

Project of Supplying Kesrouan Coastal area with Drinking Water

The Council for Development and Reconstruction is currently implementing a project to supply drinking water to the coast of Kesrouan, financed by the Japanese Fund for Overseas Cooperation for JBIC. The project is valued at approximately U.S. \$ 60 million and is implemented by the BARESEL AG / Al Tajj group under the auspices of the Consultative Group, Dar El Handasah (Nazih Taleb) / Montgomery Watson. Work is expected to be completed during the first quarter of 2010.



The project aims to curb the water of Al Madiq spring which originates in the course of Ibrahim river, and the establishment of necessary networks and facilities to ensure drinking water for the region extending from the coastal city of Okaiba to Alkalb river passing through Al-Bowar, Al-Safra, Tabarja, Jounieh and Zouk Musbeh, and extending eastward to include areas of Adma, Kferhabab, Sahel Alma, Haret Sakher, Harissa, Gosta, Zouk Mechael and Aintoura. It also includes drilling water wells in the course of Ibrahim river and its banks to utilize the Water of Al-Madiq spring, and the drilling of circular tunnel of 4 km in length and 380 cm in diameter to draw water from Al-Madik spring to the coast, and laying about 120 km of the major networks and distribution networks in order to deliver water to subscribers and the creation and rehabilitation of reservoirs and pumping stations and equipping it with all electrical and mechanical equipment necessary to secure pumping and distribution of water.

It is expected that the project will provide **about 85 thousand cubic meters per day** where the bulk of it will be distributed by gravity after going through the process of

sedimentation of sand and after the addition of chlorine to ensure the quality of distributed water.

To date, five wells were drilled in the course of Ibrahim river and some of them have been tested and during the summer of 2008 they will complete testing these wells and equipping them. About 80% of the major drawing lines were completed stretching from Ibrahim river to Zouk Mesbeh noting that the remaining section which extends on the old coastal road is currently been executed along with the rehabilitation of a sewage line to raise pollution from the Bay of Jounieh. Also about 90% of the distribution lines in the regions and towns served by the project have been completed.

Preparation for drilling of the tunnel has also been completed which called for the shipping and transferring of the drilling machine and preparing the site with necessary equipment (generators, air compressors, reservoirs, pumping machines for concrete, railway and a train to transport the output of the drilling, etc.) and establishing a control room for the machine. This is a long and complex process which was handled by the German company BARESEL AG through foreign experts and Lebanese engineers and technicians. Digging the tunnel has already been started and to date, approximately 2000 meters of the 4000 meters were drilled. The drilling process is expected to be completed during the month of July 2009, after which the draw lines are to be installed into the tunnel and to be connected to the lines which have already been laid at coast in preparation for delivering it to the reservoirs and then to subscribers.