The outbreak of the Coronavirus is putting pressure on Jordan’s water sector to continue delivering safe water while the country combats the pandemic. USAID is supporting the Pandemic Response Plan of Jordan’s Ministry of Water and Irrigation (MWI). The plan lays out actions that will sustain operations, protect employee’s health, create awareness, and protect water resources.

The plan consists of two main sections: A) Pandemic Planning Actions that are taken before the spread of the disease, and B) Pandemic Response Actions which are implemented after the outbreak when the Government of Jordan activates the Defense Law. The plan includes the following key elements:

1. Critical Response Identification: to help identify essential employees required to work during the pandemic;
2. Employees’ Health and Safety: to promote practices and protective gear that will help keep the sector’s employees safe;
3. Strategic Communications: to support communication and outreach efforts to help the Ministry leverage online channels to share influential content;
4. Business Continuity: to present a plan of activities to ensure continuity of water sector services during the pandemic.

The Plan is a living document that USAID will monitor and update during the pandemic in order to help the water sector fight the disease, protect its water resources and facilities, and, most importantly, protect the health and safety of all Jordanians.

Because Jordan’s water sector has long suffered from consumer theft and abuse, the Ministry of Water and Irrigation (MWI) has been conducting an ongoing campaign against illegal water use in order to protect the country’s water resources and facilities. The campaign was lacking a reference manual detailing procedures for protecting water resources and collecting performance indicators to measure the impact of strengthened controls. USAID supported the Ministry to develop the Procedures Manual for the Campaign to Control Illegal Water Use.

The manual articulates measures required to tighten controls over water resources and procedures to protect groundwater resources, potable water supply and distribution networks, water facilities, and watersheds. The manual includes an illustrative timeline for MWI employees to act and shorten the response time to reports of vandalism.

The manual will support the enforcement of laws and regulations which are critical to change behavior.
Rehabilitation of Northern Jordan Valley customer service offices

As part of a major effort to modernize water management and irrigation services, USAID rehabilitated, furnished, and equipped three customer service offices at the Northern Jordan Valley Authority (NJV).

The aim of this rehabilitation is to enhance the Operations and Maintenance (O&M) services provided to Jordan Valley farmers. Rehabilitating the offices will help align the services with the new proposed organizational structure of the NJV directorate and will positively impact the management of irrigation water and reduce water losses. Moreover, the new organizational structure will increase efficiency and reduce NJV’s O&M costs.

USAID supports Ministry to develop the Water Sector Gender Policy

To address the challenge of empowering women in the water sector, USAID assisted the Ministry of Water and Irrigation (MWI) to develop the Water Sector Gender Policy. The policy is the first of its kind in Jordan and is aligned with the National Water Strategy.

The Policy outlines the main gender issues within Jordan’s water sector and articulates guiding principles to support water sector institutions and stakeholders in integrating gender considerations into water sector policies, programs, actions and investments. The Policy examines the roles of men and women in managing water use in their homes and communities, as well as the role women play within water sector institutions. The policy also identifies opportunities to strengthen women’s contributions to the sector.

To achieve the objectives of the policy over the next few months, USAID will support MWI in overseeing and enforcing its implementation through institutional arrangements detailed in an Action Plan.

The Minister of Water and Irrigation Eng. Raed Abu Al Saud announced the official launch of the Gender Policy on International Women’s Day on March 8, 2020. In his announcement, he emphasized the importance of supporting women to achieve gender equity in the water sector.
The Tafileh Water Administration was still relying on paper maps to store, manage, and display data related to their water and wastewater systems. Many challenges and inefficiencies come with such a system. Locating underground water and wastewater pipes is often dependent on the knowledge of certain staff, and paper maps make locating exact problem areas difficult.

USAID assisted the Tafileh Water Administration to address this challenge by activating the Geographical Information System (GIS) to allow for accurate mapping of infrastructure, and the ability to attribute relevant data to that infrastructure that makes repair more efficient.

GIS will help the administration to store its data in spatial format, and query and analyze specific attributes that can be displayed by electronic maps. The GIS will help identify problems within the systems quickly, coordinate the utility’s resources, and communicate with its customers. GIS will also ensure accurate information can be shared among the staff, including locations of valves and the number and type of customers located in each service zone. The GIS will also help analyze the infrastructure, understand customers, and discover trends and patterns for Water Tafileh Administration.

USAID is building staff capacity to operate the GIS so that it can be fully activated in the next few months. The GIS will shorten response times, decrease water loss, and improve customer satisfaction and fee collection.

USAID launched a non-revenue water (NRW) pilot project in Amman to explain how the NRW Strategic Master Plan will be implemented. The pilot, which will introduce new technologies to manage NRW, was initiated several months ago. Setting the project’s baseline of NRW was the first step to be implemented, but had to be halted as a result of the COVID-19 lockdown. However, USAID was able to complete the preparation phase that included: 1) locating the boundaries of the implementation zone, 2) surveying customers, 3) collecting and analyzing billing and GIS data, 4) developing a hydraulic model, and 5) determining the network’s three critical pressure points (minimum, maximum, and average).

USAID has also procured a pressure management system and electromagnetic bulk meters to help regulate the pressure within the network according to the best operational practices.

Manual valves will be procured and installed at the water connection point at each house in the pilot area. Several unsuccessful attempts were made to procure remote control valves. Miyahuna will provide smart meters to be installed at the water connection point at each house.

The project is now ready to begin estimating the NRW baseline in the pilot area and to monitor and control the pressure during supply hours.
Training provided on source water protection

Human activities around water resources often result in pollution. To control water quality in catchment areas, USAID conducted a training in Amman from 18-20 November, 2019 on the subject of developing a water safety plan to protect water resources from pollution.

The training focused on the water safety standards for springs used for municipal water supply, and the geology/natural features surrounding the catchment areas. The training included a field visit for the Wadi Alsir Springs to provide participants with the know-how on planning actions to secure water resources.

The training equipped technicians and officers working to protect water resources with the necessary hands-on experience to monitor water quality. This will help sustain efforts to protect the quality of water sources.

USAID supports YWC with bulk water meters

A utility company needs to accurately measure the levels of bulk water in order to properly manage a country’s water resources. For years, the Yarmouk Water Company (YWC) has relied on estimations and mechanical meters to measure its bulk water resources, leading to inaccurate readings.

As part of the implementation of performance improvement plans, USAID conducted a comprehensive field survey to verify bulk water metering within YWC facilities. USAID installed approximately 50 electromagnetic flow meters to improve the accuracy and reliability of water production measurement data. USAID is helping to test the operational efficiency before handing it over to YWC. USAID plans to integrate these bulk water meters into YWC’s SCADA system to enable remote monitoring and data acquisition of production quantities.

This critical support will improve the field management and operations of non-revenue water.
$11 million as USAID grant to JVA

USAID supported the Jordan Valley Authority (JVA) to receive an $11 Million USD grant through the Fixed Amount Reimbursement Agreement (FARA) funding approach. This grant will help JVA reduce water losses in its conveyance and distribution systems, improve services to farmers, improve data collection, and increase revenues. Activities will mainly target part of the Northern Jordan Valley (NJV) served by the Wadi Al-Arab Project, phase two (W02). This area contains 1,500 Hectares of irrigated land. JVA is also seeking to reduce the physical water losses in King Abdullah Canal (KAC) conveyance system by rehabilitating an 8 km section of the canal that has sustained significant damages. The project will improve measurements of the water flow in the KAC, optimize water monitoring and control, and improve the SCADA system. The project also aims to build the technical capacity of the JVA and its water user agreements (WUAs).

The grant will also improve the water distribution system by upgrading infrastructure and introducing new technologies. The grant will be used to install 44 km of pipes, 470 Farms Turnout Assemblies, and a new pumping station on the KAC. The new irrigation network will integrate technologies to improve the monitoring and management of water distribution and efficiency, including smart meters, flowmeters, data loggers, and pressure management and remote-control valves.

E-Memo system implemented at MWI and JVA

To help Jordan’s water sector entities achieve a fully digital and paperless environment, USAID funded the e-memo system and provided technical support to launch an internal web portal (intranet) for Ministry of Water and Irrigation (MWI) and the Jordan Valley Authority (JVA). The e-memo system will transform all administrative transactions from manual to electronic. USAID assessed data collection needs, facilitated the contract, and will oversee the implementation of the new system, which was launched on November 18, 2019. By March 1, 2020 MWI was performing all internal administrative transactions electronically, and paper transactions were cancelled.

The introduction of the e-memo system marked a major change in the way water entities correspond internally and externally. The system increases productivity, reduces expenditures, enhances procedural efficiency, and provides a more accurate monitoring of transactions. This new system will improve the water sector’s responsiveness, performance, and productivity.

Overview of the project area within Northern Jordan Valley Area/ Irbid Governorate.
New Water Law drafted during the study tour to the USA

Overlapping mandates and authorities among various public entities have led to inefficient management and high financial costs for Jordan’s water sector.

To assist the Government of Jordan in drafting the legislation that would merge the functions of the Water Authority of Jordan into the Ministry of Water and Irrigation, USAID organized a U.S. study tour from February 9 -17, 2020 for leaders from Jordan’s water sector.

Participants visited four of the largest water entities in the United States: Metropolitan Water District of Southern California, the South Florida Water Management District, Los Angeles Department of Water and Power and Miami-Dade Water and Sewer Department. Participants learned about best practices in the management and governance of water utilities.

Based upon various ideas discussed during the study tour, MWI finalized the drafting of the new water law. The new law will include a major governance innovation for Jordan, by creating a National Council for Water Management that will include as participants regionally-elected officials, the private sector, and other major stakeholders. The new law will lead to greater efficiencies and will enable Jordan to manage the sustainability of the country’s water resources.