وحدة تنسيق الدعم
ASSISTANCE COORDINATION UNIT

منصة الموارد المائية
Syrian Water Resources Platform

Date: 25.04.2022

Water Quality Report in Marma Elhajar village

○ *About Marma Elhajar village*

- Marma Elhajar village is located 4.5 km southwest of the city of Jarablus with a population of about 2331 people.

Governorate	District	Sub-district	Community
Aleppo	Jarablus	Jarablus	Marma Elhajar

Location of the village

○ *WASH services in the area*

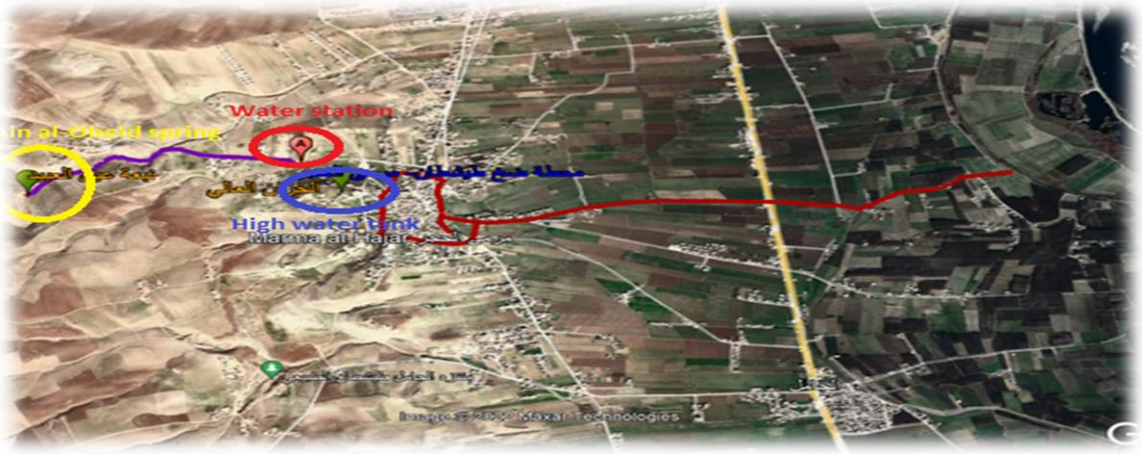
- The village is supplied with drinking water from "Ain al-Obeid" spring, which is about 1.5 km away from the pumping station where water is drawn from the spring through a pipe of 1300 m consisting of two parts the first one is metal while the other part is an old Asbestos pipe that has been installed for more than 20 years and reaches a ground reinforced concrete water tank of 200 cubic meters where water pours into this tank preparing to pump it by horizontal pumps with a total flow of 50 cubic meters/hour for a period of 3 three hours per day to a high water tank of 50 cubic meters located inside the village then the collected water in this high tank is pumped through the water network for the residents of the village where he high tank secures the required pressure to deliver water to people's homes.
- The residents of the village also depend on water trucking, as the quantities of water coming from the pumping station are not sufficient for daily consumption.
- CARE International has rehabilitated the pumping station where all works have been completed by the end of March 2022.
- The water is sterilized using the liquid chlorine which is added to the water by a dosing chlorine pump connected to the main pumping pipes after the pumps.

- Currently, there are no supporting entities in the area, as the local authorities operate the pumping station.
- It should be noted that, during the previous years, there are no cases of water pollution were recorded in the area.

○ Description of the site of the spring

- It is located at the bottom of the valley and water stems from among the rocks.
- There is a solid waste dumpsite approximately 575 m away from the spring site, as shown below. Knowing that the difference in the geographical level between the dumpsite and the spring is about 50 meters (The dumpsite is higher than the spring).

- There are agricultural lands surrounding the spring that is being cultivated with various crops. These agricultural lands are about 500 meters away from the spring and they are being fertilized, but the fertilization process is very poor due to the high costs of fertilizers.
- The figure below shows the location of the spring, water pumping, and the high water tank in addition to the path of the pumping line.



- The red line is the wastewater line
- As for the violet color, it is the line connecting the spring and the pumping station

○ Water contamination warning

1. Initial notification of water contamination

- The WASH team of ACU was informed by the local authorities that the water had turned slightly yellow and as a result of this sudden situation, they took some steps such as stopping the pumping water from the station and depending on water trucking from other sources.

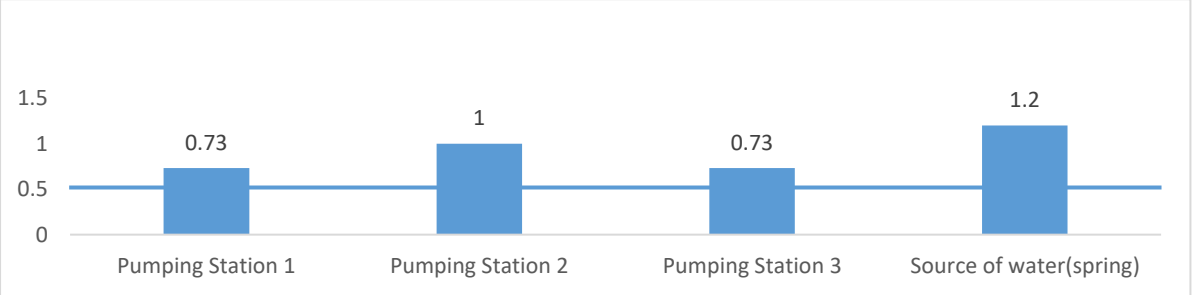
2. Conducting a visit to the site

- The WASH team of ACU visited the village and took a sample from the pumping station water tank (The groundwater tank) and conducted the necessary analysis in the central laboratory of the unit in Azaz city. Currently, the WASH team of ACU takes samples periodically to compare the results.

3. The results of water analysis

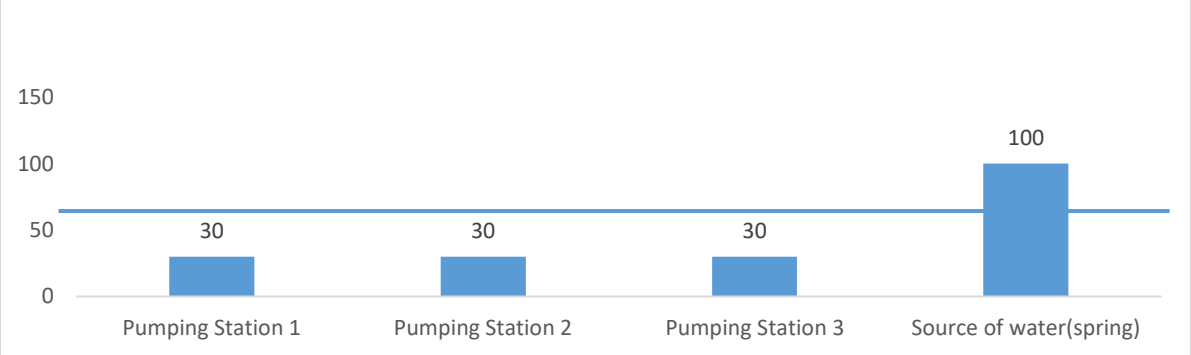
- The WASH team of ACU has analyzed the samples physically, chemically, and bacteriologically and subsequently prepared reports based on the results. The results were as follows:

❖ **AMMONIA**



The permissible limit of Ammonia according to the recognized standards of potable water is 0.5 mg/l.

❖ **NITRATE**



The permissible limit of Nitrate according to the recognized standards of potable water is 50 mg/l.

❖ **BACTERIOLOGICAL ANALYSIS**

- The results of the analysis of the samples taken from the spring and the pumping station showed that there were no E. coli colonies at 44 degrees Celsius (There is no contamination due to wastewater).

4. The conclusion

- The results of the analysis of drinking water samples and the primary information show that there is no wastewater contamination, but the main water source (the spring) is contaminated chemically, especially by ammonia and nitrates, and this is mostly due to pollution in the groundwater, which transported the contamination to the spring.

5. Future Actions

- The WASH team of ACU will take other samples in the upcoming days in order to follow up on changes in the chemical properties of water, especially at the water spring, in addition to participating in advocacy efforts aimed at finding sustainable solutions in cooperation with all actors.