



Hashemite Kingdom of Jordan

Improving water quality for Livestock watering in the Jordanian Badia Project Agreement of Second Year July, 2012

Progress Report

December 2014

Prepared by:

Ministry of Water and Irrigation

Water Authority of Jordan

Submitted to:

Ministry of Environment

Badia Restoration Program (BRP)

1. Introduction

Improving water quality for ranchers and livestock watering in the Badia is a fundamental element of Community Action Plan (CAP) adopted by the Ministry of Environment /Badia Restoration Program. This can be done by two ways; firstly, utilization of polluted ground water wells by installation of treatment units and distribution system in the areas that do not have drinking water supply system. Secondly, drilling new wells to increase supplied water quantities. For ranchers communities, the availability of clean and safe water is important for human health and well-being, economic production, and sustainable development. Failure to ensure the safety of drinking water may expose the community to the risk of outbreaks of waterborne and infectious diseases. In addition, the availability of water is expected to reduce the cost of raising livestock because the livestock owners will stop driving long distance costing them a lot of money to bring water to their animals. Reducing the traffic movements, in turn, will have indirect influence on the rangeland areas. As a result, the Ministry of Environment/Badia Restoration Program signed an agreement in July, 2012 with the Ministry of Water and Irrigation/ Water Authority of Jordan (WAJ) to improve water quality and quantity in two locations. These locations include Thableh (Tabaqat Fahel) and Mughyer Sarhan wells. The duration of this agreement is one year starting from the date of signing.

2. Project Scope of Work

This agreement includes two projects located in Northern Governorate. Northern Governorate water administration is directed by Yarmouk Water Company (YWC). Scope of work of each project can be seen in tables (7) and (8). Both projects would be implemented by private sector. The awarded contractor would be selected through competitive tendering procedures.

Table 7 Scope of work for Mughyer Sarhan Project

Contract no.	Contractor	Contract Duration	Scope of the work
M/19/2012/ Works	Equipment Procurement and Maintenance Company	50 days	<ul style="list-style-type: none">• Drilling well works• Procurement of well casing• Installation of the well casing
N/A**	-----	-----	<ul style="list-style-type: none">• Well pump procurement and installation• Electric transformer

** Notes: These works have been implemented and paid by WAJ

Table 8 Scope of work for Thableh Project (Tabaqet Fahel Well)

Contract no.	Contractor	Contract Duration	Scope of the work
58/2013/ Procurement*	To be selected	210 days The final payment would be paid after two months from start up of the two years operation and maintenance	<ul style="list-style-type: none"> • Raw water tank (300m³) • Building for desalination units and operators (168m²) • Procurement of pretreatment and desalination units with total capacity 210 m³/h including all relevant civil, mechanical and electrical works. • Test operation for four months was optional and has been cancelled. Instead WAJ selected operation and maintenance for two years that would be funded by WAJ sector.
N/A**	To be selected	210 days	<ul style="list-style-type: none"> • 4 Km of Transport pipelines to transport the rejected brine from the desalination units to the disposal point • This contract would be funded by Water sector and implemented by Yarmouk Water Company.

*Notes:

1. Raw water tank volume and building area have been reselected after detailed technical studies. In addition, feed pipe for filling mobile tanks+ fittings for ranchers would be implemented by the Yarmouk Water Company in a later stage
2. At the time of agreement signing, it was planned to utilize two wells; well no. (1) and well no. (2). However, this plan was changed so that well no. (1) would only be used because of poor water quality of well no. (2).

** Notes: WAJ gave the responsibility of tender preparation and implementation of this contract to Yarmouk Water Company

3. Project Progress

The implementation stages of this agreement and the progress of each stage can be seen in tables (9) and (10)

Table 9 Progress percentage of each stage for Mughyer Sarhan project

Stage no.	Contract no.	% Progress	Notes
(I) Preparation of tender documents	N/A	100	Performed by WAJ staff
(II) Tendering process	N/A	100	Performed by WAJ staff
(III) Implementation	M/19/2012/ Works	100	Performed by WAJ staff

Table 10 Progress percentage of each stage for Thableh (Tabaqet Fahel Wells) project

Stage no.	Contract no.	% Progress	Notes
(I) Preliminary studies	N/A	100	Performed by WAJ staff
(II) Preparation of tender documents	N/A	100	Performed by WAJ staff
(III) Tendering process	N/A	100	<ul style="list-style-type: none"> • Performed by WAJ staff • This project have been retendered due to high prices and WAJ need to reduce scope of work
(IV) Implementation	58/2013/ Procurement	Financially 10 Technically 60	<ul style="list-style-type: none"> • Star up of construction period has been issued in 18/6/2014 • All submittals have been approved. • All civil works have been completed. • Most of the equipment is ready to be transferred to the project location expected date is 15th January, 2015

4. Modified Time Schedule of the Project and Reasons for Project Time Extension

Modified time schedule for this project can be seen in tables (11) and (12). These tables show reasons for that modification for each stage as well.

Table 11 Modified time schedule for Mughyer Sarhan project

Stage no.	Start date	End Date	Notes
I & II		1/8/2012	Tender documents were ready before agreement signing
III	1/8/2012	7/10/2012	
IV	7/10/2012	24/10/2012	The contractor is very active. He finished all the works before the contractual end date

Table 12 Modified time schedule for Thableh (Tabaqet Fahel Wells) project

Stage no.	Start date	End Date	Notes
I & II	1/8/2012	26/5/2013	<p>The duration of this stage was extended because:</p> <ul style="list-style-type: none"> • Water quality and production of the well was old and new pump test was performed. Pump test took long time due to critical location (need security approval) • The decision to cancel utilization of well no. (2) took long time due to poor water quality. This was after many meetings and discussions. • The complexity of this project is very high. WAJ staff developed new specifications for the plant treatment units • Complications in coordination between the WAJ and YWC • There was a problem in determining the route of the pipeline that transport the rejected brine
III	26/5/2013	10/6/2014	<ul style="list-style-type: none"> • There is a delay in this stage due to retendering of contract 58/2013/ Procurement due to high prices and WAJ obliged to revise and make changes in the scope of work • The intake was redesigned for more safe operation of the treatment plant • Signing of the contract is delayed due to two reasons: <ol style="list-style-type: none"> 1. A delay in receiving the document of the financial obligation 2. Time is required to answer the other contractors objections on the purchase order
IV	18/6/2014	28/2/2015 End of plant construction 29/5/2015 End of test operation	<p>The contractor asked for extending the implementation duration by 45 days due to:</p> <ul style="list-style-type: none"> • Weather conditions • Other contractor is working in the same site and is closing the entrance of the location for about 10 days. As a result, the treatment contractor was not able to move his equipment to the site and therefore to start assembling the treatment plant. <p>Please refer to contractors letter in attachment no. 1</p> <p>In addition:</p> <ul style="list-style-type: none"> • We need about one month for certifying the desalination plant and to start operation testing • The final payment would be released after two months of testing operation