



USAID | **JORDAN**
FROM THE AMERICAN PEOPLE

IDARA (INSTITUTING WATER DEMAND MANAGEMENT IN JORDAN)

ANNUAL WORK PLAN- YEAR 3

(October 2009 – September 2010)

This publication was produced for review by the United States Agency for International Development. It was prepared by DAI, Bethesda, MD.

IDARA (INSTITUTING WATER DEMAND MANAGEMENT IN JORDAN)

ANNUAL WORK PLAN - YEAR 3

October 2009 - September 2010

DISCLAIMER

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

IDARA Third Year Work Plan

USAID - DAI Contract No. 278-C-00-06-00329-00

The information and data contained herein are protected from disclosure by 18 U.S.C. § 1905 and are proprietary information as defined by U.S.C. § 423. They shall not be disclosed in whole or in part for any purpose to anyone by the government, except for purposes of proposal evaluation, negotiation, and contract award, as provided by FAR 15.413-1 and FAR3.104, or the public, with out the express written permission of Development Alternatives, Inc.

CONTENTS

List of Acronyms	3
Introduction	5
Work plan Timeline	60
Monitoring and Evaluation Plan	66
ANNEXES	74
Annex I: The Training Plan.....	75
Annex II- Annual Financial Report	77
Annex III- List of Written Deliverables.....	79

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
ETVET:	Employment and Technical and Vocational Education and Training
EU:	European Union
GAM:	Greater Amman Municipality
GBMS:	Groundwater Basin Monitoring Sector
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
IAPMO:	International Association of Plumbing and Mechanical Officials
JARA:	Jabal Amman Residential Area
JEA:	Jordan Engineers Association
JCCA:	Jordan Construction Contractors 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
KACE:	King Abdullah II Center for Excellence
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
RWC:	Royal Water Committee
SCWS:	Steering Competence in the Water Sector
STTA:	Short-Term Technical Assistance
TA:	Technical Assistance
TBD:	To Be Determined
TVET:	Technical and Vocational Education and Training
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

The third year workplan of IDARA covers the period extending from October 2009 to September 2010. It 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 of possible mitigation actions or strategies that will be taken to control them. The tasks are further linked to the targets and indicators of a Monitoring and Evaluation Plan (M&E).

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 after the Task Descriptions.

The work plan also includes the following annexes:

Annex I: the Annual Training Plan which consists of an Excel spreadsheet listing all of the proposed Project training and workshop activities.

Annex II: annual financial report.

Annex III: a list of written deliverables.

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

COMPLETED

- ACTIVITY 1:** Institutional Capacity for Water Demand Management
- TASK 1.2:** Institute planning, allocation, and monitoring functions at the WDMU
- Subtask 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
- Task Leader:** Hala Dahlan
- LTTA:** Mohamed Chebaane
Lara Shahin
- STTA [LOE]:** Philip Giantris, [Total LOE 41 days: 34 completed in year 1 and 2, 7 days allocated for year 3]
- Counterparts:** WDMU, MWI, water utilities (Miyahuna, NGWA, AWC)
- Scope of Work:** The following SOW focuses on the change management activities and the operational aspect of the WDMU strategic business plan.

During this period, IDARA will utilize change management models to support water utilities better understand and adopt water use efficiency plans and programs drafted in year two of the project. IDARA will conduct change management workshops to assist utilities develop and finalize water efficiency programs, identify driving and restraining forces, and come up with action plans to either overcome the first or support the second. IDARA will also work with a smaller group of change facilitators to identify strategies and practical solutions on how best to implement water efficiency plans and institute water demand management at each of the utilities. By doing this, IDARA envisions creating a culture that is conducive towards water demand management initiatives and approaches.

IDARA will continue supporting capacity building for the implementation of the WDMU strategic plan.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Conduct a series of individual interviews and meetings with the WDMU and stakeholders	Assessment report of the WDMU organizational structure within MWI	June 2007	Completed in October 2007
Identify WDMU structure and propose linkages with other divisions	None	June 2007	Completed in February 2008
Develop strategic business plan with WDMU	Strategic business plan developed	October 2007	Completed in February 2008 for WDMU

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Capacity building for implementation of WDM strategic plan	Individual training plans developed	October 2008	Completed in December 2008
	On-the-job training conducted	October 2008	Year 4
Develop guidelines for transformation of WDMU	Transformation guidelines	November 2007	Completed in October 2008
General change management workshop for directors at Aqaba	Workshop conducted	November 2008	Completed in November 2008
Conduct a gap analysis for the WDMU to determine organizational weaknesses and strengths	Gap analysis report	September 2007	Completed in December 2008
Conduct Change Management Workshop Miyahuna, NGWA, WDMU, and WAJ to identify challenges and obstacles for the institution of water demand management in the above organizations	Workshop Conducted	November 2008	Completed in March 2009
Conduct Change Management Workshops at AWC to develop and implement WUE plans	Workshop Conducted	May 2009	Completed in June 2009
Conduct Change Management Workshops for NGWA & Miyahuna to develop and implement WUE plans	Workshops Conducted	October 2009 ¹	February 2010
Based on above workshops, meet with change agents to develop strategies to overcome obstacles and challenges to institute WDM	Meetings Conducted	February 2010	August 2010

Counterpart Inputs: Each counterpart organization will have to designate the right mix of skills needed for the development and review of the water efficiency plans for each organization.

Challenges/Issues: The commitment of the different organizations is one of the challenges that should be addressed at the highest level.

Mitigation: Getting the commitment of each decision maker from the different entities.

Logistics: Coordination between the different organizations to develop and implement their water use efficiency plans.

¹ Change management workshops for Miyahuna, AWC and NGWA are rescheduled to concur with the development of water use efficiency plans for the three utilities

- 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

COMPLETED

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 external linkages between WDMU and other organizations, propose mechanisms to build these linkages, and develop a workplan to be jointly implemented

Task Leader: Hala Dahlan

LTTA: Mohamed Chebaane
Lara Shahin

STTA [LOE]: NA

Counterparts: Ministry of Environment (MOE), Ministry of Tourism and Antiquities (MOTA), Ministry of Public Works and Housing, and Ministry of Industry and Trade, Chambers of Commerce, Consumer Protection Agency, NGOs.

Scope of Work: The scope of work during this year will focus on meeting with technical task forces from the Ministry of Tourism & Antiquities, Ministry of Public Works and Housing, Ministry of Environment, and Ministry of Industry and Trade to develop WDM action plans according to the mandate of each of these ministries. IDARA will organize meetings to facilitate the building of a dialogue between these organizations and WDMU, and develop plans to jointly implement WDM activities. IDARA will also work with US utilities for potential twinning or alliances with Jordanian WDM institutional framework partners.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Identify organizations for potential linkages with the WDMU	None	October 2007	Completed in February 2008
Work with US utilities and organizations for potential twinning or alliances and for information sharing.	At least one MOU developed	May 2007	Year 4
Conduct meetings with task forces and stakeholders to develop and present action plans	Action plans developed and presented ²	May 2009	March-June 2010 ³
Implement action plans	WDM activities conducted	August 2009	Year 4

² Framework for Action Plans developed for MOE, MOT, MOIT, and MPWH in Aug 2009

³ Action plans developed and presented for the four ministries starting March 2010 and ending June 2010.

Counterpart Inputs: Each of the selected ministries assigned a task force of a mix of expertise to develop WDM action plans according to its mandate and responsibilities. The role of the WDMU and utilities will further be clarified as specific WDM programs under the action plans are identified.

Challenges/Issues: The commitment of each of the Ministries to implement WDM action plans.

The Ministry of Water and Irrigation “water for life strategy” that will duplicate the efforts and work conducted under this activity.

Mitigation: High level support is essential to the development of the action plans and in the implementation stage.

Logistics: Coordination and follow up through the WDMU at the Ministry of Water and Irrigation.

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 in the Ministry are linked to the National Water Master Plan (NWMP) and appropriate economic analysis is performed

Task Leader: Louis Qaqish

LTTA: Mohamed Chebaane

STTA [LOE]: Hala Zawati [Total LOE 40 days: 26 days completed in year 2, 14 allocated for year 3]
Tony Bagwell [Total LOE: 28 days allocated for year 3]

Counterparts: WDMU, WAJ, Utilities (Miyahuna, AWC, NGWA), NWMP, and MWI.

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 and utilities to evaluate the economic value of WDM. Train WDMU and utilities to conduct cost-benefit analyses of the BMPs selected for pilot projects.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Train WDMU counterparts to conduct cost-benefit analysis	Training session(s) on cost benefit analysis	June 2009 ⁴	Completed ⁵
Develop and implement procedures for improved collection of water demand and water allocation data ⁶	Procedures for collection of WDM and allocation data	June 2010	Year 4
Provide TA to evaluate the cost effectiveness of selected BMPs ⁷	Cost effectiveness of selected BMPs is analyzed. Data needs are identified.	January 2008	September 2010

Counterpart Inputs: NWMP and other Departments at MWI, WAJ, PMU, WDMU and the utilities to work with IDARA on identifying existing data collection and entry procedures and warehousing of water demand and allocation data.

All Counterparts to attend the training

⁴ Started earlier than planned, the start date was year 3 in year two workplan

⁵ Covered by on the job training and two workshops for water use efficiency tracking tool, (task 1.5.2)

⁶ The sub-milestones of this task are covered in task 1.2.5 milestones, namely “Providing TA to streamline WDM data collection and data management”, and “designing a comprehensive database”.

⁷ This milestone will be covered in task 1.6.1 where each BMP include cost recovery and analysis of cost effectiveness.

- Challenges/Issues:** Willingness of the stakeholders to implement changes in their systems as needed to acquire WDM data and establish sustainable data exchange mechanisms that can serve both planning and demand management
- Data reliability problems including those needed for the evaluation of cost effectiveness of WDM.
- Timing conflict between stakeholders in attending the training
- Mitigation:** Meet with stakeholders in advance and discuss with them the importance of this task. Discuss the importance of linking WDM data with demand forecasting at the utilities level, and with forecasting and allocations at the national planning level. Collect data needed to evaluate the cost effectiveness of WDM measures. Develop respective database tables as an integral part of the GIS based database (refer to task 1.2.5). 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:** Louis Qaqish,
- LTTA:** Mohammed Chebaane
Lana Naber
Nour Esoh.
- STTA [LOE]:** Hala Zawati [Total LOE 38 days: 11 completed in year 2, 27 allocated for year 3]
Bob Bouvier [Total LOE 12 days: allocated for year 3]
Data Base Developer/s [Total LOE 92days: 85 for year 3, 7 for year 4]
GIS expert [Total LOE 77 days: 63 allocated for year 3, 14 for year 4]
- Counterparts:** WDMU, WAJ, NWMP, Miyahuna, NGWA, AWC, and WIS.
- 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.
- To this effect, IDARA will undertake the following tasks based on the findings and recommendations of IDARA first deliverable under task 1.3, and the subsequent review of this deliverable made by Aquacraft upon a request made by MWI:
1. WDM database needs assessment: This includes:
 - a. Assessment of needs for the GIS-based comprehensive WDM system and the optimal methods for regular demand data exchange between the utilities and the WIS,
 - b. Prepare a model for streamlining the collection and management of WDM data with clear indication where data tables will be hosted and how it will be accessed by or integrated with the WIS. Also indicating any implications on and/or requirements from the utilities system and a roadmap for implementation of required changes at the utilities if needed.
 2. Integrate the GIS technology into the database and test the database.
 3. Train the Counterparts and utilities on the new WDM data collection & management model

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Provide TA to streamline WDM data collection and	WDM Database Needs Assessment	July 2007	December 2009

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
data management ⁸			
Design a comprehensive database	Database is designed	January 2008	December 2009
Integrate GIS technology into databases	GIS is integrated into Database	April 2008	April 2010
Present findings of WDM database needs assessment to stakeholders	Consensus is reached on the following: - database requirements by all stakeholders, - data flow between utilities and WIS - model of cooperation between the utilities and MWI (WDMU & NWMP)	April 2009	June 2010
Develop and test the database	Database is developed and tested	June 2009	June 2010
Train Counterparts and utilities on new WDM data collection & management model	Training delivered	March 2010	September 2010

Counterpart Inputs: WDMU, GTZ SCWS project, WIS and the utilities (including WAJ) to assist in identifying the data management model, data exchange options and system design and in collecting needed data and populating the database.

Challenges/Issues: Data distributed between WAJ and the utilities. Lack of uniform data, missing or incoherent data, inconsistency of information, coordination between relevant MWI directorates, WAJ and utilities

Mitigation: IDARA will leverage the experience learnt from year 1, regarding the benefits of collaborative approach. Hence, IDARA will develop with the stakeholders' implementation plans to standardize data collection, collect data needed, and integrate such data in the respective systems (at the data source).

Agree with the stakeholders on a common model for data exchange, and time line for the implementation of necessary changes by the respective stakeholder.

Assign different working groups responsibility for each separate type of needed information.

Logistics: Continuous meetings and follow up with working group members.

⁸ This task waited finalization of the water efficiency plan given that the WDM data requirement is identified by this plan.

- 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:** Louis Qaqish
- LTTA:** Nour Esoh,
- STTA [LOE]:** Hala Zawati [Total LOE 17 days: completed in year 2]
David Mitchell [Total LOE 28 days: 21 days completed in year 2, 7 allocated for year 3]
Loay Froukh [Total LOE 4 day: completed in year 2]
- Counterparts:** WDMU, WAJ, WIS, NWMP, MWI Planning Directorate, ASEZA, and water utilities (Miyahuna, AWC and NGWA).
- Scope of Work:** 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.

Since implementation of data collection is by necessity largely undertaken at the utilities level, IDARA will assess existing data collection methods, data entry and warehousing systems for the urban water uses and their types within the billing systems at the utilities, will propose an action plan for integrating the required data into the utilities systems, and follow up its implementation (See Deliverable 3 under this task, scheduled for completion by October 2008).

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	Final Report completed in Nov. 2008 Deliverable 1
Develop National Water Use Information Program Plan	National water use information program plan	February 2008	Final Report completed in Nov. 2008 Deliverable 2
Assess existing data collection methods, data entry and warehousing systems for urban water uses and their types at the utilities	Assessment Report (including an action plan to integrate the required data into the utilities systems)	August 2008	Final Report completed in Nov, 2008 Deliverable 3
Implement data collection, management, and analysis:	Functioning National water use information program ⁹	October 2008	September 2010

⁹ The full operation of the National Water Use Information Program depends on all the preceding deliverables under task 1.3, and the first 4 deliverables of task 1.2.5

Counterpart Inputs: NWMP, MWI Planning Directorate, WIS, WAJ, PMU, utilities, and collection of additional data as needed for the implementation of the water use information program. Implement new procedures, as needed based on the proposed water use information program action plan. Implement changes in the respective systems as necessary to facilitate sustainable data exchange and timely flow of information.

Challenges/Issues: Missing data, inconsistency of information, lack of cooperation of MWI directorates and utilities. Lack of human and financial resources to collect the data needed for WDM and to implement the changes in the respective utilities systems to accommodate the new data.

Mitigation: Leverage existing initiatives/projects to embed required WDM data at the utilities. Phase out implementation according to the specific situation of each utility. Follow up closely with all stakeholders and supervise implementation.

Logistics: NA

ACTIVITY 1: Institutional Capacity for Water Demand Management

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

Task Leader: Nour Esoh

LTTA: Louis Qaqish

STTA [LOE]: Russ Horner [Total LOE 15 days: completed in year 2]
Abdul Do'doo [Total LOE 17 days: completed in year 2]
Zack Milan [Total LOE 20 days: completed in year 2]
David Mitchell [Total LOE 15 days: completed in year 2]
Bill Hoffman [Total LOE 21 days: completed in year 2]
Bill De Oreo [Total LOE 31 days: completed in year 2]
Lennie Burke [Total LOE 25 days: allocated for year 3]
Seif International for marketing services [TBD]
Interdisciplinary Research Centre (*IdRC*) [Total LOE 200 days: allocated for year 3]

Scope of Work: IDARA will conduct water audits for Institutional and commercial facilities, the audited facilities should include users from the following categories:

- 1 Hotels (Mainly in Aqaba)
- 2 Schools

Residential End Use Analysis: IDARA will work with a private company to develop and implement a baseline survey that will link water use on the household level with socio-economic factors and determine the water use base line in typical Jordanian homes. The sample will be selected to cover the three utilities. Residential end-use analysis will include sub metering and logging of around 80 residences from the three Utilities (Amman, Aqaba and NGWA), the selected sample will represent three types of residences.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Profile and select large water consumers and residential users for end-use studies	Large consumers and residential users identified for analysis.	July 2007	Completed in March 2008
Conduct pilot end use analysis for residential users using metering	Report on End Use Analysis of 15 homes. Stakeholders are trained through learning by-doing	October 2007	Completed in June 2009
Develop and test water use forecast models	Water use forecast models developed and tested	December 2008	Completed in September 2009
Conduct end-use analyses for commercial consumer users	Report on End Use Analysis for selected subcategories.	October 2007	April 2010 ¹⁰

¹⁰ Preliminary results revealed the need for additional audits for schools, offices, and hotels mainly in Aqaba.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
	Stakeholders are trained through learning by-doing.		
Complete end-use analysis for representative samples of various categories	Report on end-use analysis for representative samples	January 2009	June 2010

Counterpart Inputs: WDMU staff, utilities, private sector and selected universities to participate in conducting end-use analyses, focus groups and surveys of participants

Challenges/Issues: Lack of potential participants for the data logging program, inconsistency in the available data from the utilities and data from site measurements. The sample size is not large enough to represent the use type of categories.

Mitigation: Commitment from utilities to carry out the developed demand forecasting models, careful selection of data logging program participants through proper training of surveyors.

Logistics: Workshops and trainings

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: Louis Qaqish

LTTA: Mohamed Chebaane
Nour Esoh

STTA [LOE]: Legal Consultant (TBD) [Total LOE 22 days: 14 for year 3, 8 for year 4]
Philip Giantris [Total LOE 15 days: completed in year 2]

Counterparts: MWI, WDMU, WAJ, PMU/regulator, utilities (Miyahuna, AWC, NGWA), ASEZA.

Scope of Work: Develop KPIs for WDM. Design and develop regulatory mechanisms and incentives to implement WDM.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Develop KPIs for WDM ¹¹	WDM KPIs	August 2007	December 2009
Develop regulatory incentives to implement WDM	Regulatory incentives	July 2009	Year 4 ¹²

Counterpart Inputs: PMU/regulator will work with the utilities and WDMU to develop performance indicators.

Challenges/Issues: Inconsistency of data from water utilities.

Mitigation: Establish and maintain good communication with counterparts

Logistics: Coordination of meetings and workshops.

¹¹ Draft list was prepared in May 2009 and discussed with stakeholders and WDMU. KPIs list will be finalized upon completion of Water Efficiency Use plans for the three water utilities.

¹² Completion of this task is related to the completion of the Code and further development of the Sector Water Law.

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

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

Subtask 1.5.2: **Assist utilities in establishing WDM functions**

Task Leader: Louis Qaqish

LTTA: Mohamed Chebaane
Hala Dahlan
Nour Esah

STTA [LOE]: A& N Company (Water Conservation Plan Specialist) [Total LOE 72 days: 32 completed in year 2, 40 allocated for year 3]
Russel Horner [Total LOE 14 days: allocated for year 3]

Counterparts: MWI, WDMU, WAJ, Water Utilities (Miyahuna, AWC, NGWA), US Water utilities.

Scope of Work: Work with utilities to build their respective WDM functions in their strategic business/master plans. Activities within this task will be defined with utilities and implementation of actions will be tracked.

Assist utilities in building alliances with US utilities to share experience in the institutional and operational aspects of WDM.

Train utilities on water audits and code enforcement mechanisms.

Develop a leak detection program and support utilities in its implementation.

Review existing communication tools and if needed develop and implement additional tools for communicating water efficient measures to consumers.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Identify DCA and GDA deals ¹³			
Developing tools for communicating with customers	Training sessions on communication tools developed	April 2009	Completed in June 2009 as part of the public information BMP guide training
Train utilities in water audit and code enforcement implementation ¹⁴	Training sessions delivered	October 2008	Year 4

¹³ This is covered in Task 2.7

¹⁴ IDARA provided on the job and formal training on residential audits/end use metering and IC audits/end use analysis to utilities in October-November 2008 (see Task 1.7).

Develop cooperative alliances between Jordanians and U.S. utilities	None	December 2008	Year 4
Develop leak detection program ¹⁵	Leak detection program developed	March 2009	April 2010
Train utilities on leak detection program ¹⁵	Training sessions delivered	April 2009	April 2010
Provide TA to utilities to identify priority consumers and suitable incentives ¹⁶	None	April 2009	August 2010
Refine water-use efficiency plans ¹⁷	Water use efficiency plans	April 2009	Year 4
Assist utilities to conduct regular analysis of water consumption patterns ¹⁸	None	November 2008	Year 4

Counterpart Inputs: Provide information related to existing or to-be-developed master plans. Assign counterparts in implementation of functions. Cooperate in establishing linkages with US utilities.

Challenges/Issues: Difficulties in accepting new methodologies for development of master/business plans that embed WDM.

Mitigation: Include master planning as part of change management activity.

Logistics: Possible video conferencing with US water utilities.

¹⁵Utilities do not have the mandate to do post-meter work. IDARA will continue discussion with utilities about this issue

¹⁶ Included in water use efficiency plans

¹⁷ IDARA is developing full- fledged water Use efficiency plans for each utility, which is beyond refining strategic business/master plans.

¹⁸ This milestone is completed for AWC and underway for Miyahuna and NGWA

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: Louis Qaqish

LTTA: Mohamed Chebaane
Mustafa Nasereddin
Lara Shahin

STTA [LOE]: Russell Horner [Total LOE 14 days: for year 3]
Tareq Tarawneh, IDRC [Total LOE 35: for year 3&4]

Counterparts: MWI, WAJ, WDMU, utilities, Royal Water Committee (RWC) private companies and/or NGOs, Chamber of Industry and Chamber of Commerce.

Scope of Work: Assist and build the capacity of at least 2 private companies in providing WDM services including conducting commercial audits and end use analysis and related companion training program on cost effectiveness analysis of water efficiency measures that can be implemented.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Invite private companies, including women owned businesses to a workshop to explain the potential business opportunities in water efficiency products and services	Workshop held	October 2008	Completed in October 2008
Assist at least two private sector companies in providing WDM services including conducting commercial audits, end use analysis (Task 1.4) and related cost effectiveness analysis	Training and technical assistance provided to at least two companies in marketing and providing WDM services	October 2008	December 2010
Assess barriers and opportunities to participation in water-efficient markets	Assessment report	April 2010	Sept 2010

Counterpart Inputs: Assist in providing training.

Challenges/Issues: The market for WDM services is currently nonexistent in Jordan except when donor funding is available.

Mitigation: Link private sector firms to WDM services needed by utilities and large water consumers who could provide funding for these services.

Logistics:

Coordination of meetings and workshop with private sector firms to encourage them to offer WDM services.

ACTIVITY 1: **Institutional Capacity for Water Demand Management**
TASK 1.6.1: **Develop BMP guides on conservation of nonagricultural water**

Task Leader: Mustafa Nasereddin

LTTA: Hala Dahlan
 Louis Qaqish
 Noor Esoh
 Lara Zureikat
 Dalia Al Hussein
 Lara Shahin

STTA [LOE]: Bill Hoffman [Total LOE 75 days: 15 completed in year 2, 60 days for year 3]
 Prisma [Total LOE 77 days: 57 days completed in year 2, 20 days allocated for year 3]
 Hind Hussein [Total LOE 35 days: completed in year 2]

Counterparts: WDMU, RWC, BMP Task Force, utilities, municipalities, trade associations

Scope of Work: Produce BMP Guides for residences, hotels, offices, parks, public information, and hospitals based on data obtained during the end use analysis. The implementation of the BMP is covered under Task 1.7. A brochure of best practices will be developed for residential customers.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Establish BMP Task Force	BMP Task Force established	July 2007	Completed in September 2007
Present BMPs to Stakeholders at a workshop and incorporate their feedback	None	October 2008	Completed in October 2008
Draft 6 BMP Guidelines	Draft Guidelines of 6 BMPs presented to BMP task force	September 2007	Completed in March 2009
Produce Park BMP Implementation Guide	Complete BMP Guide ¹⁹	November 2008	Completed in June 2009
Produce Public Information BMP Implementation Guide	Complete BMP Guide	November 2008	December 2009
Produce Hospital BMP Implementation Guide	Complete BMP Guide	November 2008	April 2010 ²⁰

¹⁹ All BMP guides will be printed and disseminated in December 2010.
²⁰Due to the time frame to get sufficient data from IC audit reports and residential data logging and baseline survey; BMP guides will not be completed as scheduled in Year 2 work plan; therefore, finish date is rescheduled to when the data will be available.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Produce Hotel BMP Implementation Guide	Complete BMP Guide	April 2009	June 2010
Produce Office BMP Implementation Guide	Complete BMP Guide	April 2009	August 2010
Produce Residential BMP Implementation Guide	Complete BMP Guide	October 2009	September 2010

Counterpart Inputs: BMP Task Force and stakeholders review each BMP.

Challenges/Issues: Guides need the input from the end use analysis before being drafted.

Mitigation: Both residential and commercial end use analysis will be completed before guides are developed since useful information will be gathered during the end use analysis that will improve the BMP guides.

Logistics: Arranging for meetings and workshops.

ACTIVITY 1:

Institutional Capacity for Water Demand Management

TASK 1.6.2:

Develop BMP guide for high-rise buildings and high-density residential development

COMPLETED²¹

²¹ The final HRHD BMP guide has been approved by the HRHD committee and is awaiting printing and translation to Arabic

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

TASK 1.7: **Provide training and capacity building to promote water demand management**

Task Leader: Hala Dahlan

LTTA: Mohamed Chebaane
Lara Shahin

STTA [LOE]: JUST [Total LOE 40 days: allocated for year 3]
Mary Ann Dickinson [Total LOE 14 days: completed in year 2]

Counterparts: 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 RWC.

Scope of Work: Conduct training workshops to support instituting of water demand management for the three utilities in Amman, Aqaba, and the Northern Governorates, and the private sector.

In year three of the project, formal training will be provided to WDMU and utilities staff by JUST based on the curriculum developed by WEPIA in addition to training focused on skills related to the implementation of water efficiency plans, implementation of best management practices, adopting the new plumbing code for Jordan, and the establishment of a “Master Plumber” certification in Jordan.

Milestone²²	Deliverable	Start Date	Finish/ Deliverable Due
Conduct training workshops on implementing BMPs in three utility service areas	One workshop	November 2008	Completed in November 2008
Change management workshop for AWC	Workshop	November 2008	Completed in November 2008
Training on WDM Strategy and policies for decision makers ²³	Training course	January 2009	Completed in January 2009
Training on WDM for technical staff from WDMU, utilities and the private sector ²⁴	Training course	January 2009	Completed in January 2009
Learning by doing on Residential, Commercial, and	None	October 2008	Completed

²² There are no significant changes on this task in comparison with first year work plan. Tasks were rearranged with an addition of the WDM training course

²³ This activity was not in year 1 workplan. It represents the WDM training course recommended by IDARA. It is added to build capacities in audit and end-use in support of task 1.4. No other major changes have been taken place

²⁴ This activity was not in year 1 workplan. It represents the WDM training course recommended by IDARA. It is added to build capacities in audit and end-use in support of task 1.4.

Milestone ²²	Deliverable	Start Date	Finish/ Deliverable Due
hospital Water Audit (task 1.4)			in April 2009
Training courses on the use of Demand forecasting tools developed by IDARA	Training course for counterparts and utilities delivered	May 2009	Completed for AWC in June 2009 and September 2009 for WDMU, Miyahuna, and NGWA
Conduct training on national or utility-based economic incentive programs for WDM (under task 1.5.2)	Two Training courses	April 2009	Completed in May 2009 ²⁵
Training on BMP guide for high-rise and high-density residential developments	Workshop	May 2009	Completed in May 2009
Drought workshop	Workshop	January 2009	Completed in January 2009
Demonstration on toilet testing	Workshop	March 2009	Completed in March 2009
Training of implementing agency staff and plumbers from Vocational Training Corporation on the retrofit program	Workshop	July 2009	Completed in July 2009
Presentation of labeling survey findings	Workshop	April 2009	Completed in April 2009
Training on xeriscaping principles- Jerash, Ajloun, Al-Mafraq, Aqaba, Muan, Balqa, and Madaba	Training courses	October 2008	Completed in February 2009
Link BMPs to applied research opportunities at JUST university through the grant pool. Under task 1.4	None	July 2009	Year 4
Conduct training on plumbing code enforcement if enforcement plan has been funded by USAID (Under task 2.2.1)	Two Training courses	September 2010	Year 4
Conduct in coordination with JUST University a WDM technical training for WDMU and utility staff	One workshop	January 2010	June 2010

²⁵ This deliverable is covered under the training of water-use efficiency tracking tools that provided extensive economic and cost-benefit analysis for each of the utilities' water use efficiency programs. Both economic and cost-benefit analysis provided justifications and incentives for implementation of the programs.

Milestone ²²	Deliverable	Start Date	Finish/ Deliverable Due
Conduct TOT training course for potential VTC Instructors "Master Plumbers Certification"	One Workshop	March 2010	August 2010
Conduct "Master Plumbers" training for plumbers	training conducted	August 2010	Year 4
Training on various BMP guides	Training workshops	June 2009	Year 4

Counterpart Inputs: During year two and based on the water efficiency plans drafted by IDARA, utilities have agreed to establish WDM units and assign staff to carry out tasks related to WDM. IDARA will focus on developing the capacity of those staff in BMP implementation, WDM tasks, and development of water efficiency plans. IDARA will also need support from the Ministry of Public Works and Housing with regards to the training on the new plumbing code. The Later will have to coordinate this activity with all its stakeholders and other involved entities. The role of the ETVET Council, Ministry of Labor and VTC will be vital in the development of the "Master Plumber" certification and training activities.

Challenges/Issues: Timely input and commitment from all stakeholders to carry out the above training courses.

Mitigation: Establish and maintain good communication with counterparts. Empower the WDMU role as the training resource center. 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: Nour Esoh

LTTA: Louis Qaqish
Hala Dahlan

STTA [LOE]: Mary Ann Dickinson [Total LOE 6 days: completed in year 2]

Counterparts: WDMU, WAJ, Utilities (Miyahuna, AWC, NGWA), MWI planning directorate, NWMP, ASEZA, GAM, JVA.

Scope of Work: IDARA will prepare a report that identifies drought response principles and drought response guidelines for Jordan based on the data provided from the MWI. The report would include tips for demand management under drought conditions and the messages to be sent out to the public.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Identify drought response principles and drought response guidelines ²⁶	Guidelines distributed	June 2008	February 2010
Promote best practice drought response guidelines	None	March 2009	Year 4

Counterpart Inputs: Water Utilities and stakeholders to contribute in the input for the guidelines and the messages to be sent to the public. Identification of the drought triggers for Jordan.

Challenges/Issues: Definition of drought triggers

Mitigation: Establish and maintain good communication with counterparts.

Logistics: Meetings and workshops.

²⁶ This activity witnessed delay due to the fact that it is a difficult to streamline this activity given that MWI is used to emergency drought plans. The consultant is taking this into consideration to prepare practical guidelines that help MWI to develop a rational drought plan.

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: Hala Dahlan

LTTA: Mohamed Chebaane
Tony Gregg
Lara Zureikat
Lara Shahin

STTA [LOE]: NA

Counterparts: WDMU, WAJ, Utilities (Miyahuna, AWC, NGWA), King Abdullah II Center for Excellence (KACE), and JUST.

Scope of Work: IDARA will assist the King Abdullah II Center for Excellence in designing, administrating and integrating water efficiency sub criteria in the public and private categories in King Abdullah II Award for Excellence. By doing this, IDARA will draw attention to the creative contributions of Jordanians from the public and private sector institutions (entities) in water efficiency management, design and function, and action.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Form a task force to develop the water efficiency sub criteria to include in KACE award for the private and public sectors	Task force formed	October 2008	Completed in November 2008
Develop in coordination with KACE team water efficiency sub-criteria questions, case studies, and WDM glossary for the public and private KACE awards.	Draft questions, and excellence indicators, evaluation, and scoring developed.	November 2008	Completed in March 2009
Develop an action plan identifying potential trainers, and other resources needed in cooperation with KACE team ²⁷	Action plans developed Trainers & evaluators identified Training material selected Awareness workshops scheduled	January 2009	January 2009

²⁷ The tasks listed under this activity and in bold font were based on the original plan developed in coordination with KACE. Then, KACE agreed with USAID, MWI and IDARA to complete all necessary work related to the integration of water efficiency sub-criteria in the award; and later get the approval of the Board of trustees before proceeding with further tasks. IDARA has no influence at pushing the agenda.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
	Training courses scheduled		
Announce winners of previous cycle (5th) & Introduction of water efficiency sub criteria in the new 6th KACE Cycle.	None	March 2009	March 2009
Contact trainers to develop & deliver water efficiency	None	March 2009	March 2009
Review & modify of the King Abdullah II Award for Excellence criteria & sub criteria to include water efficiency	Inclusion of water efficiency in award sub criteria	April 2009	April 2009
Launch KACE 6th cycle	None	May 2009	May 2009
Conduct awareness workshops for applicants to introduce the award and its sub criteria	Awareness workshops conducted	June 2009	September 2009
Train KACE trainers on WDM measures & techniques ²⁸	Training conducted	January 2010	March 2010
Provide KACE with a grant for KACE booklet printing and WDM glossary ²⁹ .	Grant Awarded	December 2009	January 2010

Counterpart Inputs: Final approval from KACE Board of Trustees to include water efficiency into the KACE Award for the private and public sectors.

Challenges/Issues: Timely coordination with KACE.

Mitigation: High level support by the Royal Water Committee.

Logistics: Close follow up with KACE.

²⁸ Timeline dependent on if and when KACE approves the new criteria.

ACTIVITY 2: Enabling Institutional and Legal Environment

TASK 2.1: **Assist in creating a stakeholder-driven WDM program**

Task Leader: Hala Dahlan

LTTA: Mohamed Chebaane
Lara Shahin

STTA [LOE]: Basel Barghouthi [Total LOE 12 days: allocated for year 2]

Counterparts: Utilities, Royal Water Committee (RWC), NGOs, JUST, JU, consumer NGOs, trade organizations, private sector firms, government ministries

Scope of Work: Once a revised Water Law has been adopted including authority to implement the WDM policy, IDARA will develop strategies and interventions to encourage stakeholders to adopt the WDM policy and implement the related WDM functions listed in the Strategic Plan for the WDM Unit.

Once the National Water Strategy has been adopted, hold workshops to encourage the full range of stakeholders to adopt and implement the WDM sections of the strategy.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Conduct meetings to introduce the approved WDM Policy (link with subtask 1.2.3)	Meetings conducted	October 2008	Completed in November 2008
Provide support for development and implementation of National Water Strategy (as needed)	None	May 2008	Year 4
Form task force and organize series of workshops to develop action plans for strategies and interventions including public education campaigns that conform to the approved WDM policy (link with subtask 1.2.3) ²⁹	Task force formed Action plans developed	December 2008	Year 4
Conduct survey of internal & external stakeholder organizations to assess progress made on policy implementation	Survey report	Year 4	Year 4

Counterpart Inputs: The WDMU unit will have a significant role in this activity.

²⁹ IDARA will support the institutions in the development of the action plans and provide mentoring for the implementation

Challenges/Issues: Coordination between the work that is currently implemented by MWI on the development of action plans for “Water for Life” strategy and the action plans that will be developed under this activity. In addition, adopting WDM action plans as one of stakeholders’ priority issues will be a challenge that has to be addressed by high level support. .

Mitigation: High level support technical assistance, regular communications and follow up as well as recognition for those stakeholders who do participate.

Logistics: Coordination for workshops and meetings

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

TASK 2.2.1: **Develop a national standardized plumbing code**

Task Leader: Mustafa Nasereddin

LTTA: Louis Qaqish
Lana Naber
Noor Esoh

STTA [LOE]: IAPMO [Total LOE 24 days: 12 for year 3 and 12 for Year 4]
Plumbing Code Trainer (CCN-TBD) [Total LOE 50 days: 25 for year 3, 25 for year 4]

Counterparts: MPWH, JNBC, RSS, VTC, MOL, MWI, JISM, ASEZA, AWC, NGWA, Miyahuna, JEA, Universities, JCCA, municipal officials and private sector contractors and designers.

Scope of Work: Review the Jordanian plumbing codes. Work with counter parts and stakeholders to develop adopt a new code. Work with MPWH and RSS to draft and develop a new national plumbing code (based on the Uniform Plumbing Code). Carry out training on the new code for relevant stakeholders and develop a training manual for the new plumbing code.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Establish Plumbing Task Force	Plumbing Task Force established	July 2007	Completed in July 2007
Review current Jordanian plumbing codes	None	June 2007	Completed in January 2008
Sign agreement with MPWH and RSS to develop a new plumbing code.	Agreement signed	July 2008	Completed in July 2008
Work with JNBC to establish a committee to review the new drafted code	Plumbing code review committee established	September 2008	Completed in December 2008
Draft a new plumbing code	New drafted Code	July 2007 ³⁰	December 2009
Review the drafted plumbing code by the plumbing code review committee	Draft code reviewed and finalized	November 2008	June 2010
Design and carry out training on the new code to the construction industry,	Training & Awareness sessions on the new code.	July 2010	September 2010

³⁰ IDARA worked with JNBC's technical committee to review the existing Jordanian plumbing codes and reach a consensus to adopt the UPC in Jordan. At first, the technical committee was reluctant to adopt a totally new plumbing code for Jordan and was more into modifying the existing two codes. The Committee has taken 7 months (July 2007-Jan 2008) to review the current Jordanian codes and the UPC and then make a decision to adopt the UPC as the main reference for the new code.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
plumbing trade, municipalities, and the public			
Develop a training manual for the plumbing code ³¹	Training manual	January 2010	Year 4
Coordinate outreach efforts with the MPWH	None	July 2010	Year 4
Approve and adopt the new plumbing code	Plumbing code adopted	Year 4	Year 4

Counterpart Inputs: Counterparts (mainly JNBC and RSS) to assist in developing a new plumbing code and building consensus for adoption.

Challenges/Issues: Timely progress on drafting and adopting the code.

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

Logistics: Close follow up and coordination with MPWH, RSS and IAPMO during the drafting and adoption stage.

³¹ The master plumber-training manual can be completed before the plumbing code training manual given the fact given that both the Jordanian Code and master plumbers curriculum are technically supported by IAPMO and are based on the UPC. IAPMO will ensure that all the “Master Plumber” training topics are tailored to the modified code.

ACTIVITY 2:

Enabling Institutional and Legal Environment

TASK 2.2.2:

Draft a report that recommends to the Ministry of Water and Irrigation the specifications on water that need to be incorporated into a potential High-rise Building Code

COMPLETED

ACTIVITY 2: **Enabling Institutional and Legal Environment**
TASK 2.3: **Implement a plumbing materials certification program**

Task Leader: Lana Naber

LTTA: Mohamed Chebaane

STTA [LOE]: Bill Gauley [Total LOE 42 days: 22 completed in year 2, 20 allocated for year 3&4]

Counterparts: JEA, JISM, RSS, Customs Department

Scope of Work: Adopt new technical standards for water using appliances and plumbing products for Jordan. Encourage JISM technical committee members, related stakeholders and JISM board to issue standards as technical regulation. Provide RSS with a plan for a testing facility for water using products.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Identify rules and codes relating to the manufacture and import of plumbing and appliance equipment	Rules and codes identified	July 2007	Completed in August 2008
Identify international water efficiency specifications/regulations, testing procedures and internationally recognized labs	Identification of water efficiency specification/regulations, testing procedures, and international recognized labs	July 2007	Completed in August 2008
Work with JISM to draft revised technical standards for flow rate regulators and toilets in Jordan.	Final version of amended standards	July 2007	Completed in December 2008
Implement enforcement mechanism to eliminate noncompliant products from the market	Enforcement mechanism implemented ³²	April 2008	Completed in August 2008
Work with JISM to revise technical standards for water using appliances in Jordan	Final version of amended standards	July 2007	December 2010 ³³
Meet with JISM Board and the related stakeholders to encourage them to issue technical standards as	none	July 2008	Ongoing

³² Implementation of the enforcement mechanism was proposed to JISM in August 2008 through a letter from MWI requesting that water using product specification be considered vital to national security. This reason will allow JISM to issue technical standards for these products as technical regulations which would then be enforced by JISM. While IDARA will pursue implementation of this recommended enforcement mechanism, implementation will depend on a policy decision by the Government of Jordan

³³ The JISM process is lengthy and JISM does not have the capacity to adopt in a short time frame the long list of new technical standards proposed by IDARA.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
technical regulations			
Work on technical specifications and recommended testing protocols for water using products ³⁴	Report	November 2008	December 2009 ³⁵
Build capacity of the accredited testing laboratories to test locally manufactured products	Support provided	November 2008	Year 4 ³⁶
Support local plumbing and appliance manufacturers to replace manufacture of inefficient products with efficient products	Report on barriers to eliminating inefficient products and recommendations made to local manufactures to overcome these barriers.	November 2008	Year 4
Work with JISM to develop any new plumbing product specifications needed in Jordan for the new plumbing code and to revise any existing specifications that do not include a labeling requirement to add a labeling requirement.	List of plumbing technical specifications	January 2009	March 2010 ³⁷
	Support inclusion of the above list in JISM's action plan	April 2009	March 2011 ³⁸

Counterpart Inputs: JISM Technical Committee to review and recommend to the higher technical committee of JISM to adopt the standards. Feedback from local manufacturers on their ability to transition to production of water efficient products

Challenges/Issues: The JISM process takes a lot more time than originally anticipated. In addition, there are separate committees needed for each type of product. Due to staff leaving from JISM, they have so far been unable to form the technical committee that will review appliances. There is a reluctance of stakeholders on the technical committees to adopt new water efficiency

³⁴ This deliverable includes a list of all the technical specifications for plumbing products, materials and appliances

³⁵ Work on this task was delayed due to the delay of the approval of the waiver request to hire Veritec

³⁶ Report about the development of a plumbing fixture and appliance test lab was submitted in September 2009. Building the capacity of the RSS staff will start after the construction of the lab.

³⁷ The issuance of the list is pending the finalization of list of standards (Chapter 14 of the IAPMO Plumbing Code) by the plumbing code technical committee. Official letter is sent to JISM to conduct an agreement with ANSI.

³⁸ The JISM process is lengthy and JISM does not have the capacity to adopt in a short time frame the long list of amended and new technical standards that will be required as part of the new Jordanian plumbing code.

standards which also adds to the timeframe. The dates have been adjusted to reflect a more realistic schedule.

Mitigation: Provide information on the value of adopting new standards and examples from other countries.

Logistics: Consistent attendance at all JISM technical committee meetings by staff of WDMU and IDARA.

- ACTIVITY 2: Enabling Institutional and Legal Environment**
- TASK 2.4:** **Establish a “master plumbers” vocational training program at the VTC**
- Task Leader:** Mustafa Nasereddin
- LTTA:** Hala Dahlan
- STTA [LOE]:** Baha Consultant [Total LOE 72 days: completed in year 2]
IAPMO [Total LOE 148 days: allocated for year 3]

Yaqoob Al-Qaisia [Total LOE 95 days: 15 days completed in year 2, 40 for year 3 & 40 for year 4]
- Counterparts:** VTC, MOL, ETVET/CAQA, NET, WDMU, JEA, UNRWA, plumbing supply stores, JISM, JNBC, JCCA, GAM, water utilities (AWC, Miyahuna and NGWA), and RSS.
- Scope of Work:**
- Subtask 1:** **Provide technical assistance to the VTC to upgrade its plumbing facility in Amman**
- COMPLETED
- Subtask 2:** **Development of Master Plumbers Program**
- Develop a certified master plumbing program in coordination with the TVET council at MOL. Oversee candidate selection, train master plumbers.
- Identify plumbers (with 8-10 years of experience) for the training sessions, target construction companies and developers that are willing to collaborate with MOL, and combine training with on-the-job experience.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Upgrade of VTC			
Assess capability of existing VTC and other training facilities	None	June 2007	Completed in December 2007
Prepare tender documents and supervise the contractor.	Tender documents. Progress reports.	July 2008	Completed in March 2009
Upgrade VTCs plumbing lab (by the VTC contractor)	Plumbing lab upgraded	November 2007	Completed in August 2009 ³⁹
Master plumbers program			
Establish task force committee within the TVET	Task force established	September 2008	Completed in April 2009

³⁹ Renovation works were completed in March 2009 as scheduled in Year 2 work plan; however, furniture and plumbing equipment were delivered to the workshop in August 2009 due to slow tendering process at VTC.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
council			
Develop the “master plumbers” program	Curriculum developed	July 2007	April 2010 ⁴⁰
Establish a certification framework under the ETVET Council	Certification framework developed and adopted by the ETVET Council	October 2008	March 2010
Identify training candidates	None	January 2009	July 2010
Training of VTC trainers ⁴¹	Trainers trained	October 2009	August 2010
Training and certification for “master plumbers” program begins in Amman, Aqaba and Northern governorates	Training / Certification	December 2009	Year 4
Master plumbers “program recognized by stakeholders (MPWH, JCCA, JEA, GAM, municipalities, MOL, VTC)	Progress Report	September 2010	Year 4

Counterpart Inputs: The VTC to facilitate the renovated plumbing workshop and make it available for training. VTC should provide the qualified trainers to get trained by IAPMO trainer. E-TVET/CAQA and MOL to work with IAPMO on developing the certification process for master plumbers.

Challenges/Issues: Compressed timeline for certification then training delivery. Cooperation of VTC and E-TVET/CAQA is critical.

Mitigation: Establish and maintain good communication with counterparts.

Logistics: Training workshops

⁴⁰ The start of this activity had to wait until the establishment of the CAQA under the E-TVET. With the recent establishment of the CACA and the upcoming signature of the MOU between E-TVET, VTC, and IDRA in October 2009 this task is expected to start in November 2009.

⁴¹ Trainers would be from VTC and other organizations.

ACTIVITY 2:

Enabling Institutional and Legal Environment

TASK 2.5:

Prepare a work plan to implement a labeling program

COMPLETED

<u>ACTIVITY 2:</u>	Enabling Institutional and Legal Environment
TASK 2.6:	<u>Identify WDM enforcement mechanisms and recommend the most feasible</u>
Task Leader:	Louis Qaqish
LTTA:	Mohamed Chebaane Hala Dahlan Mustafa Nasereddin Lara Shahin
STTA [LOE]:	Basel Barghouthi [Total LOE 35 days: 21 for year 3, 14 for year 4]
Counterparts:	WDMU, WAJ, PMU, Utilities (Miyahuna, AWC, NGWA), Ministry of Public Works and Housing (MPWH), Ministry of Industry and Trade (MIT), GAM, JISM, ASEZA, and focus groups of commercial customers or residential customers.
Scope of Work:	Based on the WDM Policy legal assessment report, the updated Water and Sanitation Plumbing Code and other development related to Water Law, and with the support of RWC, assess and profile water users understanding of water regulations in Greater Amman, Aqaba and the Northern Governorate. The assessment will be done through conducting workshops with participation of commercial operators, water users in the three utility areas. The findings of the assessment will be the base of further dialogue with the RWC, MWI, WAJ, WDMU, PMU, utilities, GAM, MPWH, MIT, JISM, ASEZA as well as other key stakeholders to establish the framework for enforcement recommendations. A report including enforcement recommendations as well as incentive-based and punitive compliance approaches will be prepared and distributed for comments.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Identify potential tax incentives to promote WDM technology	Incentives identified	April 2009 ⁴²	Year 4
Assess and profile water users' understanding of water regulations in Greater Amman, Aqaba and Northern Governorate	Focus groups	June 2010	Year 4 ⁴³
Initiate sustained dialogue with key water stakeholders to develop framework for enforcement recommendations	None	July 2010	Year 4 ³⁹
Prepare detailed report on enforcement recommendations and circulate for comment	Report	September 2010	Year 4

Counterpart Inputs: Support for assessment and recommendations.

Challenges/Issues: Difficulties in gathering data about water users opinions about regulations.

Mitigation: Establish and maintain good communication with counterparts.

Logistics: Focus group meetings.

⁴² This milestone has been moved from task 2.7.

⁴³ Based on the legal assessment of WDM completed in October 2008, enforcement mechanisms require the identification of the legal instruments for implementation of the WDM policies for relevant sectors such as industry, tourism, etc. These instruments are part of the action plans developed by relevant institutions in support of task 2.1

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

TASK 2.7: **Develop mechanisms to finance the implementation of WDM projects**

Task Leader: Mohamed Chebaane

LTTA: Hala Dahlan
Lara Shahin

STTA [LOE]: Christopher McGahay [Total LOE 15 days: completed in year 2]
Carlos Abreu [Total LOE 36 days: allocated for year 3]

Counterparts: MWI, WDMU, WAJ, Water Utilities (Miyahuna, AWC, NGWA), potential private sector partners (HSBC, Saraya, Orange, Zain, Coca Cola), JIB, DCA partners, relevant Government entities

Scope of Work: **Combined BMP grant pool and public-private partnerships**

Develop BMP pilot projects and support replication of their results through community-based grants and public-private partnerships. Continue using grants as seed money to cost-share the replication of the pilot programs with private partners through a GDA with utilities or corporate social responsibilities programs between private partners and utilities.

Development Credit Authority (DCA)

Develop concept materials for potential DCA guaranteed with local financial institutions to help private-sector commercial and financial users secure financing to implement WDM-related initiatives.

Conservation tax on large, inefficient users and tax incentives for efficient users.

Recommend various tax incentive schemes to promote WDM technology.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
BMP grant pool program operational	Grants manual approved	July 2007	Completed in March 2008 and approved in July 2008
Grants from CBIGP linked to Activity 3 investigated ⁴⁴	Grant agreement signed with Mercy Corps	July 2007	Completed in April 2008
Establish GDA/PPP to finance implementation of	One PPP established	May 2008	Completed in July 2009

⁴⁴ Three grants have been awarded so far. Two of them are under implementation (RSS and Miyahuna) and one was completed (Mercy Corps)

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
WDM projects			
Implement grant program	Program implemented	May 2008	Year 4
Concept materials for potential DCA activities developed	Concept materials	April 2009	September 2010
Finance implementation of WDM projects	One PPP established	October 2009	September 2010

Counterpart Inputs: Potential public and private partners to respond and support the implementation of WDM projects.

Challenges/Issues: Linking the proposed initiatives with the available grants projects and ensuring that they are consistent with WDM BMPs. Timely coordination and response of counterparts.

Mitigation: Establish and maintain effective communication with counterparts.

Logistics: Coordination of workshops and meetings.

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.

COMPLETED

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

LTTA: NurAlfayez
Joud Khasawneh

STTA [LOE]: Majed Sabarini [Total LOE 40 days: 6 in year 1, 6 in year 2, 18 days allocated for year 3, 10 days allocated for year 4]
Mazen Daqqaq [Total LOE 29 days: 7 in year 1, 7 in year 2, 7 for year 3, and 8 for year 4]

Counterparts: MWI, GAM, MOMA, Municipalities, ASEZA

Scope of Work: After completing the water-wise training program with at least 70 municipalities, IDARA will work with six municipalities in developing water-wise parks. IDARA's technical team will aid agricultural engineers and/or architects at each municipality in designing parks that apply appropriate water efficient solutions. IDARA will work with MOMA to select a list of parks currently being developed under the 'National Program for Greening Municipalities'.

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

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
field trips			February 2009
Identify municipalities for developing 6 park designs	3 Municipalities identified	August 2008	Completed April 2009
	3 municipalities identified	August 2009	December 2009
Determine cost-sharing strategies for park development	Cost-sharing strategies for 3 parks identified	August 2008	October 2009
	Cost-sharing strategies for the other 3 parks identified	June 2010	September 2010
Provide technical assistance to municipal staff in designing 6 designated parks	assistance for 3 municipalities provided	October 2008	Completed August 2009
	assistance for the other 3 municipalities provided	January 2010	June 2010
Provide assistance in maintenance of parks	None	Year 4	Year 4
Monitor maintenance	None	Year 4	Year 4

Counterpart Inputs: GAM to continue providing two staff members to work with IDARA. MOMA to continue assistance in coordinating with municipalities

Challenges/Issues: Implementing satisfactory cost-sharing strategies for park development.

Mitigation: Establish good communication with counterparts.

Logistics: Coordination for technical assistance and park development.

- 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
- LTTA:** Hala Dahlan
Nur Alfayez
Joud Khasawneh
- STTA [LOE]:** Margaret Livingston [Total LOE 33 days: 21 for year 3, 12 for year 4]
- Counterparts:** Jordan University, JUST, Balqaa Applied University, Mu'ta University, Petra University, and German Jordanian 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 Balqaa 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, IDARA would have worked with at least one university to integrate the course into its regular degree programming.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Review courses offered at Agriculture and Engineering Faculties	Report on Water-wise Principles currently offered	June 2008	Completed December 2008
Meet professors from JU, JUST, Petra, and GJU to determine needs	Meetings conducted	January 2009	Completed May 2009
Prepare module for GJU	Module prepared	January 2009	Completed June 2009
Prepare module content for JU	Module prepared	April 2009	October 2009
Prepare content of seminar for JUST	Seminar held	May 2009	June 2010
Prepare module for Petra	Module prepared	September 2009	September 2010
Module integrated into course for JU and Petra	Module integrated	October 2009	February 2010
Expand activities to other universities	None	Year 4	Year 4

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

LTTA: Nur Alfayez

STTA [LOE]: Mazen Daqqaq [Total LOE 30 days: 15 for year 3, 15 for year 4]
Nursery Specialist [Total LOE 6 days: allocated for year 3]

Counterparts: FoEME, private nurseries, GAM, developers

Scope of Work: Identify suitable organizations (public or private), small businesses, or small nurseries interested in specializing in drought tolerant plants. The IDARA team will assist in developing product lines and/or improving the marketing of drought tolerant plants. IDARA will work with large government nurseries in establishing drought-tolerant tree nurseries.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Assess nurseries established by WEPIA	Assessment report	July 2007	Completed in January 2008
Prepare Business plan in conjunction with the WEPIA nursery and determine type and scale of assistance.	Business Plan	June 2008	Completed March 2009
Explore the potential for drought tolerant plants product line with GAM and/or CBOs	Meeting summaries	September 2008	Completed March 2009
Conduct assessments of potential nurseries	Assessment report	September 2008	Completed March 2009
Provide technical assistance to WEPIA nurseries for improving marketing if need is determined	No assistance provided based on business plan.	December 2008	Completed March 2009
Provide technical assistance to new nurseries (FOEME, Ur Garden)	Documentation of technical assessment provided	January 2009	October 2010
Provide technical assistance to large nurseries (GAM, developers)	Documentation of technical assessment provided	October 2009	Year 4

Counterpart Inputs: GAM, developers, and private nurseries to cooperate with project.

Challenges/Issues: Support for GAM tree nursery from upper management. Timely cooperation of FOEME due to budget limitations.

Mitigation: Identifying new enterprises as early as possible.
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

LTTA: Mohamed Chebaane
Joud Khasawneh
Nur Alfayez

STTA [LOE]: NA

Counterparts: MOMA, NGOs, Chamber of Commerce, Chamber of Industry, utilities, GAM, CVDB, Arab Foundation for Sustainable Development, Small Municipalities,

Scope of Work: Identify financing strategies for smaller municipalities to develop and improve public spaces. 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.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Identify financing strategies	Financing strategies identified	April 2009	Completed September 2009
Identify opportunities for public-private partnerships	Two PPPs identified	January 2010	Year 4

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

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

Mitigation: 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 and energy efficient houses in the highland areas.**
- Task Leader:** Lara Zureikat
- LTTA:** Hala Dahlan
Joud Khasawneh
Nur Alfayez
Amani Shaath
- STTA [LOE]:** Majd Musa [Total LOE 15 days: allocated for year 3]
- Counterparts:** MPWH, HUDC, JEA, King Abdullah II Fund for Development, 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, energy and water-efficient house for the highland areas. 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.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Prepare competition logistics and fund raise	Competition brief	October 2008	Completed August 2009
Launch competition	Competition announcement	January 2010	January 2010
Select winning entries	Hold jury	June 2010	June 2010
Explore financing strategies and adoption mechanisms to develop prototype and later mass production	Report on financing strategies and adoption mechanisms.	June 2010	Year 4

- Counterpart Inputs:** Contestants to cooperate in submitting ideas and participate in a timely manner.
- Challenges/Issues:** Adequate number of contestants. Securing an international jury member. Seeking funds from private sector sponsors or NGOs to build prototype.
- Mitigation:** Establish and maintain good communication with counterparts. Contest to be adequately and timely publicized.
- Logistics:** Selection and coordination of judges.

ACTIVITY 3: Demonstrate Selected WDM Initiatives to the Public

TASK 3.3: **Provide plumbing services and plumbing fixtures to rural areas**

Task Leader: Lara Shahin

LTTA: Mustafa Nasereddin

STTA [LOE]: NA

Counterparts: WDMU, Community Based Organizations

Scope of Work: Provide supervision and technical assistance and support for the awarded CBOs in conducting plumbing services, maintenance of plumbing fixtures, and any other needed support to improve water-use efficiency in households in poor rural areas.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Identify the best mechanism to implement the program	Mechanism identified	October 2007	Completed in January 2008
Develop Action plan and TOR to Implement the program through CBIWDM	TOR drafted / agreement drafted	January 2008	Completed in March 2008
Sign agreement and implement the program	Grant Agreement signed	March 2008	Completed in April 2008
Identify potential beneficiaries and conduct field visits	Proposals received / field visits	April 2008	Completed in May 2008
Select beneficiaries and award grants	Awarding Ceremony Advisory Committee MOM	June 2008	Completed in August 2008
CBOs to start implementing their grants.	Grant agreements. Houses retrofitted with new and efficient plumbing fixtures and WSDs	August 2008	Completed
Follow up on implementation	Field visits and follow up	August 2008	Year 4

Counterpart Inputs: Assist IDARA in providing support and follow up on the performance of CBOs.

Challenges/Issues: Ensuring 100% payment of all loans given to beneficiaries.

Mitigation: Frequent follow up.

Logistics: Transportation.

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

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

Task Leader: Lana Naber

LTTA: Mohamed Chebaane
Hala Dahlan

STTA [LOE]: (TBD) [Total LOE 45 days: 45 for year 3&4]
JUST [Total LOE 50 days: 50 for year 3&4]
WMI [TBD]

Counterparts: WDMU, Miyahuna, AWC, NGWA, NGOs

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.

Milestone	Deliverable	Start Date	Finish/ Deliverable Due
Develop pilot implementation strategies for some of the selected BMPs (linked to activity 1).	Concept paper documenting pilot implementation strategies	July 2008	Completed in December 2008
Implement selected BMPs with a utility.	BMPs implemented in pilot areas	August 2008	Year 4
Collect lessons learnt on implementation.	Lessons learnt collected	February 2009	September 2010
Disseminate lessons to other utilities.	Lessons disseminated	September 2010	Year 4

Counterpart Inputs: Cooperation of utilities to implement BMPs in terms of water consumption and indoor leakage data, GIS shapefiles and maps and human resources.

Challenges/Issues: Limited availability of data for proper selection of samples.

Mitigation: Conduct intensive data analysis in coordination with the utilities

Logistics: Procurement of water saving devices.

Work plan Timeline

Work Plan Timeline	Project Year 3											Project Year 4		
	2009			2010								2011		
	Q1			Q2			Q3			Q4		Q1	Q2	
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Activities and Tasks														
Activity 1: Institutional Capacity for Water Demand Management														
Task 1.2: Institute planning, allocation, and monitoring functions at the WDMU														
Subtask 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 within the Ministry and its two authorities														
<i>* Capacity building for implementation of WDM strategic plan</i>													on the job training conducted	
<i>* Conduct Change Management Workshops for NGWA & Miyahuna to develop and implement WUE plans</i>						Workshops conducted								
<i>* Based on above workshops, meet with change agents to develop strategies to overcome obstacles and challenges to institute WDM</i>										Meetings conducted				
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														
<i>* Work with US utilities and organizations for potential twinning or alliances and for information sharing.</i>													One MOU developed	
<i>* Conduct meetings with task forces and stakeholders to develop and present action plans</i>										Action Plans developed and presented				
<i>* Implement action plans</i>													WDM activities conducted	
Subtask 1.2.4: Ensure that demand and allocations data developed by units within the Ministry are linked to the National Water Master Plan														
<i>* Develop and implement procedures for improved collection of water demand and water allocation data</i>													Procedures -WDM collection & allocation of data	
<i>* Provide TA to evaluate the cost effectiveness of selected BMPs</i>												Cost effectiveness of BMPs analyzed		
Subtask 1.2.5: Design and build appropriate databases under WDMU as integral components of the Water Information System deployed at														
<i>* Provide TA to streamline WDM data collection and data management</i>						WDM Database Ass.								
<i>* Design a comprehensive database</i>						Database is designed								
<i>* Integrate GIS technology into databases</i>								GIS into Database						
<i>* Present findings of WDM database needs assessment to stakeholders</i>										Model of Cooperation for database				
<i>* Develop and test the database</i>										Test database				
<i>* Train Counterparts and utilities on new WDM data collection & management model</i>												Training		
Task 1.3: Strengthen the MWI Planning Directorate by establishing a national water use information program														
<i>* Implement data collection, management, and analysis:</i>													water use Information Prog.	

Work Plan Timeline	Project Year 3											Project Year 4		
	2009			2010								2011		
	Q1			Q2		Q3			Q4			Q1	Q2	
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Task 1.4: Perform end-use analyses														
<i>* Conduct end-use analyses for commercial consumer users</i>			Report on End Use Analysis Learning by doing											
<i>* Complete end-use analysis for representative samples of various categories</i>										Report on end-use analysis				
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														
<i>* Develop KPIs for WDM</i>			WDM KPIs											
<i>* Develop regulatory incentives to implement WDM</i>													Regulatory incentives	
Subtask 1.5.2: Assist the utilities in establishing WDM functions														
<i>* Train utilities in water audit and code enforcement implementation</i>													Training	
<i>* Develop cooperative alliances between Jordanians and U.S. utilities</i>														
<i>* Develop leak detection program</i>									Leak detection Prog. Developed					
<i>* Train utilities on leak detection program</i>									Training sessions delivered					
<i>* Provide TA to utilities to identify priority consumers and suitable incentives</i>														
<i>* Refine water use efficiency plans</i>													Water-use efficiency plans	
<i>* Assist utilities to conduct regular analysis of water consumption patterns</i>														
Subtask 1.5.3: Assist the private sector in each utility area to establish WDM functions and services														
<i>* Assist two private sector companies in providing WDM services, conducting commercial audits, end use analysis & related cost effectiveness analysis</i>													Training & technical assistance providing WDM services	
<i>* Assess barriers and opportunities to participation in water-efficient markets</i>												Assessment Report		
Task 1.6.1: Develop BMP guides on conservation of nonagricultural water														
<i>* Produce Public Information BMP Implementation Guide</i>			Public Information BMP Guide											
<i>* Produce Hospital BMP Implementation Guide</i>								Hospital BMP Guide						
<i>* Produce Hotel BMP Implementation Guide</i>										Hotel BMP Guide				
<i>* Produce Office BMP Implementation Guide</i>											Office BMP Guide			
<i>* Produce Residential BMP Implementation Guide</i>												Residential BMP Guide		

Work Plan Timeline	Project Year 3											Project Year 4		
	2009			2010								2011		
	Q1			Q2		Q3			Q4			Q1	Q2	
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Task 1.7: Provide training and capacity building to promote water demand management														
* Link BMPs to applied research opportunities at JUST university through the grant pool. Under task 1.4														
* Conduct training on plumbing code enforcement if enforcement plan has been funded by USAID (Under task 2.2.1)													Two Training courses	
* Conduct in coordination with JUST University a WDM technical training for WDMU and utility staff								One workshop						
* Conduct TOT training course for potential VTC Instructors "Master Plumbers Certification"										One workshop				
* Conduct "Master Plumbers" training for plumbers													Training conducted	
* Training on various BMP guides	Training Conducted													
Task 1.8: Introduce and promote drought response principles in the water community														
* Identify drought response principles and drought response guidelines					Guidelines distributed									
* Promote best practice drought response guidelines														
Task 1.9: Design, administer, and institutionalize a yearly event to recognize individuals, institutions, and industries that help advance														
* Train KACE trainers on WDM measures & techniques						Training conducted								
* Provide KACE with a grant for KACE booklet printing and WDM glossary					Grant awarded									
Activity 2: Enabling Institutional and Legal Environment														
Task 2.1: Assist in creating a stakeholder-driven WDM policy program														
* Provide support for development & implementation of National Water Strategy (as needed)														
* Form task force, organize series of workshops to develop action plans for strategies & interventions including public education campaigns that conform to the approved WDM policy (link with subtask 1.2.3)													Task force formed	
* Conduct survey of internal & external stakeholder organizations to assess progress made on policy implementation													Action plans developed	
													Survey report	
Task 2.2.1: Develop a national standardized plumbing code														
* Draft a new plumbing code					New drafted Code									
* Review the drafted plumbing code by the plumbing code review committee										Draft code reviewed & finalized				
* Design & carry out training on the new code to the construction industry, plumbing trade, municipalities, and the public													Training & Awareness sessions on the new code	
* Develop a training manual for the plumbing code													Training manual	
* Coordinate outreach efforts with the MPWH														
* Approve and adopt the new plumbing code													Plumbing code adopted	

Work Plan Timeline	Project Year 3											Project Year 4		
	2009			2010								2011		
	Q1			Q2		Q3			Q4			Q1	Q2	
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Task 2.3: Implement a plumbing materials certification program														
* Work with JISM to revise technical standards for water using appliances in Jordan														Final version of amended standards
* Meet with JISM Board & the related stakeholders to encourage them to issue technical standards as technical regulations														
* Work on technical specifications and recommended testing protocols for water using products			Report											
* Build capacity of the accredited testing laboratories to test locally manufactured products														Support Provided
* Support local plumbing and appliance manufacturers to replace manufacture of inefficient products with efficient products														
* Work with JISM to develop any new plumbing product specifications needed in Jordan for the new plumbing code and to revise any existing specifications that do not include a labeling requirement to add a labeling requirement.						List of plumbing technical specifications								Support inclusion of the above list in JISM's action plan
Task 2.4: Establish a "master plumbers" vocational training program at the VTC														
* Develop the "master plumbers" program							Curriculum developed							
* Establish a certification framework under the ETVET Council						Certification framework developed and adopted								
* Identify training candidates														
* Training of VTC trainers											Trainers trained			
* Training and certification for "master plumbers" program begins in Amman, Aqaba and Northern governorates														Training -Certification
* Master plumbers "program recognized by stakeholders (MPWH, JCCA, JEA, GAM, municipalities, MOL, VTC)														Progress Report
Task 2.6: Identify WDM enforcement mechanisms and recommend the most feasible														
* Identify potential tax incentives to promote WDM technology														Incentives identified
* Assess and profile water users' understanding of water regulations in Greater Amman, Aqaba and Northern Governorate														Focus groups
* Initiate sustained dialogue with key water stakeholders to develop framework for enforcement recommendations														
* Prepare detailed report on enforcement recommendations and circulate for comment														Report
Task 2.7: Develop mechanisms to finance the implementation of WDM projects														
* Implement grant program														Program implemented
* Concept materials for potential DCA activities developed													Concept materials	
* Finance implementation of WDM projects													One PPP established	

Work Plan Timeline	Project Year 3											Project Year 4		
	2009			2010				2011						
	Q1			Q2		Q3		Q4		Q1		Q2		
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Activity 3: Demonstrate Selected Water Demand Management 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.														
<i>* Identify municipalities for developing 6 park designs</i>														
			3 municipalities identified											
<i>* Determine cost-sharing strategies for park development</i>														
	Cost-sharing strategies for 3 parks identified											Cost-sharing strategies for the other 3 parks		
<i>* Provide technical assistance to municipal staff in designing 6 designated parks</i>														
								assistance for municipalities provided						
<i>* Provide assistance in maintenance of parks</i>														
<i>* Monitor maintenance</i>														
Subtask 3.1.3: Introduce water-wise landscaping principles in the curriculum of agricultural faculties in at least two universities														
<i>* Prepare module content for JU</i>														
	Module prepared													
<i>* Prepare content of seminar for JUST</i>														
								Seminar held						
<i>* Prepare module for Petra</i>														
												Module prepared		
<i>* Module integrated into course for JU and Petra</i>														
					Module integrated									
<i>* Expand activities to other universities</i>														
Subtask 3.1.4: Expand work with nurseries														
<i>* Provide technical assistance to new nurseries (FOEME, Ur Garden)</i>														
													Documentation of technical assessment provided	
<i>* Provide technical assistance to large nurseries (GAM, developers)</i>														
													Documentation of technical assessment provided	
Subtask 3.1.5: Determine incentives for water-wise landscaping.														
<i>* Identify opportunities for public-private partnerships</i>														
													Two PPPs identified	
Task 3.2: Host a competition for best low-income, water-efficient houses in the highland and Jordan Valley areas.														
<i>* Launch competition</i>														
				Competition announcement										
<i>* Select winning entries</i>														
								Jury held						
<i>* Explore financing strategies and adoption mechanisms to develop prototype and later mass production</i>														
													Report on financing strategies & adoption mechanisms	
Task 3.3: Water Efficiency in Rural Areas														
<i>* Follow up on implementation</i>														
													Field visits and follow up	
Task 3.4: Implement best management practices in pilot areas.														
<i>* Implement selected BMPs with a utility</i>														
													BMPs implemented in pilot areas	
<i>* Collect lessons learnt on implementation</i>														
													Lessons learnt collected	
<i>* Disseminate lessons to other utilities</i>														
													Lessons disseminated	

Monitoring and Evaluation Plan

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Achieved in year 1	Achieved in year 2	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to USAID PMP Indicator
Program Objective-Level: Instituting Water Demand Management in Jordan											
Total number of people trained (Management indicator)	People trained are those who have participated in project training activities.	This will allow the IDARA to monitor how many people have been trained through the project.	Number	Yr 1:195 Yr 2: 550 Yr 3: 200 Yr 4: TBD	Yr 1:549	Yr 2: 614	Gender, type of participant (MWL, utilities, private sector, plumbers, etc.), location, topic of training	Project records	The Chief of Party and Activity Leaders will review project records	Annually	11
Number of beneficiaries (Management indicator)	Beneficiaries are those Jordanian citizens who have been assisted by the IDARA anywhere along the water demand supply chain	This will allow the IDARA to monitor total number of people who have been assisted by the IDARA.	Number	Yr 1: 600 Yr 2: 800 Yr 3: 800 Yr 4: TBD	Yr 1: 977	Yr 2: 4987	Location, gender, sector, services area	Project records	The Chief of Party and Activity Leaders will review project records	Quarterly	3 and 11
Activity 1: Institutional Capacity for Water Demand Management											
Score on the Water Organization Capacity Assessment Tools (WOCAT) ⁴⁵											
Task 1.1: Build consensus on WDM functions and institutions as part of the water sector reform and restructuring											
No performance measures needed, work plan milestones instead											
Task 1.2: Institute planning, allocation, and monitoring functions at the WDMU											
WDM Functional Operations Milestone scale score ⁴⁶	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	WDMU score: 15	Refer to Task 1.5 WOCAT assessment below	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 8 stages, and each completed stage is assigned 1 point, and maximum possible points= 8.	This indicator will measure the process of passing and enforcing WDMU policies needed for improved management of water demand in Jordan.	Score	Yr 1: TBD Yr 2: 7 Yr 3: 7 Yr 4: 7	Yr 1: 6 ⁴⁷	Yr 2: 7 ⁴⁸	Policy Topic	IDARA Staff, USAID SO team staff, and WDMU staff	The IDARA 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 is suggested that this be done at the same time as the portfolio review process within the Mission.	Annually	2
Number of types of members on the National Water Alliance ⁴⁹											
Number of linkages formed to support	Linkages, between organizations such as committees, working groups, task forces, etc.,	As linkages bring about collaborative problem solving on	Number	Yr 1: 4	Yr 1: 31 ⁵¹	Yr 2: 33 ⁵²	Private institutions, public institutions, and	WDMU	IDARA team	Quarterly	2

⁴⁵ This indicator was used to measure the performance of IDARA under Task 2.5

⁴⁶ The assessment of WDMU functions and operations has been included as part of the WOCAT assessment tool under Task 2.5 in the second year work plan of IDARA. Therefore, this indicator has been removed from year 2 work plan.

⁴⁷ In year 1, IDARA accomplished 6 stages of the 8 stages mentioned below with regards to the WDM Policy.

Stage 1: Interested groups propose that legislation is needed on a particular issue. Stage 2: Issue is introduced in the relevant legislative committee or ministry. Stage 3: Legislation is drafted by relevant committee or ministry.

Stage 4: The legislature debates the legislation. Stage 5: Legislation is passed by full approval process needed in legislature. Stage 6: The executive branch approves the legislation (where necessary). Stage 7: Implementing actions are taken.

Stage 8: No immediate need identified for amendments to the law. **Source:** *Handbook of Democracy and Governance Program Indicators*, (1998).

⁴⁸In year 2, IDARA accomplished the seventh stage.

⁴⁹ This indicator has been found not applicable. Therefore, it has been removed from the second year work plan.

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Achieved in year 1	Achieved in year 2	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to USAID PMP Indicator
WDM functions and programs ⁵⁰	can be formal or informal, but must meet regularly or as triggered by an agreed-upon event. Linkages are formalized to bring together staff from a variety of groups within the WDM community to conduct collaborative problem solving together.	water issues, better decisions and processes will be developed within the WDM community. In addition, trust between the WDM groups will improve.		Yr 2: 40 Yr 3: 20 Yr 4: TBD			NGOs:	Project records	WDMU staff		
Number of institutions with improved water-use and demand management information ⁵³	Data related to WDM requires to be collected and integrated into existing systems at MWI and the utilities through the development of appropriate database tables	As the water community adopts, integrates and learns to effectively utilize databases and exchange information, it will allow improved planning and allocation of resources at the planning level and improve operations and decision making.	Number of database tables updated, or designed and implemented	Yr 1: 0 Yr 2: 7 Yr 3: 5 Yr 4: TBD	Yr 1: 0	Yr 2: 4 WDMU, Miyahuna, AWC, NGWA	Type of database (end-use, billing, demand forecasting, GIS data tables), type of information managed	Utilities and/or MWI systems	Team leader/ WDM monitoring and forecasting will review and assess score	Annually	10
Task 1.3: Strengthen the MWI Planning Directorate by establishing a national water use information program											
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: 17 (8 external, 9 internal) Yr 3: 17 Yr 4: TBD	Yr 1: 11 (2 external, 9 internal) ⁵⁴	Yr 2: 17 (8 external, 9 internal) ⁵⁵	Internal and external institutions	Project records, WDMU records	The Chief of Party and the Team Leader/ WDM monitoring and forecasting will review project records	Annually	10
Task 1.4: Perform end-use analyses											
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 to which stakeholders reference and apply end-use analysis data. 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: 12 (5 internal, 7 external including 2 private companies) Yr 3: 7 Yr 4: TBD	Yr 1: 0	Yr 2: 11 (6 external, 5 internal) ⁵⁶	Internal and external institutions	Project records	The Team Leader/ WDM monitoring and forecasting will interview key stakeholders	Annually	11
Number of information gathering or research activities related to profiling water users and analyzing municipal	Water users include industries, municipalities, etc.	This indicator measures the number of activities focused on profiling water users and analyzing municipal consumption patterns.	Number	Yr 1: 1 (Profiling of large consumers for Miyahuna) Yr 2: 1 (same as above) Yr 3: 1 Yr 4: TBD	Yr 1: 1 (customer demand profile for Miyahuna, AWC, NGWA)	Yr 2: 1	Stakeholders (industry, municipality, etc.)	Project records, MWI and utility records	The Team Leader/ WDM monitoring and forecasting will review with MWI, utilities and municipalities	Annually	12

⁵¹ Linkages formed with: Ahmad Badaweih Est., ASEZA, AWC, Bitar Office for Engineering Consultation, GAM, GTZ, JOHUD, JCCA, JEA, JFBPW, JISM, JUST, JVA, Legal Department/MWI, MOA, MOE, MOPIC, MPWH, Miyahuna, municipalities, NCARE, NGWA, NWMP, Orange, Pepsi Co., PMU, RSS, Segura IP3 Partners LLC, University of Jordan, WAJ, WAJ Labs

⁵² Linkages formed with: ACED, ASEZA, AWC, DZC, DOS, GAM, GTZ, HSBC, HUDC, JEA, JFBPW, JISM, JUST, JVA, KACE, Legal Department/MWI, MOE, MOL, MPWH, MOTA, MOIT, Miyahuna, MWI IT Department, NCARE, NGWA, NWMP, Orange, Pepsi Co., PMU, RSS, Saraya, University of Jordan, WAJ.

⁵⁰ During implementation of IDARA, this indicator has been slightly changed

⁵³ During implementation of IDARA, this indicator has been added to track the number of institutions with improved water-use and demand management information.

⁵⁴ **External:** WAJ Subscription Directorate incl. tankers, WAJ IT Department, WAJ O&M, WAJ GBMS, NGWA IT, Subscribers incl. tankers water, annual water budgeting Departments, Miyahuna IT, Subscribers including tankers water and annual water budgeting Departments, AWC IT, Subscribers including tankers water and annual water budgeting Departments, MWI Planning Directorate, MWI NWMP

Internal: GAM (GIS, Amman Metropolitan Plan), DOS (GIS, Family Expenditure and Census divisions).

⁵⁵ **External:** hotels, hospitals, schools, mosques, universities, offices, GAM (GIS, Amman Metropolitan Plan), DOS (GIS, Family Expenditure and Census divisions)

Internal: WAJ GBMS, NGWA IT, Subscribers including tankers water and annual water budgeting Departments, **Miyahuna** IT, Subscribers including tankers water and annual water budgeting Departments, **AWC** IT, Subscribers including tankers water and annual water budgeting Departments, MWI Planning Directorate, MWI NWMP, WAJ Subscription Directorate incl. tankers, WAJ IT Department, WAJ O&M

⁵⁶ **External:** hotels, hospitals, schools, mosques, universities, offices

Internal: NGWA IT, Subscribers including tankers water and annual water budgeting Departments, **Miyahuna** IT, Subscribers including tankers water and annual water budgeting Departments, **AWC** IT, Subscribers including tankers water and annual water budgeting Departments, MWI WDMU, WAJ

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Achieved in year 1	Achieved in year 2	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to USAID PMP Indicator
consumption patterns ⁵⁷											
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 progress IDARA is making in conducting end use analysis of customer categories.	Number	Yr 1: 8 Yr 2: 15 residential, 37 commercial, Yr 3: 10 Yr 4: TBD	Yr 1: 0	Yr 2: 18 (10 Government offices, 2 universities, 6 commercial)	User categories and service areas (utilities)	Project records, MWI and utility records	The Team Leader/ WDM monitoring and forecasting will review project and other records	Annually	7
Task 1.5: Assist in the establishment of a decentralized system for water demand management functions											
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: 21 Yr 2: Miyahuna score: 21 out of 42. AWC score: 19 out of 42. NGWA score: 17 out of 42. WDMU score: 21 Yr 3: Miyahuna score: 24 AWC score: 23. NGWA score: 19. WDMU score: 26 out of 42. Yr 4: TBD	Yr 1: Miyahuna score: 12 out of 42. AWC score: 12 out of 42. NGWA score: 9 out of 42. WDMU score: 15	Yr 2: Miyahuna score: 15 AWC score: 14. NGWA score: 11. WDMU score: 19 out of 42.	Institution	Project records, organization records	The Chief of Party will review and assess the scores	Annually, to be completed for project's annual report	
Number of training participants ⁵⁸											
Task 1.6.1 Develop BMP guides on conservation of nonagricultural water											
Number of best management practices (BMP) guides developed on water conservation and non-agricultural water ⁵⁹	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.	This indicator will measure the identification of best practices that will help improve water demand management and conservation in selected non-agricultural sectors.	Number	Yr 1: 0 Yr 2: 2 Yr 3: 5 Yr 4: 0	Yr 1: 0	Yr 2: 2 Park BMP Implementation Guide, Public Information BMP Implementation Guide	Topic of best practice	Project records	Number of BMP guides submitted to USAID	Annually	2
Task 1.6.2 Develop BMP Guide for High Rise Buildings											
Number of stakeholders involved in the development of BMPs	Developing a sense of ownership by stakeholders is important to successfully implementing BMPs	This indicator measures the extent to which stakeholders reference and apply BMPs. The more the stakeholders participate in BMP development, the more likely they will implement BMPs.	Number	Yr 1: 73 (56 external, 17 internal) Yr 2: 73 Yr 3 & 4: NA	Yr 1: 73 (56 external, 17 internal)	Yr 2: 73 (56 external, 17 internal)	Internal and external institutions	Project Records	The Senior Technical Advisor will review sign in sheets for workshops and meetings	Annually	4
Task 1.7: Provide training and capacity building to promote water demand management											
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	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: 0 Yr 2: Miyahuna score: 21. AWC score: 19. NGWA score: 17. WDMU score: 21 out of 42. Yr 3 Miyahuna score: 24 AWC score: 23.	Yr 1: 0	Yr 2: Miyahuna score: 15 AWC score: 14. NGWA score: 11. WDMU score:	Institution	Project records, organization records	The Training and Outreach Expert will review and assess the scores	Annually, to be completed for project's annual report	

⁵⁷ During implementation of IDARA, this indicator has been added to track the number of information gathering or research activities related to profiling water users and analyzing municipal consumption patterns

⁵⁸ This performance indicator has been removed from the second year work plan as it is already included under Task 1.7.

⁵⁹ During implementation of IDARA, this indicator has been slightly changed to cover the development of BMP guides

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Achieved in year 1	Achieved in year 2	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to USAID PMP Indicator
	the water organization's final score for the year.			NGWA score: 19. WDMU score: 26 out of 42. Yr 4: TBD		19 out of 42.					
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: TBD Yr 3: Avg. of 3 Yr 4: TBD	Yr 1: 0 (not applicable)	Yr 2: score=2-3 on average (2= some skills/ Knowledge, 3= Skilled/ Knowledgeable)	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; second, immediately after the training ends.	The Training and Outreach Expert will review each organization	Annually	
Number of training participants	Trainings are those training activities focused on water demand management and managed by IDARA, or by IDARA partners, or by other organizations using IDARA 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	Yr 1: 0 Yr 2: 120 Yr 3: 200 Yr 4: TBD	Yr 1: 102 (60 males, 42 females)	Yr 2: 614	Topic, gender, institution, location	Project records, institutional records	The Training and Outreach Expert will review each organization	Quarterly	3, 11
Task 1.8: Introduce and promote drought response principles in the water community											
Number of information gathering or research activities related to drought response principles ⁶⁰	Drought response principles are rules or standards for dealing with drought that have worked in other countries.	This indicator will track the number of research efforts to identify relevant principles from other drought responses throughout the world.	Number	Yr 1: 0 Yr 2: 1 Yr 3& 4: NA	Yr 1: 0	Yr 2: 1	Type of drought response principles (chronic, acute)	Project records, institutional records	IDARA will carry out the research	Once- in year 2	12
Number of drought response principles that have been introduced and promoted by utilities and WDMU	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. Promoted means that these principles are printed or used in media campaigns	This indicator will measure both the identification of relevant and possible principles from other drought responses throughout the world, and of the promotion of those introduced principles within the Jordanian context.	Number	Yr 1: 0 Yr 2: 15 ones introduced and 2 used Yr 3: 15 ones introduced and 2 used ⁶¹ Yr 4: TBD	Yr 1: 0	Yr 2: 0	Principles introduced and principles promoted	Project records, institutional records	The Team Leader/ WDM monitoring and forecasting will track the number of introduced and promoted principles	Annually	12
Task 1.9: Design, administer, and institutionalize a yearly event to recognize individuals, institutions, and industries that help advance water efficiency											
Number of integrated events accepted by national water entities as part of a national campaign ⁶²											
Number of organizations who scored on the water efficiency sub-criteria under the King Abdullah II Center for Excellence Award	Scoring on water efficiency sub-criteria will include retrofit, water saving devices, leak detection, water harvesting, gray water reuse, recycling, etc.	This indicator will track the number of organizations who implement water efficiency measures.	Number	Yr 1: NA Yr 2: NA Yr 3: 80 & 4: TBD	Yr 1: 0 (not applicable)	Yr 2: 0	Utilities, public, private entities	King Abdullah II Award for Excellence records	The Training and Outreach Expert will track and review project records	Annually	5
Activity 2: Enabling Institutional and Legal Environment											
Task 2.1: Assist in creating a stakeholder-driven WDM policy program											

⁶⁰ This indicator is added to year 2 work plan as it is found needed for assessing the progress of this task.

⁶¹ The number of used drought response actions is based on approval of MWI

⁶² This indicator has been removed from year 2 work plan, and replaced with the number of organizations score on the water efficiency sub-criteria under the King Abdullah II Center for Excellence Award

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Achieved in year 1	Achieved in year 2	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to USAID PMP Indicator
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: 68 Yr 3: 20 Yr 4: TBD	Yr 1: 68	Yr 2: 34 (25 external, 9 internal)	Internal and external institutions	Project documents	The Senior Technical Advisor will review project documents	Annually	4
Task 2.2.1 Develop a national standardized plumbing code											
Percentage of approved new standards that meet or exceed International Standards ⁶³											
Total number of public documents with new codes disseminated ⁶⁴											
Total number of people trained on the new codes ⁶⁵	Once implemented, the new codes will need to be disseminated through public documents such as guides, checklists, manuals, as well as training and workshops.	This indicator will convey the extent of dissemination of the new codes implemented.	Number	Yr 1: 0 Yr 2: 0 Yr 3: 50 Yr 4: TBD	Yr 1: 0	Yr 2: 0	Type (posters, handbook, guides, information packets, PSAs)	Project records, organization records	The Program Manager will review project documents	Annually	11
Task 2.2.2 Draft a report that recommends to the Ministry of Water and Irrigation the specifications on water that need to be incorporated into a potential High-rise Building Code											
No. of recommended practices to include in High Rise Code	A recommendation is a practice that can improve water efficiency in a high rise building	Water efficiency will be improved as more recommended practices are identified	Number	Yr 1: NA Yr 2: 5 Yr 3 & 4: NA	Yr 1: 0 (not applicable)	Yr 2: 20	NA	Project records	The Senior Technical Advisor will review project records	Annually	
Task 2.3: Implement a plumbing materials certification program											
Number of rules and codes identified ⁶⁶											
Number of technical standards drafted for Jordan ⁶⁷	Plumbing materials to be certified means those water using products for which a JISM technical committees have completed a draft standard	This indicator will measure the drafting of JISM standards for water using products	Number	Yr 1: 1 Yr 2: 2 Yr 3: 2 Yr 4: TBD	Yr 1: 1	Yr 2: 2	N/A	Project records	The Senior Technical Advisor will review project documents	Annually	12
Task 2.4: Establish a “master plumbers” vocational training program at the VTC											
Number of master plumbers trained in certification programs	Plumbers are those who are trained.	This will raise the quality of plumbing services.	Number	Yr 1: 0 Yr 2: 10 Yr 3: 50 Yr 4: 50	Yr 1: 0	Yr 2: 0	Program, gender, location	Project records, program records	The Program Manager will review each program	Annually	11
Task 2.5: Prepare a workplan to implement a labeling program											
Number of types of appliances and fixtures with labels in place in the market ⁶⁸											
Number of research and information gathering activities to identify the types of appliances and fixtures with labels in place in the market ⁶⁹	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 quantify the number of activities focused on the availability of types of fixtures and appliances that are labeled.	Number	Yr 1: 1 Yr 2: 1 (depending on funding of labeling workplan) Yr 3 & 4: NA	Yr 1: 1	Yr 2: 1	Type of fixture/ appliance, Location of market, Type of label	Plumbing companies, markets, project records	The Senior Technical Advisor will review project documentation	Annually	12

⁶³ During implementation of IDARA, this indicator has not been found adequate to assess the performance of IDARA on this task. Therefore, it has been removed from year 2 work plan.

⁶⁴ During implementation of IDARA, this indicator has not been found adequate to assess the performance of IDARA on this task. Therefore, it has been removed from year 2 work plan.

⁶⁵ Added to year 2 work plan to replace the originally proposed indicators

⁶⁶ This indicator has been replaced with “the number of technical standards drafted for Jordan”.

⁶⁷ This indicator has been added to replace the old indicator (i.e. number of rules and codes identified)

⁶⁸ This indicator has been removed from year 2 work plan and is replaced with the “number of research and information gathering activities to identify the types of appliances and fixtures with labels in place in the market”.

⁶⁹ This indicator is added to year 2 work plan to assess the performance of IDARA in Task 2.5

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Achieved in year 1	Achieved in year 2	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to USAID PMP Indicator
Number of stores/shops that carry labeled appliances and fixtures ⁷⁰	Plumbing appliances and fixtures include: dish-washers, clothes washers, faucets, shower heads, etc. Labels indicate how much water the appliance or fixture uses. Store/shop means an entity that sells appliances at retail or wholesale.	This indicator will measure the number of stores that sell labeled 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.	Number	Yr 1: 10 Yr 2: TBD Yr 3 & 4: NA	Yr 1: 0 (not applicable)	Yr 2: 0	Type of fixture/appliance, Location of market, Type of label	Plumbing companies, markets, project records	The Senior Technical Advisor will review project documentation	Annually	5
Task 2.6: Identify WDM enforcement mechanisms and recommend the most feasible											
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: 0 Yr 3: 100% Yr 4: NA	Yr 1: 0 (not applicable)	Yr 2: 0	Punitive/ incentive	Project documentation	The Chief of Party will review acceptance process of GOJ and/or MWI	Annually	2
Task 2.7: Develop mechanisms to finance the implementation of WDM projects											
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: 2 Yr 3: 4 Yr 4: TBD	Yr 1: 0	Yr 2: 3 Grant to RSS Grant to Miyahuna PPP between USAID-IDARA, HSBC and Miyahuna	Type of financial mechanisms	Project documentation	The Chief of Party will review project documentation	Annually	
Dollar value of financial instruments in place ⁷¹	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: TBD Yr 3: \$300,000 Yr 4: \$100,000	Yr 1: 0	Yr 2: \$233,840	Type of financial instruments	Project documentation	The Chief of Party will review project documentation	Annually	
Activity 3: Demonstrate Selected Water Demand Management Initiatives to the Public											
Task 3.1: Expand the urban landscape program introduced by WEPIA											
Number of water-wise public parks 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 the incorporation of water-wise landscaping principles in public parks.	Number	Yr 1: 0 Yr 2: 6 Yr 3: 3 (shifted from year 2; total for 4 years = 6) Yr 4: 0	Yr 1: 0	Yr 2: 3	Location, size	Project records	The Landscape Specialist will review project documentation and interview notes	Annually	
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 IDARA, or by IDARA partners, or by other organizations using IDARA 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: 75 Yr 3: 25 Yr 4: NA	Yr 1: 74	Yr 2: 72	Gender, location	Project records, program records	The Landscape Specialist will review each program	Annually	3

⁷⁰ This is not applicable as IDARA was only tasked to conduct a market survey and develop a workplan for labeling of water-using fixtures and appliances

⁷¹ This number includes the grants provided by IDARA

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Achieved in year 1	Achieved in year 2	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to USAID PMP Indicator
Number of public parks converted/ or created based on water-wise landscaping principles that are maintained after project resources end ⁷²	Public parks will be located in the larger municipalities within Jordan, and are free 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.	This indicator will track the number of completed parks water-wise landscaped through project efforts, and maintained by the municipalities and IDARA. This will measure the relevance and acceptance of water-wise landscaping principles at the local level by Jordanians.	Number	Yr 1: 0 Yr 2: NA Yr 3: 3 Yr 4: 3	Yr 1: 0 (not applicable)	Y2: 0 (not applicable)	Location	Project records, IDARA records, municipal records	The Landscape Specialist will review project records	Annually	
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: NA Yr 3 & 4: 2	Yr 1: 0 (not applicable)	Yr 2: 1 German Jordanian University	Specific water-wise landscaping curriculum / inserted into existing agricultural curriculum, university	Project records	The Landscape Specialist will review each program	Annually	
Number of 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: NA Yr 3 & 4: TBD	Yr 1: 0 (not applicable)	Yr 2: 25	University of Jordan, Mu'tah University, JUST	Faculty records	The Landscape Specialist will review each program	Annually, probably only after year 3 of the IDARA team project	3
Task 3.2: Host a competition for the best low-income, water-efficient houses in the highland and Jordan Valley areas											
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: TBD Yr 3: TBD Yr 4: NA	Yr 1: 0 (not applicable)	Yr 2: 0 (not applicable)	Team location	Project records	The Landscape Specialist will review project records	Annually	
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: NA Yr 3 & 4: TBD	Yr 1: 0 (not applicable)	Yr 2: 0 (not applicable)	Location	Project records	The Landscape Specialist will review each program	Annually	
Task 3.3: Provide plumbing services and plumbing fixtures to rural areas											
No of homes in rural areas provided with plumbing services and/or water saving devices or other plumbing equipment	Plumbing services are being provided through a grant to Mercy Corps	Plumbing services will reduce leakage and installing plumbing appliances will result in the more efficient use of water	Number	Yr 1: 0 Yr 2: 70 Yr 3: 200 Yr 4: TBD	Yr 1: 0	Yr 2: 217	Type of service or device provided	Project records,	The Program Manager will review each program	Annually	
Task 3.4: Implement best management practices in pilot areas											

⁷² This indicator has been changed to assess the number of water-wise public parks that have been converted or created by IDARA rather than assessing the percentage.

Performance Indicator	Definition of Indicator	Justification/ Management Utility	Unit of Measurement	Target	Achieved in year 1	Achieved in year 2	Disaggregate	Data Source	Method of Collection	Schedule of Collection	Link to USAID PMP Indicator
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: TBD Yr 3: 2 Yr 4: TBD	Yr 1: 0	Yr 2: 1	Utility, subject matter of BMP	Utility records, project records	The Water Engineer will review project records	Annually	2
Number of customers benefitting by implementation of BMPs ⁷³	Individual customers receiving water efficiency services through audits, retrofits, training, etc.	This indicator will measure the number of beneficiaries from implementations of BMPs	Number	Yr 1: 0 Yr 2: 1000 Yr 3: 200 Yr 4: TBD	Yr 1: 0	Yr 2: 2078	By utility and type of BMP	Utility records, project records	The Water Engineer will review project records	Annually	3

⁷³ This indicator is added to the second year work plan.

ANNEXES

Annex I: The Training Plan

Training and Capacity Building for WDMU, Utilities and the Private Sector

1. Working with the WDMU

Year three capacity building activity will focus on preparing the WDMU staff for the unit primary role in providing leadership and focus for water demand management in Jordan. The direct engagement of the WDMU staff in building linkages with external organizations under task 1.2.3 and task 2.1 will enhance the capacity of the staff in developing joint WDM programs in collaboration with the external organizations, and will clarify the specific role and support of WDMU to these organizations. In addition, during this period, the WDMU staff will be involved in the development of best management practices guides for hotels; offices, residential. Thus, staff will be introduced to the latest water use efficient technologies in the various sectors. During year two of the project, the WDMU staff were exposed and introduced to water use efficiency tracking tool and demand forecasting models for the utilities. However, this year, the WDMU staff will develop the skills for the analysis and monitoring of data flow between the National Water Master Plan and water utilities; and how to utilize data for demand forecasting purposes and for the identification and selection of cost effective WDM measures. Working closely with IDARA project will enhance the role of the unit as a clearing house that provides information on WDM research, codes, best management practices, and training material.

2. Working with the Utilities

During year three of the project, IDARA will focus on the adoption of the water use efficiency plans and the institutionalization of WDM at the three utilities. This will be achieved through utilizing change management workshops that will help utilities further understand WDM programs listed under the WUE plans; and to explore stakeholder input, resources needed and feasibility of these programs. Utility staff will also develop the skills in designing, implementing and monitoring WDM best management practices. Utility staff will develop the skills for the analysis and monitoring of the WDM GIS data base; and how to utilize data for demand forecasting purposes and for planning, designing, budgeting and budgeting of WDM programs.

3. Working with the private sector

IDARA will continue building capacity of private companies in water audit and end use analysis and develop their skills in water efficiency performance contracting.

Task/Sub-task	Events	Number of Training Days/Year 3	Place of the Event	Number of Trainees or Attendees	Potential Training Providers	Estimated Cost of Training Year 3	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Year 4	
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.	Change Managment workshop for Miyahuna	2	TBD	25	Hala Dahlan	\$1500													
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.	Change Managment workshop for NAGWA	2	TBD	25	Hala Dahlan	\$1500													
1.2.5	Design and build appropriate database under WDMU as intergral components of the Water Information System deployed at MWI.	Training session for the water utilities (NGWA, MIYAHUN, AWC) on the developed Water Demand Management System	6 days / 2 for each utility	TBD	TBD	ICT Consultant - Eng. Hala Zawati	\$600													
1.4	Perform end-use analyses	Training session for the implementing agency of the baseline survey on water audits, inspection of plumbing fittings, site inspection for data logging and sub-metering	1	Amman TBD	TBD	IDARA staff	\$500													
1.5.1	Introduce regulatory incentive mechanisms to encourage utilities to adopt demand management measures	Present recommended KPI's and regulatory incentives for utilities.	1	TBD	20-30	TBD	\$1,000													
1.5.3	Assist the Private Sector to establish WDM functions and services	Training on performance contracts	3	TBD	20	Russel Horner	\$1,500													
1.7	Provide training & capacity building to promote water demand management	Conduct training for the three water utilities on water demand management topics (management, legal, technical, communication, drought response initiatives and BMPs)	TBD	Amman	25	JUST	TBD													
2.2.1	Develop a national standardized plumbing code	Training workshop on new code	3	Amman	25	IAPMO	TBD													
2.3	Implement a plumbing materials certification program	Develop training materials and deliver training to RSS after completion of water product testing facility	1	RSS	TBD	Bill Gauley	TBD													
2.4	Establish a "master plumbers" vocational training program at the VTC	TOT Workshop	6	Amman	8	IAPMO, JEA, RSS, private sector	TBD													
	Establish a "master plumbers" vocational training program at the VTC	Training for "master plumbers"	24	Amman	100	Trainers who got the TOT	TBD													
3.1.2	Train personnel from at least 70 of the 90 municipalities on water wise landscaping principles.	Training workshop municipality managers on water-wise landscaping	3	Amman	20	Awatef Akour, Thaera El-Hafiz, Mazen Daqqaq, Majed Sabbarini	\$ 1000													

Annex II- Annual Financial Report

Activity	Budget	Actuals					Cumulative Expenditures C- Yr One	Budget						Cumulative Expenditures D- (4/1-3/31/09)	Budget						Budget	Total Budget (Yr 1 to Yr 4)	Remaining Budget= sum(A-C)+(B-D)+(E-F)+G
		A Year 1	Apr-Jun 07	Jul-Sep 07	Oct-Dec 07	Jan-Mar 08			B Year 2	Apr-Jun 08	Jul-Sep 08	Oct-Dec 08	Jan-Mar 09			E Year 3	Apr-Jun 09	Jul-Sep 09	F- (4/1-9/30/09)	G Year 4			
A. Salaries and Wages																							
Expatriate Long Term Technical Assistance	DAI	\$116,405	\$27,000	\$33,000	\$27,000	\$30,688	\$117,688	\$124,585	\$24,226	\$29,757	\$30,028	\$32,462	\$116,473	\$130,531	\$32,191	\$23,859	\$56,050	\$137,057	\$508,578	\$218,367			
CCN Long Term Technical Assistance	DAI	\$49,928	\$9,094	\$15,701	\$12,461	\$17,569	\$54,826	\$200,315	\$27,521	\$60,321	\$48,124	\$58,918	\$194,885	\$207,959	\$58,748	\$48,124	\$106,872	\$218,358	\$676,560	\$319,978			
Total Long Term Technical Assistance		\$166,333	\$36,094	\$48,701	\$39,461	\$48,257	\$172,514	\$324,900	\$51,747	\$90,079	\$78,152	\$91,380	\$311,358	\$338,490	\$90,939	\$71,983	\$162,922	\$355,415	\$1,185,138	\$538,345			
DAI Short Term Technical Assistance	DAI	\$50,079	\$19,152	\$5,446	\$11,758	\$14,273	\$50,629	\$8,104	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$58,183	\$7,554			
Independent Consultants-STTA-Expats	DAI	\$1,165	\$0	\$0	\$0	\$0	\$0	\$111,914	\$10,354	\$15,925	\$0	\$3,911	\$30,190	\$32,092	\$23,900	\$0	\$23,900	\$22,173	\$167,344	\$113,255			
Independent Consultants-STTA-CCN	DAI	\$8,825	\$0	\$0	\$0	\$5,780	\$5,780	\$29,847	\$6,168	\$2,420	\$1,760	\$0	\$10,347	\$9,493	\$4,288	\$0	\$4,288	\$9,662	\$57,827	\$37,412			
DAI STTA - Home Office Support	DAI	\$24,766	\$10,462	\$5,244	\$6,019	\$2,413	\$24,139	\$18,326	\$1,320	\$4,562	\$3,204	\$2,311	\$11,397	\$15,798	\$2,833	\$1,820	\$4,653	\$11,183	\$77,073	\$36,884			
Total Short Term Technical Assistance		\$84,835	\$29,614	\$10,690	\$17,777	\$22,466	\$80,548	\$168,191	\$17,842	\$22,907	\$4,963	\$6,222	\$51,934	\$57,383	\$31,020	\$1,820	\$32,840	\$50,018	\$419,317	\$195,105			
Total Labor-Salaries and Wages		\$251,168	\$65,709	\$59,392	\$57,238	\$70,723	\$253,061	\$493,091	\$69,590	\$112,986	\$83,115	\$97,602	\$363,292	\$395,873	\$121,959	\$73,803	\$195,762	\$405,433		\$733,450			
B. Fringe Benefits DAI																							
Expatriate DAI Direct Hires (LTTA and STTA)	DAI	\$77,456	\$22,929	\$17,695	\$18,135	\$21,569	\$80,328	\$61,162	\$14,540	\$13,899	\$13,459	\$14,083	\$55,981	\$59,263	\$14,185	\$9,288	\$23,473	\$62,872	\$260,753	\$100,972			
Total Fringe Benefits		\$77,456	\$22,929	\$17,695	\$18,135	\$21,569	\$80,328	\$61,162	\$14,540	\$13,899	\$13,459	\$14,083	\$55,981	\$59,263	\$14,185	\$9,288	\$23,473	\$62,872	\$260,753	\$100,972			
C. Overhead																							
Expatriate LTTA, STTA and LTTA CCN - DAI Direct Hire	DAI	\$166,327	\$46,269	\$40,239	\$39,345	\$48,154	\$174,007	\$215,320	\$40,696	\$56,658	\$52,770	\$60,271	\$210,394	\$215,873	\$56,353	\$73,803	\$130,156	\$227,838	\$825,358	\$310,800			
Total Overhead		\$166,327	\$46,269	\$40,239	\$39,345	\$48,154	\$174,007	\$215,320	\$40,696	\$56,658	\$52,770	\$60,271	\$210,394	\$215,873	\$56,353	\$73,803	\$130,156	\$227,838	\$825,358	\$310,800			
D. Travel, Transportation and Per Diem																							
1. International Travel		\$22,000	\$12,089	\$12,604	\$2,089	\$3,670	\$30,453	\$59,740	\$4,139	\$2,077	\$43,394	\$3,215	\$52,826	\$25,462	\$1,000	\$0	\$1,000	\$37,153	\$144,355	\$60,077			
2. Per Diem		\$26,020	\$12,206	\$2,051	\$9,269	\$5,011	\$28,537	\$77,456	\$11,525	\$4,651	\$0	\$0	\$16,176	\$21,642	\$1,244	\$713	\$1,957	\$18,358	\$143,476	\$96,806			
3. Miscellaneous Travel Expenses		\$2,200	\$142	\$191	\$0	\$1,401	\$1,733	\$3,914	\$2,310	\$378	\$0	\$0	\$2,688	\$1,698	\$3,512	\$657	\$4,168	\$1,530	\$9,342	\$752			
Total Travel, Transportation and Per Diem		\$50,220	\$24,437	\$14,845	\$11,359	\$10,082	\$60,723	\$141,110	\$17,975	\$7,106	\$43,394	\$3,215	\$71,690	\$48,802	\$5,756	\$1,369	\$7,126	\$57,041	\$297,173	\$157,635			
E. Allowances																							
1. Post Differential		\$6,199	\$1,350	\$1,650	\$1,650	\$2,025	\$6,675	\$6,634	\$2,644	\$1,515	\$1,501	\$1,515	\$7,175	\$6,951	\$1,858	\$1,874	\$3,733	\$7,298	\$27,082	\$9,499			
2. Cost of Living Allowance		\$4,115	\$0	\$1,171	\$958	\$2,743	\$4,872	\$4,202	\$583	\$1,750	\$-1,403	\$1,638	\$2,568	\$4,328	\$2,099	\$1,892	\$3,991	\$4,458	\$17,103	\$5,672			
3. Danger Payment		\$18,595	\$3,750	\$4,950	\$4,050	\$5,850	\$18,600	\$19,902	\$4,645	\$4,688	\$4,099	\$4,383	\$17,815	\$20,852	\$4,893	\$3,749	\$8,643	\$21,895	\$81,244	\$36,187			
4. Temporary Quarters Subsistence Allowance		\$8,891	\$2,454	\$2,606	\$0	\$0	\$5,060	\$6,146	\$0	\$0	\$1,429	\$0	\$1,429	\$0	\$0	\$0	\$0	\$4,345	\$19,382	\$12,893			
5. Living Quarters Allowance		\$19,503	\$19,774	\$24	\$115	\$179	\$20,093	\$33,990	\$28,107	\$4,959	\$1,619	\$2,201	\$36,886	\$38,192	\$14,797	\$364	\$15,161	\$39,338	\$131,023	\$58,883			
6. Household Effects		\$19,944	\$0	\$0	\$6,669	\$0	\$6,669	\$29,546	\$7,727	\$0	\$150	\$0	\$7,877	\$3,819	\$8,046	\$0	\$8,046	\$32,001	\$85,310	\$62,718			
7. Educational Allowance		\$0	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0	\$31,115	\$0	\$95	\$31,210	\$15,914	\$1,000	\$14,723	\$15,723	\$16,391	\$62,305	\$15,372			
Total Allowances		\$77,247	\$27,328	\$10,401	\$13,442	\$10,798	\$61,969	\$130,420	\$43,706	\$44,027	\$7,394	\$9,831	\$104,959	\$90,056	\$32,693	\$22,603	\$55,296	\$125,726	\$423,449	\$201,225			

Activity	Budget		Actuals					Budget		Projections					Budget		Budget		Total Budget of each line	Remaining Budget= sum(A-C)+(B-D)+(E-F)+G
	A					Cumulative Expenditures	B						Cumulative Expenditures	E			Cumulative Expenditures	G		
	Year 1	Apr-Jun 07	Jul-Sep 07	Oct-Dec 07	Jan-Mar 08	C- Yr One	Year 2	Apr-Jun 08	Jul-Sep 08	Oct-Dec 08	Jan-Mar 09	D- (4/1-3/31/09)	Year 3	Apr-Jun 09	Jul-Sep 09	F- (4/1-9/30/09)	Year 4			
F. Other Direct Costs																				
1. DBA Insurance	\$3,010	\$1,226	\$0	\$0	\$0	\$1,226	\$4,306	\$0	\$4,306	\$0	\$4,983	\$9,289	\$2,956	\$0	-\$1,116	-\$1,116	\$2,912	\$13,184	\$3,785	
2. Medical Exams and Inoculations	\$2,900	\$0	\$0	\$62	\$70	\$132	\$2,266	\$176	\$2,920	\$0	\$0	\$3,096	\$1,273	\$113	\$0	\$113	\$1,639	\$8,078	\$4,738	
3. Program Support Costs	\$194,473	\$108,473	\$24,807	\$19,633	\$16,409	\$169,322	\$80,334	\$37,305	\$12,333	\$51,350	\$35,848	\$136,837	\$69,096	\$17,630	\$16,419	\$34,049	\$71,169	\$415,072	\$74,864	
4. Support Staff CCN	\$20,828	\$2,138	\$2,775	\$5,895	\$5,895	\$16,703	\$40,529	\$10,035	\$7,888	\$7,792	\$9,417	\$35,132	\$44,319	\$9,588	\$8,662	\$18,251	\$45,649	\$151,325	\$81,240	
5. Total Insurance and Social Charges CCN Supporting Staff	\$40,859	\$3,230	\$4,710	\$10,138	\$4,099	\$22,177	\$133,692	\$21,152	\$6,858	\$39,007	\$21,982	\$88,999	\$124,889	\$32,824	\$12,185	\$45,009	\$130,598	\$430,038	\$273,853	
Total Other Direct Costs	\$262,070	\$115,067	\$32,292	\$35,728	\$26,473	\$209,559	\$261,127	\$68,668	\$34,305	\$98,150	\$72,230	\$273,353	\$242,533	\$60,156	\$36,150	\$96,306	\$251,967	\$1,017,697	\$438,479	
G. Training and Workshops																				
Activity 1	\$7,500	\$2,108	\$1,077.48	\$2,908.48	\$158.34	\$6,252	\$16,500	\$2,298.09	\$5,086.66	\$5,282.36	\$5,809.67	\$18,477	\$18,000	\$2,807.56	\$3,325.67	\$6,133	\$16,000	\$58,000	\$27,138	
Activity 2	\$0	\$0	\$0	\$535.54	\$188.41	\$724	\$20,000	\$1,187.50	\$4,152.00	\$0.00	\$97.82	\$5,437	\$20,000	\$0.00	\$0.00	\$0	\$17,000	\$57,000	\$50,839	
Activity 3	\$0	\$0	\$0	\$651.91	\$1,481.90	\$2,134	\$20,000	\$3,837.53	\$4,117.65	\$3,646.10	\$2,716.03	\$14,317	\$17,008	\$38.56	\$0.00	\$39	\$16,409	\$53,417	\$36,927	
Task 3.3: Efficient water use in rural areas-Mercy Corps	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	\$100,000	
Pilot Projects and Activities	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	\$0	\$8,168	\$3,386	\$2,736	\$14,290	\$60,000	\$6,141	\$0	\$6,141	\$30,000	\$190,000	\$169,569	
High Rise	\$0	\$0	\$0	\$0	\$0	\$0	\$15,895	\$0	\$3,233.91	\$2,820	\$5,785.05	\$11,839	\$0	\$3,092	\$0	\$3,092	\$0	\$15,895	\$964	
Total Program Activities	\$7,500	\$2,108	\$1,077	\$4,096	\$1,829	\$9,110	\$272,395	\$7,323	\$24,758	\$15,135	\$17,144	\$64,360	\$115,008	\$12,080	\$3,326	\$15,405	\$79,409	\$474,312	\$385,436	
H. Sub Contracts																				
IP3	\$341,423	\$25	\$146,592	\$123,224	\$25,942	\$295,783	\$428,396	\$57,600	\$138,818	\$56,590	\$79,503	\$332,510	\$437,096	\$73,196	\$10,892	\$84,088	\$9,759	\$1,216,674	\$504,292	
ECO Consult	\$169,630	\$0	\$26,618	\$51,614	\$60,757	\$138,989	\$80,370	\$61,900	\$46,789	\$0	\$0	\$108,690	\$0	\$0	\$0	\$0	\$0	\$250,000	\$2,322	
CSBE	\$83,493	\$0	\$17,117	\$16,664	\$16,001	\$83,493	\$49,782	\$115,205	\$17,203	\$18,286	\$5,428	\$48,763	\$73,573	\$24,622	\$16,189	\$40,811	\$67,132	\$339,403	\$200,046	
ValuAdd	\$47,287	\$0	\$0	\$0	\$16,899	\$16,899	\$35,987	\$23,377	\$0	\$0	\$0	\$23,377	\$0	\$0	\$0	\$0	\$0	\$83,274	\$42,998	
WMI	\$52,811	\$0	\$0	\$0	\$0	\$0	\$21,193	\$0	\$0	\$0	\$52,127	\$52,127	\$32,873	\$0	\$0	\$0	\$23,101	\$129,978	\$77,851	
Expat Pool	\$0	\$0	\$0	\$0	\$0	\$0	\$114,000	\$0	\$15,206	\$60,301	\$37,931	\$113,438	\$33,990	\$67,943	\$19,460	\$87,403	\$37,132	\$185,122	-\$15,719	
CCN Pool	\$0	\$0	\$0	\$0	\$0	\$0	\$110,700	\$0	\$0	\$17,422	\$0	\$17,422	\$39,552	\$489	\$15,855	\$16,344	\$26,417	\$176,669	\$142,903	
Bahman Sheikh Associates (BSA)	\$0	\$0	\$0	\$0	\$0	\$0	\$76,199	\$0	\$11,429	\$65,199	\$0	\$76,628	\$0	\$11,000	\$0	\$11,000	\$0	\$76,199	-\$11,429	
Aquacraft Inc./ Charlie Pike (Actual)	\$0	\$0	\$0	\$0	\$0	\$0	\$63,001	\$0	\$15,921	\$22,607	\$6,165	\$44,693	\$0	\$6,165	\$0	\$6,165	\$0	\$63,001	\$12,142	
Consolidated Consultants (CC)	\$0	\$0	\$0	\$0	\$0	\$0	\$39,418	\$0	\$0	\$0	\$29,564	\$29,564	\$0	\$0	\$9,855	\$9,855	\$0	\$39,418	\$0	
Total Sub Contracts	\$694,644	\$25	\$190,326	\$191,502	\$119,599	\$501,452	\$1,084,469	\$160,081	\$246,450	\$227,547	\$213,136	\$847,213	\$617,084	\$183,416	\$72,251	\$255,666	\$163,541	\$2,559,738	\$955,406	
SUBTOTAL PROGRAM COSTS																				
	\$1,586,632	\$303,872	\$366,267	\$370,844	\$309,226	\$1,350,210	\$2,659,094	\$422,578	\$540,189	\$540,962	\$487,513	\$1,991,242	\$1,784,492	\$486,597	\$292,593	\$779,190	\$1,373,827	\$5,858,480	\$3,283,403	
General and Administrative Costs	9.10%	\$144,384	\$27,652	\$33,328	\$33,818	\$28,140	\$122,869	\$241,978	\$38,765	\$49,157	\$40,958	\$40,586	\$169,467	\$162,389	\$42,488	\$23,807	\$66,295	\$125,018	\$533,122	\$298,790
TOTAL DAI PROGRAM COSTS		\$1,731,016	\$331,525	\$399,595	\$404,662	\$337,366	\$1,473,079	\$2,901,072	\$461,344	\$589,346	\$581,920	\$2,160,709	\$1,946,881	\$529,085	\$316,400	\$845,485	\$1,498,845	\$6,391,602	\$3,582,192	
Fixed Fee	6.50%	\$112,516	\$21,549	\$25,974	\$26,303	\$21,929	\$95,750	\$188,570	\$34,419	\$38,307	\$31,918	\$31,628	\$140,446	\$126,547	\$33,110	\$18,553	\$51,663	\$97,425	\$415,454	\$237,199
TOTAL DAI PROGRAM COSTS PLUS FIXED FEE		\$1,843,532	\$353,074	\$425,569	\$430,965	\$359,295	\$1,568,829	\$3,089,641	\$495,763	\$627,653	\$613,838	\$2,301,155	\$2,073,428	\$562,195	\$334,953	\$897,148	\$1,596,270	\$6,807,056	\$3,819,391	
Small Grants																				
Small Grants Program		\$0	\$0	\$0	\$0	\$0	\$225,000	\$0	\$79,983	\$0	\$0	\$79,983	\$175,000	\$11,299	\$0	\$11,299	\$100,000	\$408,717	\$408,717	
Small Grants Fee	2.00%	\$0	\$0	\$0	\$0	\$0	\$4,500	\$0	\$1,600	\$0	\$0	\$1,600	\$3,500	\$226	\$0	\$226	\$2,000	\$8,174	\$8,174	
Total Grants		\$0	\$0	\$0	\$0	\$0	\$229,500	\$0	\$81,583	\$0	\$0	\$81,583	\$178,500	\$11,525	\$0	\$11,525	\$102,000	\$416,892	\$416,892	
Grand Total		\$1,843,532	\$353,074	\$425,569	\$430,965	\$359,295	\$1,568,829	\$3,319,141	\$495,763	\$709,236	\$613,838	\$2,382,738	\$2,251,928	\$573,720	\$334,953	\$908,673	\$1,698,270	\$7,265,846	\$4,236,282	
Year one: covers the period from April 2007 till March 2008																				
Year two: covers the period from April 2008 till March 2009																				
Year three: covers the period from April 2009 till March 2010																				
Year four: covers the period from April 2010 till March 2011																				
Obligation																				
Obligation Per the Contract		\$4,300,000																		
Actual expended through Sept 30,2007		\$778,642																		
Actual expenditures through June 30,2008		\$2,064,592																		
Actual expenditures through Sept 30,2008		\$2,773,828																		
Total Remaining Obligation		\$1,526,172																		
Amount of obligation spend		64.51%																		

Annex III- List of Written Deliverables

Task No.	Report	Language
1.2.3 & 2.1	Action Plans for MOE, MOIT, MOTA, and MPWH	English
1.2.5	WDM database needs assessment	English
1.2.5	Design a comprehensive database	English
1.4	End-use analysis reports	English
1.5.1	KPIs for WDM	English
1.5.2	Leak detection program	English
1.5.2	Water-use efficiency plans for utilities	English
1.5.3	Assess report on barriers and opportunities for participation in water-efficient markets	English
1.6.1	Public Information & Outreach BMP Guide ⁷⁴	English/ Arabic
1.6.1	Hospital BMP Implementation Guide	English/ Arabic
1.6.1	Hotel BMP Implementation Guide	English/ Arabic
1.6.1	Office BMP Implementation Guide	English/ Arabic
1.6.1	Residential BMP Implementation Guide	English/ Arabic
1.6.1	High-rise and high-density developments Guide	English/ Arabic
1.8	Drought response principles and drought response guidelines	English
2.2.1	Draft Plumbing Code	Arabic
2.3	Report on technical specifications and recommended testing protocols for water using products	English
2.3	List of plumbing technical specifications (as agreed upon by the plumbing code technical committee)	English
2.4	Master plumber training curriculum	English/ Arabic
3.1.3	Module for Petra University	English

⁷⁴ All BMP guides will be printed and disseminated in December 2010.