areas, much like the “adopt a highway” approach employed in the United States.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Identify financing strategies	Financing strategies identified	Year 2	Year 2
Identify opportunities for public-private partnerships	Two PPPs identified	Year 2	Year 3

**Counterpart Inputs:**   Counterparts to cooperate in identifying opportunities and improving public spaces.

**Challenges/Issues:**   Some municipalities do not have necessary capacities or expertise.

**Mitigation:**             Care must be exercised in selecting municipalities. Establish and maintain good communication with counterparts.

**Logistics:**                NA

**ACTIVITY 3:**            **Demonstrate Selected WDM Initiatives to the Public**

**TASK 3.2:**            **Host a competition for best low-income water efficient houses in the highland and the Jordan Valley areas**

**Task Leader:**        Lara Zureikat [25], Total [55]

**LTTA:**                Tony Gregg  
Outreach/Communication Specialist (TBD)

**STTA [LOE]:**        CSBE STTA [50], Total [80]

**Counterparts:**     MPWH, JVA, DOS, JEA, universities, architects, architectural students and apprentices, construction engineers, master plumbers, landscapers, interior designers, and developers.

**Scope of Work:**    Hold a major competition for the best design of low-income, water-efficient houses for the highlands and for the Jordan Valley. Develop strategies to fashion public and private partnerships to finance first prototypes and later mass construction, possibly including Habitat for Humanity, which builds low-cost houses in Jordan.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Explore strategies to finance prototype developed under WEPIA	Minutes of meetings with MOPW, developers, and NGOs	August 2007	August 2008
Approach developers to sponsor competition	Minutes of meetings with developers	September 2007	November 2007
Hold competition and select winning designs	If funding is secured Competition will be held in Year 1	April 2008	August 2008
	If funding is not secured Competition will be held in Year 3	Year 3	Year 3
Develop prototype	Conceptual drawings of prototype (will not include construction documents)	TBD	TBD
Explore financing strategies to develop prototype and later mass production	Report on financing strategies.	TBD	TBD

**Counterpart Inputs:** Contestants to cooperate in developing prototype plans and participate in a timely manner. Developers to provide funding for competition prizes and jury honoraria.

**Challenges/Issues:** Adequate number of contestants. Enlistment of a royal sponsorship. Securing funds from private sector sponsors.

**Mitigation:** Establish and maintain good communication with counterparts. Contest to be adequately and timely publicized. Early communication with the Royal Court.

**Logistics:** Selection and coordination of judges.

**ACTIVITY 3:**            **Demonstrate Selected WDM Initiatives to the Public**

**TASK 3.3:**                **Distribute 20,000 school bags in rural poor areas**

**Task Leader:**            Lara Zureikat [85], Total [125]

**LTTA:**                     Tony Gregg

**STTA [LOE]:**             CSBE STTA [60], Total [130]

**Counterparts:**        MOH, MOEd, MOSD, DOS, JES, JOHUD, NHF, Haya Cultural Center, Jordan Youth Forum and Donor agencies

**Scope of Work:**        Prepare for the distribution of school bags which will take place in Year Two. Conduct a survey of rural houses to determine what kind of water saving devices would best serve the poor rural communities. Conduct discussions with parents, teachers, and water professionals to better define the contents of the bags.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Survey of rural houses	Survey results	October 2007	January 2008
Define the targeted age group	Age group defined	January 2008	March 2008
Focus groups to define contents of bags	Focus groups	January 2008	March 2008
Design bags	Sample bag	April 2008	August 2008
Fabricate bags	Bags fabricated	Year 2	Year 2
Distribute bags and conduct awareness activities	Bags distributed	Year 2	Year 3
Expand program	None	Year 3	Year 4

**Counterpart Inputs:**    Counterparts to assist project to define the contents of the bag, produce sample bag, and connect project to outreach network for bag distribution.

**Challenges/Issues:**    Design and manufacture of bag and contents. Additional outreach could be achieved through partnerships with NGOs but funding was not included in the project budget.

**Mitigation:**            Focus groups and participation of rural communities. Solicit an NGO partnership by issuing an RFP to be funded by the project grant pool.

**Logistics:**                School bags; printed materials; bag contents.

**ACTIVITY 3:**            **Demonstrate Selected WDM Initiatives to the Public**

**TASK 3.4:**                **Implement Best Management Practices in pilot areas**

**Task Leader:**            Tony Gregg

**LTTA:**                    Utility Support Expert (TBD)  
Data Design/Analysis Specialist (TBD)  
Outreach/Communication Specialist (TBD)

**STTA [LOE]:**            Russell Horner [6], Total [12]  
John Koeller [16], Total [32]  
End Use and Audit Specialist (TBD) [12], Total [30]

**Counterparts:**        WDMU, Miyahuna, AWC, NGWA, the private sector

**Scope of Work:**        Develop pilot implementation strategies for some of the BMPs developed in Activity 1. Work with a utility to implement BMPs. Capture lessons learned about strategies for implementing them in the field, and disseminate those lessons to other utilities.

<b>Milestone</b>	<b>Deliverable</b>	<b>Start Date</b>	<b>Finish/ Deliverable Due</b>
Develop pilot implementation strategies for selected BMPs (linked to activity 1)	Pilot strategies developed	Year 2	Year 2
Implement BMPs with a utility	BMPs for one utility implemented	Year 2	Year 2
Collect lessons learned on implementation	Lessons learned collected	Year 2	Year 3
Disseminate lessons to other utilities	Lessons disseminated	Year 3	Year 4

**Counterpart Inputs:**    Cooperation of utilities to implement BMPs.

**Challenges/Issues:**    Timely cooperation with utilities.

**Mitigation:**            Establish and maintain good communication with utilities

**Logistics:**              NA





WORK PLAN TIMELINE	Project Year 1												Project Year 2				Option Year 3				Option Year 4																							
	2007			2008			2009			2010		2011																																
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4																										
Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Activities and Tasks</b>																																												
<b>Subtask 1.5.2: Assist the utilities in establishing WDM functions</b>																																												
▶ Provide TA to utilities to identify priority consumers and suitable incentives																																												
▶ Develop cooperative alliances between Jordanian and U.S. utilities																																												
▶ Identify DCA and GDA deals																																												
▶ Refine strategic business plans																																												
▶ Train utilities in water audit and code enforcement implementation																																												
▶ Assist utilities to conduct regular analysis of water consumption patterns																																												
▶ Develop tools for communicating with consumers																																												
<b>Subtask 1.5.3: Assist the private sector in each utility area to establish WDM functions and services</b>																																												
▶ Assess barriers and opportunities to participation in water-efficient markets																																												
▶ Assist at least two private entities in providing WDM services																																												
<b>Task 1.6: Develop BMP guides on conservation of nonagricultural water</b>																																												
▶ Establish BMP Task Force																																												
▶ BMPs are drafted for comment																																												
▶ Review and incorporate stakeholder feedback																																												
▶ Series of BMP guides produced																																												
<b>Task 1.7: Provide training and capacity building to promote water demand management</b>																																												
▶ Link JUST WDM M. Sc. curriculum to research and BMPs																																												
▶ Conduct training workshops on BMPs in three utility service areas																																												
▶ Work with utilities to implement BMPs																																												
▶ Conduct training on demand and supply forecasting																																												
▶ Conduct training on economic incentive tools for WDM																																												
▶ Conduct training on plumbing code enforcement if enforcement plan has been funded by USAID																																												
<b>Task 1.8: Introduce and promote drought response principles in the water community</b>																																												
▶ Identify drought response principles and drought response guidelines																																												
▶ Promote best practice drought response guidelines																																												
<b>Task 1.9: Design, administer, and institutionalize a yearly event to recognize individuals, institutions, and industries that help advance water efficiency</b>																																												
▶ Define award categories for water efficiency events																																												
▶ Design and hold water efficiency event																																												



WORK PLAN TIMELINE	Project Year 1												Project Year 2					Option Year 3				Option Year 4					
	Q3			Q4			Q1			Q2			Q3		Q4			Q1	Q2	Q3		Q4	Q1	Q2			
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug.	Sep	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
<b>Activities and Tasks</b>																											
<b>Task 2.5: Prepare a workplan to implement a labeling program</b>																											
▶ Prepare and present a work plan for labeling water-saving fixtures and appliances to MWI, USAID and JISM																											
▶ Conduct market survey																											
▶ Implement labeling program – if approved																											
<b>Task 2.6: Identify WDM enforcement mechanisms and recommend the most feasible</b>																											
▶ Engage a diverse group of stakeholders to assist in drafting the terms of the data collection methodology																											
▶ Assess and profile water users' understanding of water regulations and violations																											
▶ Initiate sustained dialogue with key water stakeholders to develop framework for enforcement recommendations																											
▶ Prepare detailed report on enforcement recommendations and circulate for comment																											
<b>Task 2.7: Develop mechanisms to finance the implementation of WDM projects</b>																											
▶ BMP grant pool program operational																											
▶ Grants from CBIGP linked to Activity 3 investigated																											
▶ Work with WDMU and utilities to prepare a proposal to secure GPOBA funds																											
▶ Concept materials for potential DCA activities developed																											
▶ Develop efficiency requirements for large users																											
▶ Implement BMP grant program																											
<b>Activity 3: Demonstrate Selected Water Demand Management Initiatives to the Public</b>																											
<b>Task 3.1: Expand the urban landscape program introduced by WEPIA</b>																											
<b>Subtask 3.1.1: Explore public conceptions of culturally desirable park space use to inform water-wise landscaping efforts.</b>																											
▶ Identify target groups in geographic focus areas																											
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▶ Connect with counterpart outreach organizations/centers																											
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▶ Conduct surveys and focus group sessions																											
▶ Hold first meeting for Water-wise Task Force																											
▶ Evaluate data																											
▶ Draft Public Conception of Water-wise Landscaping Report																											
▶ Incorporate input into the Public Conception of Water-wise Landscaping Report																											

WORK PLAN TIMELINE	Project Year 1												Project Year 2					Option Year 3				Option Year 4					
	2007			2008			2009			2010		2011															
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4									
Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug.	Sep										
<b>Activities and Tasks</b>																											
<b>Subtask 3.1.2:</b> Train personnel from at least 70 of the 99 municipalities on water-wise landscape principles.																											
► Visit parks developed by WEPIA (Mansoura, Za'atari, and Shuqraih) and perform assessment																											
► Identify municipalities and obtain information on departments, managers, and technical staff																											
► Identify 2 trainers																											
► Enlist the participation of mayors and managers in the one-day seminar																											
► Prepare and hold one-day seminar																											
► Mayors and managers to nominate technical staff to be trained																											
► Prepare content and format of three-day training sessions for technical staff																											
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► Assist municipal staff in conducting a water-wise workshop for homeowners in their respective areas																											
<b>Subtask 3.1.3:</b> Introduce water-wise landscaping principles in the curriculum of agricultural faculties in at least two universities																											
► Review courses offered at Agriculture and Engineering Faculties																											
► Form committee of professors and IWDMJ																											
► Hold workshop to determine module content																											
► Prepare content of module																											
► Module integrated into course																											
► Expand activities to other universities																											
<b>Subtask 3.1.4:</b> Expand work with nurseries																											
► Assess nurseries established by WEPIA																											
► Identify and assess new organizations																											
► Provide technical assistance to WEPIA nurseries for improving marketing if need is determined																											
► Explore the potential for expanding product line with larger nurseries																											
► Provide technical assistance to new small business and/or WEPIA nurseries																											
► Provide technical assistance to large nurseries																											
<b>Subtask 3.1.5:</b> Determine incentives for water-wise landscaping.																											
► Identify financing strategies																											
► Identify opportunities for public-private partnerships																											

WORK PLAN TIMELINE	Project Year 1												Project Year 2				Option Year 3				Option Year 4						
	2007			2008			2009			2010		2011															
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4									
Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<b>Activities and Tasks</b>																											
<b>Task 3.2: Host a competition for best low-income, water-efficient houses in the highland and Jordan Valley areas.</b>																											
► Explore strategies to finance prototype developed under WEPIA																											
► Approach developers to sponsor competition																											
► Hold competition and select winning designs																											
► Develop prototype																											
► Explore financing strategies to develop prototype and later mass production																											
<b>Task 3.3: Distribute 20,000 school bags in rural poor areas</b>																											
► Survey of rural houses																											
► Define the targeted age group																											
► Focus groups to define contents of bags																											
► Design bags																											
► Fabricate bags																											
► Distribute bags and conduct awareness activities																											
► Expand program																											
<b>Task 3.4: Implement best management practices in pilot areas.</b>																											
► Develop pilot implementation strategies for selected BMPs (linked to activity 1)																											
► Implement BMPs with a utility																											
► Collect lessons learned on implementation																											
► Disseminate lessons to other utilities																											
<b>Crosscutting Issues</b>																											
Gender Considerations, Jordanian stakeholder collaboration, and donor coordination																											
Program mobilization																											
<b>Reporting</b>																											
Submit annual workplan																											
Submit annual training plan (annex to annual workplan)																											
Submit annual procurement plans																											
Submit annual and quarterly progress and financial reports																											
Submit Contractor Demobilization Plan																											
<b>Monitoring and Evaluation</b>																											
Review current 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 the collected baseline data																											
Develop comprehensive M&E Plan																											
Special studies and evaluations -- as needed																											
Milestones																											
Deliverables																											
Time schedule to be determined later during project implementation																											

# **DRAFT MONITORING AND EVALUATION PLAN**

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
<b>Program Objective-Level: Instituting Water Demand Management in Jordan</b>									
Total number of people trained (Management indicator)	People trained are those who have participated in project training activities.	This will allow the IWDMJ to monitor how many people have been trained through the project.	Number	Yr 1: 195 Yr 2, 3 & 4: TBD	Gender, type of participant (MWI, utilities, private sector, plumbers, etc.), location, topic of training	Project records	The Chief of Party and Activity Leaders will review project records	Annually	4
Number of beneficiaries (Management indicator)	Beneficiaries are those Jordanian citizens who have been assisted by the IWDMJ anywhere along the water demand supply chain	This will allow the IWDMJ to monitor total number of people who have been assisted by the IWDMJ.	Number	Yr: 600 Yr 2, 3 & 4: TBD	Location, gender, income, sector, services area	Project records, (Task 3.3)	The Chief of Party and Activity Leaders will review project records	Quarterly	1 D
<b>Activity 1: Institutional Capacity for Water Demand Management</b>									
Score on the Water Organization Capacity Assessment Tool (WOCAT)	The WOCAT scores water entities along 7 dimensions that are critical to effective operations of organizations (governance, management practices, human resources, financial resources, service delivery, external relations, and sustainability). Each dimension is scored along a 7-point scale, where 0 = N/A, 1 = needs urgent attention, all the way to 6 = acceptable, needs maintaining. Then all the dimension totals will be added together to get the water organization's final score for the year.	In order to measure our progress in creating effective organizations, we will use the assessment tool to evaluate their capacity by looking at governance, management practices, human resources, financial resources, service delivery, external relations, and sustainability.	Score	Yr 1: 3 utilities with an average score of 21 Yr 2, 3 & 4: TBD	Institution	Project records, organization records	Activity 1 Leader will review and assess a score	Annually, to be completed for project's annual report	8
<b>Task 1.1: Build consensus on WDM functions and institutions as part of the water sector reform and restructuring</b>									
No performance measures needed, work plan milestones instead									

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
<b>Task 1.2: Institute planning, allocation, and monitoring functions at the WDMU</b>									
WDM Functional Operations Milestone scale score	The Functional Operations Milestone tracks the capability of key water demand functions, focused on planning, regulatory, and operational functions The Milestone lists 10 stages, and progress from each stage is weighted according to importance.	This indicator will measure the process of effective functioning of WDMU operations in order to better manage water demand in Jordan.	Score	Yr 1, 2, 3 & 4: TBD	Function, level of decentralization	IWDMJ staff, USAID SO team staff, and WDMU staff	The IWDMJ team, along with WDMU key staff, the USAID SO team, and other stakeholders, will score each key function along the milestones, tracking progress from year to year. It is suggested that this be done at the same time as the portfolio review process within the Mission.	Annually	
WDMU Policy Milestone Scale Score	The Policy Milestone tracks the progress of key water policies, from the provision of input by water entities including NGOs, to the drafting of policy language, through the approval process, to the promulgation of the new policy(ies), to the training of WDMU and others on the policy(ies), and finally to the corrective actions taken in response to the new policy(ies). The Milestone lists 10 stages, and progress from each stage is	This indicator will measure the process of passing and enforcing WDMU policies needed for improved management of water demand in Jordan.	Score	Yr 1, 2, 3 & 4: TBD	Policy Topic	IWDMJ Staff, USAID SO team staff, and WDMU staff	The IWDMJ team, along with WDMU key staff, the USAID SO team, and other stakeholders, will score each key policy along the milestones, tracking progress from year to year. It	Annually	3

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
	weighted according to importance.						is suggested that this be done at the same time as the portfolio review process within the Mission.		
Number of types of members on the National Water Alliance	The National Water Alliance is a forum that will include a broad representation of water demand stakeholders. Types include representatives from private-sector entities (businesses, utilities, associations, NGOs, etc.) and public sector entities (ministries, municipalities, local governments, etc.).	The National Water Alliance will serve as a forum for participatory decision making and for building consensus. As membership in the Council expands, different perspectives and knowledge will be incorporated into planning, allocation decisions, and monitoring of the functions of the WDMU.	Number	Yr 1: 6 Yr 2, 3 & 4: TBD	Organization type (public/private)	Project records, organization records	Activity 1 Leader will review project data and Alliance meeting notes	Annually	
Number of linkages formed to deal with WDM functions and issues	Linkages, such as committees, working groups, task forces, etc., can be formal or informal, but must meet regularly or as triggered by an agreed-upon event. These linkages must be between WDM groups (functional, operational, management, etc.). Linkages are formalized to bring together staff from a variety of groups within the WDM community to conduct collaborative problem solving together.	As linkages bring about collaborative problem solving on water issues, better decisions and processes will be developed within the WDM community. In addition, trust between the WDM groups will improve.	Number	Yr 1: 4 Yr 2, 3 & 4: TBD	Location, topic, members	Project records, organization records	Activity 1 Leader will review each committee	Annually	8

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
<b>Task 1.3: Strengthen the MWI Planning Directorate by establishing a national water use information program</b>									
Number of sources included in national water use information systems	Sources are those water demand entities that generate data that are critical to WDMU's capability of producing accurate reports. Sources can include water users such as hotels, households, and water suppliers, etc., as well as metered data. The information system is the collection and analysis process within the WDMU.	This will directly measure whether the WDMU is using data from all available and relevant sources.	Number	Yr 1: 0 Yr 2: 6 Yr; 3 & 4: TBD	Type of data, source of data	Project records, WDMU records	The Chief of Party, and Activity 1 Leader will review project records	Annually	8
<b>Task 1.4: Perform end-use analyses</b>									
Number of stakeholders involved with the end-use analyses	End-use analyses are equivalent to water audits conducted within key industries/users groups. Stakeholders include the hotel industry, hospital industry, etc., as well as the WDMU, utilities, and other water entities.	This indicator measures the extent of stakeholders' participation. The more the stakeholders participate in end-use analyses, the more likely they will implement water savings and better management practices.	Number	Yr 1: 6 Yr 2, 3 & 4: TBD	Stakeholders (industry, water entity, plumbing companies, ministries)	Project records	Activity 1 Leader will interview key stakeholders	Annually	11
Number of end-use analyses carried out independently by MWI and utilities	End-use analyses are equivalent to water audits conducted within key industries/users groups. Carried out independently means that the MWI and/or utilities conduct their own end use analyses without funding by donors.	This indicator measures the extent that MWI and utilities find end-use analyses to be relevant and critical to their capability to manage water demand in Jordan. It is also a proxy indicator for the sustainability of end-use analysis (or any analysis) within key water entities.	Number	Yr 1: 8 Yr 2, 3 & 4: TBD	Entity carrying out end-use analysis, industry type	Project records, MWI and utility records	Activity 1 Leader will review project and other records	Annually	10

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
<b>Task 1.5: Assist in the establishment of a decentralized system for water demand management functions</b>									
Score on the Water Organization Capacity Assessment Tool for Utilities	Water Organization means the three principle water utilities (remaining six utilities later in the program).	In order to measure our progress in creating effective utilities (under tasks 1.5.1 & 1.5.2), we will use the assessment tool to evaluate the improvement in their capacity by looking at governance, management practices, human resources, financial resources, service delivery, external relations, and sustainability.	Score	Yr 1: 21 Yr 2, 3 & 4: TBD	Institution	Project records, organization records	Activity 1 Leader will review and assess a score	Annually, to be completed for project's annual report	8
Number of training participants	Training includes those training activities focused on implementing water audits, commercial and code enforcement, etc. and managed by IWDMJ, or by IWDMJ partners, or by other organizations using IWDMJ training curricula. Participants are those people who have completed the training.	This will track the number of people who have been trained through IWDMJ. As the capacity of the WDMU-related entities increases, they will be able to better manage water demand in their localities.	Number	Yr 1: 0 Yr 2, 3, & 4: TBD	Topic, gender, type of trainee (public, private, utilities)	Project records	Activity 1 Leader will review project information	Quarterly	9
<b>Task 1.6: Develop BMP guides on conservation of nonagricultural water</b>									
Number of best practices (BMP) identified and approved by the government and the National Water Alliance for dissemination	A best practice is defined as the optimum possible way of doing something. A best practice is formulated after the study of specific business or organizational case studies to determine the most broadly effective and efficient means of organizing a system or performing a function. Approved means	This indicator will measure the identification of best practices that will help improve water demand management. The sum of all best practices will comprise the BMP guide on conservation. This measure is a proxy for quality of the best	Number	Yr 1: 0 Yr 2, 3 & 4: TBD	Topic of best practice	Project records	Activity 1 Leader will review project, National Water Alliance, and WDMU information	Annually	3

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
	that once the best practice has been identified, the WDMU or other government or national water entity has determined that the best practice should be widely shared throughout Jordan.	practices.							
<b>Task 1.7: Provide training and capacity building to promote water demand management</b>									
Score on the Water Organization Capacity Assessment Tool	Water Organization means the three principle water utilities (remaining six utilities later in the program).	In order to measure our progress in creating effective water demand stakeholders, we will use the assessment tool to evaluate their capacity by looking at governance, management practices, human resources, financial resources, service delivery, external relations, and sustainability. Scores will be used to identify training and technical assistance based on actual need, and to track capacity improvement.	Score	Yr 1: 0 Yr 2, 3, & 4: TBD	Type of entity (not utilities – which are covered under Task 1.5)	Project records, Organization records	Activity 1 Leader will review and assess a score	Annually, to be completed for project's annual report	8
Average score on individual skills assessment rating	Skills and knowledge are defined as those key areas that the trainings have focused on, to build the capacity of individuals within water demand institutions key to project results. The short skills/knowledge assessment tool will be based on the content of the training.	An increase in skills and knowledge will improve the ability of staff in organizations to better manage water demand.	Score	Yr 1, 2, 3 & 4: TBD	Location, gender, topic of training, participant type	Project records, organization records. This assessment tool may be used twice for each training participant: first, immediately before the training begins;	Activity 1 Leader will review each organization	Annually	

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
						second, immediately after the training ends.			
Number of training participants	Trainings are those training activities focused on water demand management and managed by IWDMJ, or by IWDMJ partners, or by other organizations using IWDMJ training curriculum. Participants are those people who have completed the training.	This will track the number of local and municipal water staff, and others associated with water demand management at the local level who have been trained. As the capacity of the local and municipal staff increases, their skills will improve, and the capability of their institutions to make decisions about water will be strengthened.	Number	Yr1: 0 Yr 2, 3 & 4: TBD	Topic, gender, location	Project records, institutional records	Activity 1 Leader will review each organization	Quarterly	9
<b>Task 1.8: Introduce and promote drought response principles in the water community</b>									
Number of introduced drought response principles that have been adopted by Jordanian entities	Introduced means brought in and established from another country into Jordan. Drought response principles are rules or standards for dealing with drought that have worked in other countries. Adopted means that these principles have been taken up or practiced or accepted as a norm.	This indicator will measure both the identification of relevant and possible principles from other drought responses throughout the world, and of the acceptance of those introduced principles within the Jordanian context.	Number	Yr1: 0 Yr 2, 3 & 4: TBD	Type of drought (chronic, acute)	Project records, institutional records	Activity 1 Leader will track each introduced response and review each organization	Annually	10
<b>Task 1.9: Design, administer, and institutionalize a yearly event to recognize individuals, institutions, and industries that help advance water efficiency</b>									
Number of integrated events accepted by national water entities as part of a national campaign	Integrated events are those that include both upstream and downstream water stakeholders, as well as combining several related mediums for each event. Events are those planned	This indicator will measure the acceptance by key Jordanian water entities of a critical project milestone.	Number	Yr 1: 1 Yr 2: 1 Yr 3: 1 Yr 4: 1	Location, Event	Project records	Activity 1 Leader will track and review project information and interview key water	Annually	

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
	occurrences to promote water efficiency within a wide/broad audience throughout Jordan.						entities		
<b>Activity 2: Enabling Institutional and Legal Environment</b>									
<b>Task 2.1: Assist in creating a stakeholder-driven WDM policy program</b>									
Number of stakeholders involved in policy change	Stakeholders include utilities, Government of Jordan ministries, plumbing companies, and other water entities. Policy designates a process. This process includes the elaboration of programs by different, usually public and private collective actors and the way the programs are then applied as concrete programs and actions.	This indicator will measure the commitment of water entity stakeholders in changing and improving policy.	Number	Yr 1: 6 Yr 2, 3, & 4: TBD	Type	Project documents	Activity 2 Leader will review project documents	Annually	11
<b>Task 2.2: Develop a national standardized plumbing code</b>									
Percentage Approved new standards meet or exceed International Standards	International Association of Plumbing and Mechanical Officials and others (International Code Council) have established minimum plumbing codes for global application. International standards are a set of rules or principles that articulate the minimum necessary for safe or effective operations.	This indicator will measure the degree of parallel between Jordanian plumbing code and the international standards for plumbing. The greater the parallel, the greater the likelihood that Jordanian codes will help improve safety and service quality standards.	Percent	Yr 1: 0 Yr 2, 3 & 4: TBD	Meet/Exceed	IAMPO, ICC, Project documents	Activity 2 Leader will review each standard code and Jordanian codes	Annually	3
Total number of public documents with new codes disseminated	Public documents include guides, checklists, manuals, or other media that are available in the public. New codes are those plumbing codes that meet or exceed international standards.	This indicator is a proxy for GOJ approval of national standardized plumbing codes.	Number	Yr 1: 0 Yr 2, 3 & 4: TBD	Type (posters, handbook, guides, information packets, PSAs)	Project records, organization records	Activity 2 Leader will review project documents	Annually	3

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
<b>Task 2.3: Implement a plumbing materials certification program</b>									
Number of rules and codes identified	Plumbing materials to be certified means those materials for which JISM has adopted specifications.	This indicator will measure the acceptance of plumbing materials certification.	Number	Yr 1: 5 Yr 2, 3 & 4: TBD	N/A	Project records	Activity 2 Leader will review project documents	Annually	3
<b>Task 2.4: Establish a “master plumbers” vocational training program at the VTC</b>									
Number of plumbers trained in certification programs	Certification programs are those that have been approved to provide the training to plumbers. Plumbers are those professionals who have entered the training program.	This will track the demand for certification among plumbers. As more plumbers sign up for the certification training, this will indicate that they believe such certification will improve their careers. Indirectly, this will also measure the plumbers perception of public/customer demand for certified plumbers over non-certified plumbers.	Number	Yr 1: 0 Yr 2, 3 & 4: TBD	Program, gender, location	Project records, program records	Activity 2 Leader will review each program	Annually	9
<b>Task 2.5: Prepare a workplan to implement a labeling program</b>									
Number of types of appliances and fixtures with labels in place in the market	Plumbing appliances and fixtures include: dish-washers, clothes washers, faucets, shower heads, etc. Labels indicate how much water the appliance or fixture uses. In the market means that it is available for sale (retail or wholesale).	This indicator will measure the availability of types of fixtures and appliances that are labeled. The more types of appliances and fixtures that are labeled and available, the greater the chances are that plumbing construction will be effective and efficient.	Number	Yr 1: 10 Yr 2, 3, & 4: TBD	Type of fixture/ appliance, Location of market, Type of label	Plumbing companies, markets, project records	Activity 2 Leader will review project documentation	Annually	
Number of stores/shops that carry labeled	Plumbing appliances and fixtures include: dish-washers, clothes washers,	This indicator will measure the number of stores that sell labeled	Number	Yr 1: 10 Yr 2, 3 & 4:	Type of fixture/ appliance, Location of	Plumbing companies, markets,	Activity 2 Leader will review project	Annually	

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
appliances and fixtures	faucets, shower heads, etc. Labels indicate how much water the appliance or fixture uses. Stores/shops means an entity that sells appliances at retail or wholesale.	products. The more stores that sell labeled products, the larger will be the availability of labeled products. This may be a proxy for demand among both the retailers and wholesalers, and for the ultimate customer for labeled materials.		TBD	market, Type of label	project records	documentation		
<b>Task 2.6: Identify WDM enforcement mechanisms and recommend the most feasible</b>									
Percentage of plumbing code enforcement recommendations accepted by the Government of Jordan / MWI	Recommendations are those enforcement options that are most likely to work in Jordan, based on stakeholder assessments. Accepted means that the GOJ (and/or MWI) has reviewed and approved of the enforcement mechanisms recommended.	This indicator is a measure for the level of Government support for WDM.	Percentage	Yr 1: 0 Yr 2, 3, & 4: TBD	Punitive/ incentive	Project documentation	Activity 2 Leader will review acceptance process of GOJ and/or MWI	Annually	
<b>Task 2.7: Develop mechanisms to finance the implementation of WDM projects</b>									
Number of mechanisms to finance the implementation of WDM projects in place	Financial mechanisms can include grants, contracts, loans, joint ventures or other mechanisms that support water demand management projects. In place means that they have been approved (through a MOU or other agreement) that is binding.	This indicator will measure the number and types of financial mechanisms in place for WDM projects in Jordan.	Number	Yr 1: 1 Yr 2, 3 & 4: TBD	Type of financial mechanisms	Project documentation	Activity 2 Leader will review project documentation	Annually	

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
Dollar value of financial instruments in place	Financial instruments can include: grants, contracts, loans, joint ventures or other mechanisms that support water demand management projects. In place means that they have been approved (through a MOU or other agreement) that is binding.	This indicator will measure the value and types of financial instruments for WDM projects in Jordan.	Number	Yr 1: 0 Yr 2, 3 & 4: TBD	Type of financial instruments	Project documentation	Activity 2 Leader will review project documentation	Annually	
<b>Activity 3: Demonstrate Selected Water Demand Management Initiatives to the Public</b>									
<b>Task 3.1: Expand the urban landscape program introduced by WEPIA</b>									
Number of water-wise public landscaped designs developed for public parks	Water-wise landscaping is an environmentally friendly form of landscaping that uses a variety of indigenous and drought-tolerant plants, shrubs, and ground cover. Public landscaped designs are plans for public spaces/parks.	This measure will indicate whether public perceptions of culturally desirable park spaces have been incorporated into water-wise landscaping designs.	Number	Yr 1: 0 Yr 2, 3, & 4: TBD	Type of participant, gender, age, locality	Project records	Activity 3 Leader will review project documentation and interview notes	Annually	13
Number of people trained in water-wise landscaping principles	Water-wise landscaping is an environmentally friendly form of landscaping that uses a variety of indigenous and drought-tolerant plants, shrubs, and ground cover. Trainings are those training activities focused on water-wise landscaping and managed by IWDMJ, or by IWDMJ partners, or by other organizations using IWDMJ approved training curriculum. Participants are those people who have completed the training.	This will track the number of people who have been trained in water-wise landscaping. As the knowledge and understating of water-wise landscaping principles increases, water management demand should rationalize. This indicator also measures the demand for water-wise landscaping among landscape professionals and organizations.	Number	Yr 1: 105 Yr 2, 3, & 4: TBD	Program, gender, location, type of trainee (landscaper, architect, nursery owner, municipal manager, etc.)	Project records, program records	Activity 3 Leader will review each program	Annually	9
Percentage of public parks converted/	Public parks will be located in the larger municipalities within Jordan, and are free	This indicator will track the number of completed parks water-wise	Percentage	Yr 1: 0 Yr 2, 3, & 4:	Location	Project records, IWDMJ	Activity 3 Leader will review project	Annually	13

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
created based on water-wise landscaping principles that are maintained after project resources end	for the public to enjoy and visit. Water-wise landscaping is an environmentally friendly form of landscaping that uses a variety of indigenous and drought-tolerant plants, shrubs, and ground cover. Converted means that the parks were originally designed based on non-water-wise landscaping principles, and have been redesigned. Created means that no park and/or no water-wise landscaping existed previous to the project activity. Maintained means that the parks have the resources (financial and technical) to continue to exist after project resources end.	landscaped through project efforts, and maintained by the municipalities and IWDMJ. This will measure the relevance and acceptance of water-wise landscaping principles at the local level by Jordanians.		TBD		records, municipal records	records		
Number of institutions of higher- education adopting water-wise landscaping principles into their curriculum	Institutions of higher-education are those universities and colleges within Jordan. Adopting means that either an entire curriculum and degree program exists for water-wise landscaping, or that curriculum at the course level exists. Water-wise landscaping is an environmentally friendly form of landscaping that uses a variety of indigenous and drought-tolerant plants, shrubs, and ground cover.	This indicator will measure whether the principles of water-wise landscaping have been accepted within Jordanian higher-education institutions as a part of their curriculum.	Number	Yr 1: 0 Yr 2, 3, & 4: TBD	Specific water-wise landscaping curriculum / inserted into existing agricultural curriculum, university	Project records	Activity 3 Leader will review each program	Annually	13

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
Number university agricultural students completing classes which include water-wise landscaping principles	Completing means that they have passed the water-wise landscaping class. Water-wise landscaping is an environmentally friendly form of landscaping that uses a variety of indigenous and drought-tolerant plants, shrubs, and ground cover.	This indicator is a proxy measure for demand for classes on water-wise landscaping at the universities. As well, it is an indicator that the university has adopted water-wise landscaping into the curriculum.	Number	Yr 1: 0 Yr 2, 3, & 4: TBD	University of Jordan, Mu'tah University, JUST	Faculty records	Activity 3 Leader will review each program	Annually, probably only after year 3 of the IWDMJ team project	9
<b>Task 3.2: Host a competition for the best low-income, water-efficient houses in the highland and Jordan Valley areas</b>									
Number of design entrants to competition	Design entrants are submitted by teams of architects, students, apprentices, engineers, master plumbers, landscapers, interior designers, etc. The competition is for the best low-income, water-efficient house design.	This indicator will measure the number of designs submitted, and is a proxy for the interest and demand for low-income water-efficient housing.	Number	Yr 1: 0 Yr 2, 3, & 4: TBD	Team location	Project records	Activity 3 Leader will review project records	Annually	10
Number of strategies developed to finance building of prototypes or mass construction based on designs	Financing strategy means any public-private partnership to provide financial assistance or support. Design means a plan developed for low-income water-efficient housing under the competition of this Task.	This indicator will measure the marketability of the winning design for a low-income water-efficient house. It is a proxy for the builders expectation that such a model will be in demand by home buyers in Jordan.	Number	Yr 1: 0 Yr 2, 3, & 4: TBD	Location	Project records	Activity 3 Leader will review each program	Annually	
<b>Task 3.3: Distribute 20,000 school bags in rural poor areas</b>									
Number of water demand management school bags distributed	School bags are filled with water savings information, and age-appropriate materials. Distributed means given to school children to share with household members.	The bags are part of an educational program to bring water demand management to the classroom. This indicator will measure the distribution of bags to	Number	Yr 1: 0 Yr 2, 3, & 4: TBD	Location, age of children, gender of children	Project records, School records	Activity 3 Leader will review each program	Annually	

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to PMP Indicator
		families/households. This indicator is a proxy for water demand management “curriculum” taught in lower-level schools.							
<b>Task 3.4: Implement best management practices in pilot areas</b>									
Number of BMPs implemented by utilities	A best practice is defined as the optimum way of doing something. Implemented means the BMP is institutionalized by the utility.	This indicator will measure the number BMPs implemented.	Number	Yr 1: 0 Yr 2, 3, & 4: TBD	Utility, subject matter of BMP	Utility records, project records	Activity 3 Leader will review project records	Annually	3

## ANNEXES

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## Annex I: The Training Plan

Task/Sub-task	Events	Number of Training Days/Year 1	Timeframe	Place of the Event	Number of Trainees or Attendees	Potential Training Providers	Estimated Cost of Training/Year 1	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Year 2	Year 3	Year 4
Impl. Introduce Project Activities and Tasks	Kick-off Core Workshop	2	Apr-May-07	Amman	34	Tony Gregg, Bil Tucker, Lara Zureikat	\$1,500																				
Impl. Develop Yearly Work Plan	Work Plan Workshops	3	Jun-07	Amman	45	Tony Ghegg, Bil Tucker, Lara Zureikat, Narmine Muna	\$3,000																				
1.1	Build consensus on WDM functions and institutions as part of the water sector reform and restructuring.	2	Feb-08	Amman	20	TBD	\$1,700																				
1.2.1	Assess the organizational structure of the WDMU within the institution as a whole and propose operating procedures for linkages between the unit and other divisions in the ministry and its two authorities.	12	Oct-07 Jan-08 Apr-08 Jul-08	Various	20	Dira Jamali	\$10,400																				
1.2.2	Develop WDM policy in close cooperation with the WDMU	2	Jun-08	Amman	20	Bil Tucker	\$1,700																				
1.2.4	Ensure that demand and allocations data developed by units in the ministry are linked to the National Water Master Plan (NWMP) and appropriate economic analysis is performed.		Year 2 - Year 3	Amman, Irbid, Aqaba	15	Data Design Specialist, Hala Zawati, Water Economist	NA																				
1.5.2	Assist utilities in establishing WDM functions		Year 2 - Year 4	Amman, Irbid, Aqaba	15	Tony Gregg, Outreach/Training Specialist	NA																				
			Year 2 - Year 4	Amman, Irbid, Aqaba	15	Outreach/Training Specialist	NA																				
1.7	Provide training and capacity building to promote WDM		Year 2	Amman, Irbid, Aqaba	20	Mary Ann Dickinson, Christopher Brown	NA																				
			Year 2	Amman, Aqaba	20	Mary Ann Dickinson, Christopher Brown	NA																				
			Year 2 - Year 3	Amman, Aqaba	20	Christopher Brown	NA																				
			Year 2 - Year 3	Amman, Aqaba	20	Kathleen Slattery	NA																				
			Year 3 - Year 4	Amman, Aqaba and Northern Governorate	30	Lonnie Burke, Yaqoob Al-Qaisia	NA																				
2.1	Assist in creating a stakeholder-driven WDM policy program		Year 2	Amman	40	Bil Tucker, Mohamed Chebaane	NA																				
			Year 2	Various	40	Bil Tucker, Mohamed Chebaane, Policy Expert	NA																				
			Year 3	Various	40	Bil Tucker, Mohamed Chebaane, Outreach/Training Specialist	NA																				
2.2	Develop a national standardized plumbing code		Year 2	Amman, Municipalities	50	John Koeller, Thomas Pape, PHCC or IAMPO	NA																				
2.4	Establish a "master plumbers" vocational training program at the VTC		Year 2	Main VTC center	10	Lonnie Burke, Yaqoob Al-Qaisia	NA																				
			Year 2 - Year 4	Amman, Aqaba, NGWA	100	VTC	NA																				
3.1.2	Train personnel from at least 70 of the 99 municipalities on water-wise landscaping principles	1	Oct-07	Amman	20	Lara Zureikat	\$900																				
		16	Apr 08 - Year 2	70 Municipalities in various locations around Jordan	15	Lara Zureikat	\$10,400																				
3.1.3	Introduce water-wise landscaping principles in the curriculum of agricultural faculties in at least two universities	1	Year 2	Amman	10	Margaret Livingston	\$400																				
<b>Total training days</b>		<b>34</b>					<b>\$30,000</b>																				

## ANNEX II

### ANNUAL PROCUREMENT PLAN

The procurement for this project is straightforward with all IT Equipment and Office Equipment and Furniture to be acquired in the first year of the project as shown in the tables on the following pages. In addition, a total of \$30,000 is included in the budget for pilot programs in Year 1 as well a small number of service contracts shown under Program Support Costs. A Draft Procurement Manual has been developed and will be followed when procuring items or services for this project.

The procurement for Years 2, 3, & 4 are the costs associated for workshops, additional funding for pilot programs and in Year 2 for obtaining 20,000 school bags.

There is also a substantial grants program that starts in Year 2.

**Computer Equipment**

Item	Qty Year 1	Component	Description	Unit Cost	Total
<b>Server (File/Print/Active Directory/Antivirus/Lotus Notes services)</b>					
Server	1	Generation 5 server	Dual-Core and Quad-Core Intel® Xeon™ 5000 sequence processors with up to 8 MB Level 2 cache for blazing performance; systems support up to 2 processors, 1333/1066/667 MHz front side bus (FSB), Intel® 5000Z chipset, Network Controller Embedded Single NC373i Multifunction Gigabit NIC, Storage Controller Smart Array E200i Controller with 128MB and BBWC, Hard Drive None Ship Standard	\$2,200	\$2,200
Power supply	1	Redundant Power Supply	Redundant Power Supply 350/370/380 G5 Worldwide Kit	\$250	\$250
Fan kit	1	Fan kit	Hot Plug Redundant System Fan Kit for ML350 G5	\$65	\$65
Memory	1	Memory	1 GB FBD PC2-5300 2 x 512 MB Kit	\$350	\$350
HDD	7	Storage	HP 72GB 3G SAS 10K SFF HDD	\$350	\$2,450
SCSI controller	1	SCSI controller	64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2	\$140	\$140
Backup Drive	1	Backup Drive	StorageWorks Ultrium 448 Internal Tape Drive (carbonite)	\$1,650	\$1,650
Backup Tape	1	Backup media	HP Ultrium 400GB Custom Labeled Data Cartridge (20pk)	\$900	\$900
Cleaning tape	1	Cleaning media	HP Ultrium Universal Cleaning Cartridge	\$70	\$70
Deployment	1	Deployment	Rapid Deployment Pack, Single-Server License	\$118	\$118
Management	1	Server Management	ProLiant Essentials Integrated Lights-Out Advanced Pack, 1 server	\$304	\$304
Monitor	1	Monitor	15" Flat Panel Monitor	\$185	\$185
UPS/220V	1	True Online UPS	3000 VA online UPS /230V	\$1,415	\$1,415
UPS/Battery	1	UPS External Battery	72V Extended Battery Module	\$390	\$390
UPS Environmental Monitoring Card	1	UPS Environmental Monitoring Card	UPS Environmental Monitoring Card	\$130	\$130
UPS Connect card	1	UPS Connect Card	Web/SNMP UPS Connectivity Device	\$225	\$225
				<b>SubTotal</b>	<b>\$10,842</b>
<b>Desktop with monitor and UPS specs</b>					
Desktop	2	Desktop PC - convertible minitower	Intel® Q965 Express chipset, and Intel Graphics Media Accelerator 3000 integrated graphics, Intel Core 2 Duo E6300 Processor (1.86-GHz, 2 MB L2 cache, 1066-MHz FSB), support non-ECC DDR2 PC2-5300 (667-MHz) and PC2-6400 (800-MHz) memory, 80GB hard drive, 1GB RAM, CD-RW write—2,400 to 4,800 KB/s (16X to 32X), 10/100/1000 Ethernet, , Windows XP Pro	\$1,200	\$2,400
Monitor	2	Monitor	17-inch TFT Flat Panel Display – Analog/Digital & Multimedia	\$200	\$400
UPS	2	UPS	700VA/425W, Input 230V/ Output 230V, Interface Port DB-9 RS-232	\$250	\$500
MemoryStick	2	MemoryStick	2.0 Hi-Speed - USB flash drive 512 MB	\$45	\$90
Local Back-up Device	2	Local Back-up Device	Sony BWU-100A Internal Blu-ray™ Disc Rewritable Drive	\$275	\$550
Local Backup media	2	Blu-Ray	Sony 50GB Blu-ray Dual Layer Recordable Disk	\$25	\$50
				<b>SubTotal</b>	<b>\$3,990</b>
<b>Laptop and Accessories specs</b>					
Laptop	7	Laptop Computer	Genuine Microsoft Windows XP Professional, Intel® Core™ Duo Processors T2300 to T2600*, Mobile Intel 945GM Express Chipset, 533- or 667-MHz DDR2 SDRAM, dual channel memory support, min 40-GB 5400 rpm, Intel Graphics Media Accelerator 950, integrated 802.11 a/b/g or 802.11 b/g wireless LAN module and Bluetooth®, 7-in-1 Media Reader, Broadcom NetLink Gigabit Ethernet PCI Controller, three-year standard parts and labor warranty	\$1,612	\$11,284
Extra Battery	7	Extra Battery	Extended Life Battery - travel Battery	\$155	\$1,085
surge protection	7	Surge Suppressor	Notebook surge suppressor 120/240 V	\$20	\$140
GPS	2	GPS handheld	Garmin Etrex Vista	\$152	\$304
MemoryStick	7	MemoryStick	2.0 Hi-Speed - USB flash drive 512 MB	\$45	\$315
Case	7	Case	Backpack	\$49	\$343
Security Lock	7	Security Lock	Security Cable Lock	\$50	\$350
				<b>SubTotal</b>	<b>\$13,821</b>

<b>Digital Imaging</b>					
Printer	1	Network Printer	B/W - Laser - A4 (8.25 in x 11.7 in) - 1200 dpi x 1200 dpi - 45 ppm - EN, Fast EN, <b>230 V</b>	\$1,815	\$1,815
Mobile Printer	1	Ink jet printer	mobile a4/letter ink jet printer with battery	\$350	\$350
Printer	1	Network Color Printer	Laser, 600 x 600 dpi, 16ppm black, 16ppm color	\$1,321	\$1,321
Camera	1	Computer ready camera	6-Megapixel Digital Camera with Optical Image Stabilizer	\$310	\$310
Camera Kit	1	Camera Kit	Kit with carrying case, batteries, and charger	\$100	\$100
Camera Memory	1	Camera Memory	1 GB SD Memory Card - SD3 (133x) class speed	\$50	\$50
LCD Projector	1	LCD Projector	Digital Projector	\$1,125	\$1,125
ProjectorBulb	1	ProjectorBulb	Lamp module	\$450	\$450
Scanner	1	color Scanner	2400 x 2400 resolution; 8.5" x 11.7" scan size, with automatic feeder	\$1,100	\$1,100
				<b>Sub Total</b>	<b>\$6,621</b>
<b>Network and Communication Equipment</b>					
Internet connectivity	1	Router	Leased Line-Router and internet connection required by ISP	\$5,000	\$5,000
Firewall	1	Firewall	Firewall, unlimited user licences with 3year SmartNET agreement Next Business Day (NBD) and VPN option	\$710	\$710
Tools	1	Tools	Network toolkit (Crimper / Tester / Connectors / Tools)	\$325	\$325
Cabling	1	Network Cabling	Network / Phone Cabling (Labor/Cable /Racks /Outlets)	\$2,500	\$2,500
Switch	1	Network switch	Network switch with 24 10/100/1000 ports	\$350	\$350
				<b>Sub Total</b>	<b>\$8,885</b>
			<b>TOTAL HARDWARE</b>		<b>\$44,159</b>
<b>SOFTWARE (All software requires maintenance agreements or software assurance options for 3 years)</b>					
<b>* Software Assurance Upgrade or maintenance agreement should be purchased during the fourth year.</b>					
Server	1	Operating System	MSFT Win 2003 SRV License with Software assurance	\$834	\$834
Server	8	Client access licence	MSFT Win 2003 SRV CAL with Software assurance	\$34	\$272
Server	1	media	MSFT Win 2003 SRV Media	\$26	\$26
Client Application	8	Application suite	MSFT Office Pro 2003 License	\$650	\$5,200
Client Application	1	media	MSFT Office Pro 2003 Media	\$26	\$26
Client Application	1	Project management	MSFT Project 2003 License	\$597	\$597
Client Application	1	media	MSFT Project 2003 Media	\$26	\$26
Client Application	1	Project management	MSFT Visio 2003 License	\$279	\$279
Client Application	1	media	MSFT Visio 2003 Media	\$26	\$26
Server	1	Collaboration Server	Lotus Domino Application SRV R7 License with passport advantage	\$2,141	\$2,141
Server	1	Media	Lotus Domino Application SRV R7 Media	\$120	\$120
Client Application	8	Collaboration License	Lotus Notes R7 Client Desktop & Collaboration License with passport advantage	\$130	\$1,040
Client Application	1	Mail/Workgroup Client	Lotus Notes R7 Client Developer and Administrator & Collaboration License with passport advantage	\$590	\$590
Backup and Recovery	1	server backup software	Brightstor ArcServe R 11.5 for Windows plus media	\$812	\$812
Backup and Recovery	1	server backup software agents	Brightstor ArcServe r11.5 Agent for Lotus Notes for Win	\$648	\$648
Anti-virus	8	AV licence	Symantec corporate antivirus v10.x plus Media	\$50	\$400
client management	8	client management licence	Altiris Client management software licence all levels	\$95	\$760
server management	1	server management licence	Altiris server management software licence all levels	\$475	\$475
GIS Software	1	GIS Application	ARC GIS 9.0	\$1,550	\$1,550
Client Application	2	Desktop publishing	Adobe Acrobat Standard latest release	\$200	\$400
Reference	8	Reference	Tri-fold cards - "Help Guides" for Lotus Notes R7	\$4	\$32
Reference	8	Reference	Tri-fold cards - "Help Guides" for MS Word 2003	\$4	\$32
Reference	8	Reference	Tri-fold cards - "Help Guides" for MS Excel 2003	\$4	\$32
Reference	8	Reference	Tri-fold cards - "Help Guides" for MS Power Point 2003	\$4	\$32
			<b>TOTAL Software</b>		<b>\$16,350</b>
			<b>TOTAL HARDWARE AND SOFTWARE</b>		<b>\$60,509</b>
			<b>Shipping</b>	\$	<b>4,500</b>
			<b>GRAND TOTAL</b>	\$	<b>65,009</b>



Office Equipment and Furniture

Unit		Description	Unit Cost	Total
<b>Office Equipment</b>	<b>Main Office</b>			
	1	Copier	\$ 4,000	\$ 4,000
	1	Fax Machine	\$ 400	\$ 400
	1	Safe	\$ 450	\$ 450
	1	Telephone System	<b>\$ 2,000</b>	\$ 2,000
	11	Cell Phone	\$ 125	\$ 1,375
	6	A/C / heat units	\$ 200	\$ 1,200
	0	Small A/C units		\$ -
	0	Generator 40KW	\$ -	\$ -
		<b>Office Equipment Subtotal</b>		<b>\$ 8,225</b>
<b>Office Furnishings</b>				
	11	Desks	\$ 200	\$ 2,200
	11	Desk Chairs	\$ 100	\$ 1,100
	11	Guest Chairs	\$ 100	\$ 1,100
	11	Filing Cabinets	\$ 100	\$ 1,100
	6	Small Filing Cabinets	\$ 100	\$ 600
	11	Bookshelves	\$ 100	\$ 1,100
	1	Meeting Room Lg Table	\$ 800	\$ 800
	2	Meeting Room Sm Table	\$ 300	\$ 600
	14	Meeting Room Chairs	\$ 100	\$ 1,400
		<b>Office Furnishings Subtotal</b>		<b>\$ 10,000</b>
<b>Vehicle</b>	2	Cars	\$ 21,000	\$ 42,000
Vehicle freight				\$ -
		<b>Vehicle Subtotal</b>		<b>\$ 42,000</b>
		<b>Office Gear Total</b>		<b>\$ 60,225</b>

Pipeline Budget

<b>Contractor: Development Alternatives, Inc.</b>					
<b>Contract Title: Instituting Water Demand Management in Jordan</b>					
<b>Contract No.: 278-C-00-06-00329-00</b>					
<b>DAI Project Number: 1000407</b>					
<b>Period: 3/28/07 - 9/30/08</b>					
Line Items	A	B	C	D = B + C	E = A - D
	Budget Year 1	Actual Expenditures through 5/31/07	Projected Expenditures 6/1/07 - 9/30/08	Total Actual + Projected	Variance
Salaries and Wages	\$452,156.00	\$47,893.28	\$403,051.70	\$450,944.98	\$1,211.02
Fringe	\$118,684.00	\$15,713.62	\$105,646.00	\$121,359.62	(\$2,675.62)
Overhead	\$249,844.00	\$33,203.02	\$222,417.20	\$255,620.22	(\$5,776.22)
<i>Subtotal Salaries and Overhead</i>	<i>\$820,684.00</i>	<i>\$96,809.92</i>	<i>\$731,114.90</i>	<i>\$827,924.82</i>	<i>(\$7,240.82)</i>
Travel, Transportation, Per Diem	\$141,588.00	\$13,490.31	\$125,818.00	\$139,308.31	\$2,279.69
Allowances	\$88,148.00	\$3,300.00	\$77,804.20	\$81,104.20	\$7,043.80
ODCs	\$309,962.50	\$102,204.08	\$268,622.20	\$370,826.28	(\$60,863.78)
Program Activities	\$163,500.00	\$0.00	\$153,500.00	\$153,500.00	\$10,000.00
Subcontracts	\$1,495,502.00	\$25.42	\$1,331,563.50	\$1,331,588.92	\$163,913.08
<i>Subtotal Direct Costs</i>	<i>\$2,198,700.50</i>	<i>\$119,019.81</i>	<i>\$1,957,307.90</i>	<i>\$2,076,327.71</i>	<i>\$122,372.79</i>
G&A	\$274,764.00	\$19,640.92	\$244,646.50	\$264,287.42	\$10,476.58
<b>Total Project Costs</b>	<b>\$3,294,148.50</b>	<b>\$235,470.65</b>	<b>\$2,933,069.30</b>	<b>\$3,168,539.95</b>	<b>\$125,608.55</b>
Fixed Fee	\$214,119.50	\$15,305.59	\$190,649.30	\$205,954.89	\$8,164.61
<b>Total Operating Costs</b>	<b>\$3,508,268.00</b>	<b>\$250,776.24</b>	<b>\$3,123,718.60</b>	<b>\$3,374,494.84</b>	<b>\$133,773.16</b>
Grants Program	\$100,000.00	\$0.00	\$100,000.00	\$100,000.00	\$0.00
Fee	\$2,000.00	\$0.00	\$2,000.00	\$2,000.00	\$0.00
<i>Grants Subtotal</i>	<i>\$102,000.00</i>	<i>\$0.00</i>	<i>\$102,000.00</i>	<i>\$102,000.00</i>	<i>\$0.00</i>
<b>Total</b>	<b>\$3,610,268.00</b>	<b>\$250,776.24</b>	<b>\$3,225,718.60</b>	<b>\$3,476,494.84</b>	<b>\$133,773.16</b>
<b>Obligation</b>					
Obligation per the contract	\$1,500,000.00				
Actual expended through 5/31/07	\$250,776.24				
Total remaining obligation	\$1,249,223.76				
Amount of obligation spent	16.72%				

Annex III- Attendees of Kick-off Meeting, April 30<sup>th</sup> and May 1<sup>st</sup>, 2007

No.	Name	Organization/Institution	Email	Phone
1.	Abdullah Bseiso	DAI	Abdullah_Bseiso@dai.com	079-55 70 171
2.	Ahmed Elimat	MWI	Ahmad_Elimat@mwi.gov.jo	077-67 19 391
3.	Awatef Akour	GAM	awatefakour@gmail.com	077-66 51 162
4.	Betsy Marcotte	DAI	Betsy_marcotte@dai.com	
5.	Bil Tucker	The Institute for Public- Private Partnerships	Bil_Tucker@dai.com	079-642 7090
6.	Dafi Breizat	MWI	Dafi_Breizat@mwi.gov.jo	077-91 60 654
7.	Dalal Shehadeh	JISM	dshehadeh@jism.gov.jo	077-73 15 569
8.	Dr Munjed Al Sharif	QRACEST/JUST	munjed@just.edu.jo	079-54 79 505
9.	Eng. Husam Eddin Alidi	JVA	NA	077-73 88 518
10.	Izz Dean	STKI	NA	
11.	Jamal Qtaishat	JNBC	Jamalqtaishat@hotmail.com	079-51 78 015
12.	Jeff Wuorinen	The Institute for Public- Private Partnerships	jwuorinen@ip3.org	079-633 7115
13.	John Smith Sreen	USAID /WRE	Smith.sreen@usaid.gov	590-6677
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17.	Mohammad Al Momani	MWI	Mohammad_almomani@mwi.gov.jo	
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19.	Mohammed Chebaane	DAI	Mohamed_Chebaane@dai.com	
20.	Mustafa Nasereddin	ECO Consult	Mustafa.nasereddin@ecoconsult.jo	079-58 20 434
21.	Nayef Seder	MWI/ JVA	nseder@hotmail.com	560-4169
22.	Nehal Al Shawabkah	JISM	nehalshawabkah@yahoo.com	
23.	Pat Bakir	Miyahuna	baker@gmail.com	
24.	Peter Reiss	DAI	Peter_Reiss@dai.com	
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28.	Ross Hagan	USAID/ WRE	rhagan@usaid.gov	590-6677
29.	Sa'ed Abu Hammoum	Miyahuna	Abu_hammoun@nets.com.jo	077-74 80 802
30.	Setta Tutundjian	USAID	stutundjian@usaid.gov	590-6708
31.	Suzan Taha	MWI	Suzan_taha@mwi.gov.jo	079-55 54 563
32.	Thaira El Hafiz	GAM	Althaira6@yahoo.com	079-54 01 949
33.	Tony Gregg	DAI	Tony_gregg@dai.com	079-624 0872
34.	Waleed Sukkar	PMU	Wsu1301@maktoob.com	

Annex IV- Attendees of Work Plan Workshop, June 13, 14, 17<sup>th</sup>, 2007

No.	Name	Organization/Institution	Email	Phone
1.	Abdallah Naimat	Ministry of Agriculture/ Land & Irrigation Department	abdnalid@yahoo.com	07-95200108
2.	Abdel Karim Abu Znemah	Vocational Training Center	abuznemah@vtc.gov.jo	07-95938751
3.	Abdulla Yassin	ASEZA	NA	07-99958555
4.	Abdullah Bseiso	IWDMJ	Adbullah_bseiso@dai.com	07-99176917
5.	Abeer Abu Azzam	Ministry of Industry & Trade	Abeer.a@mit.gov.jo	5629030
6.	Abeer Al Khawaldeh	Ministry of Industry & Trade	NA	
7.	Abeer Mohamed	Ministry of Industry & Trade	Abeerkh106@hotmail.com	07-77907601
8.	Ahmad Elimat	Ministry of Water & Irrigation	Ahmad_elimat@mwi.gov.jo	07-76719391
9.	Ahmed Abu Al-Soud	Aqaba Water Company	A_abualsoud@awc.com.jo	07-96394011
10.	Areej Diab	ACC	Areej690@yahoo.com	5666151
11.	Awatef Akour	Greater Amman Municipality	awatefakour@gmail.com	07-76651162
12.	Bader Kassab	USAID	bkassab@usaid.gov	07-96531517
13.	Basem Telfah	PMU	Basem_telfah@pmu.gov.jo	07-95311108
14.	Bil Tucker	IWDMJ	Bil_tucker@dai.com	07-96427090
15.	Dafi Breizat	Ministry of Water & Irrigation	Dafi_breizat@mwi.gov.jo	07-79960654
16.	Dalal Shehadeh	JISM	dshehadeh@jism.gov.jo	07-77315569
17.	Dr. Ahmad Abu Awwad	Jordan University	abuawwad@ju.edu.jo	07-77610075
18.	Dr. Emad Shurman	PMU	Emad132@hotmail.com	07-77672377
19.	Dr. Hadeer Marza	Petra University	hadirmerza@yahoo.com	07-96499126
20.	Dr. Mahmoud Al-Disi	Vocational Training Corporation	Al_disi_m@yahoo.com	07-95170214
21.	Dr. Munjid Al-Sharif	Jordan University for Science & Technology	munjed@just.edu.jo	07-95479505

No.	Name	Organization/Institution	Email	Phone
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24.	Ghalib Hamarsheh	Entity Green	Ghalib_eg@yahoo.com	07-96255166
25.	Hayat Bakir	Jordan Forum for Business and Professional Women	NA	07-95757380
26.	Hiba Yassien	ASEZA	hyassien@aseza.jo	07-99927927
27.	Hussein Adaileh	Jordan Industrial Estate Corporation	adailehjo@yahoo.com	07-77272447
28.	Ibtisam Al Saleh	Ministry of Water & Irrigation	Ibtisam_saleh@mwi.gov.jo	5652265 Ext.1019
29.	Iyad Alawadat	Ministry of Public Works and Housing	NA	07-77327528
30.	Jaser Al Mashni	Ministry of Water & Irrigation	Jaser_almashni@mwi.gov.jo	07-95419992
31.	Jehad Sagarat	Aqaba Water Company	jehadsagarat@yahoo.com	07-76712525
32.	Jihad Al Majali	ASEZA	jmajali@aseza.jo majali_70@hotmail.com	07-96660024
33.	Lara Shahin	IWDMJ	Lara_shahin@dai.com	07-77649010
34.	Lina Battaineh	JOHUD	lina@johud.org.jo	07-77915597
35.	Mahmoud Sabha	Vocational Training Corporation	NA	07-95565091
36.	Mohamed Al Momani	Ministry of Water and Irrigation	Mohammad_almomani@mwi.gov.jo	
37.	Mohammad Omar Al Nuaimi	JOHUD	mohdomar@johud.org.jo	07-96747466
38.	Mohammed Abu Hamdeh	Miyahuna	Mohammedabuhamdeh@miyahuna.com.jo	07-45532846
39.	Mohammed Abu Taha	Jordan Engineers Association	abutaha@go.com.jo	07-95755949
40.	Mohammed Chebaane	Development Alternatives Co.	Mohamed_chebaane@dai.com	
41.	Mohammed Saraireh	Ministry of Planning & International Cooperation	Mohammad.sa@mop.gov.jo	07-77793748
42.	Mousa Saifi	Noor Al Hussein Foundation	msaifi@khf.org.jo	07-77422121
43.	Muna Gharaibeh	Water Authority of Jordan	Muna_gharaibeh@mwi.gov.jo	07-77258739

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Annex V- List of Written Deliverables

<b>Task No.</b>	<b>Report</b>	<b>Language</b>
Task 1.2.1	Assessment report of the WDMU organizational structure within MWI	English
	Gap analysis report	English
	Five-year strategic business plan for WDMU	English/Arabic
Task 1.2.2	Final draft policy	English/Arabic
Task 1.3	Assessment report of available data and determine deficiencies	English
Task 1.5	Decentralization vision	English/Arabic
Task 1.5.1	Regulatory incentives	English/Arabic
Task 1.5.3	Assessment report of barriers and opportunities to participation in water-efficient markets	English
Task 1.6	Series of BMP guides	English/Arabic
Task 1.8	Drought response principles and guidelines	English/Arabic
Task 2.2	Draft national standardized plumbing code	English/Arabic
Task 2.3	Draft water efficiency technical specifications/regulations	English/Arabic
Task 2.4	Curriculum of the “Master Plumbers Program”	English/Arabic
Task 2.5	Work plan for labeling water-saving fixtures and appliances	English
Task 2.7	BMP grant pool program guidelines and manual	English/Arabic
Task 3.1.1	Public Conception of Water-wise Landscaping Report	English
Task 3.1.2	Assessment report on WEPIA parks	English
Task 3.1.3	Report on Water-wise Principles currently offered	English
	Water-wise Landscaping Module	English
Task 3.1.4	Assess report on nurseries established by WEPIA	English
Task 3.2	Report on financing strategies.	English