

# Algiers - Doubling of Wadi M'Kacel stormwater main



**Country**  
Algeria

**Client**  
CSM Bessac / Hydro-Technique

**Date**  
2005-2006

**Sogreah's services**

- ▶ Hydraulic design study for the doubling of Wadi M'Kacel main
- ▶ Construction of scale models (vortex drop shafts, portion of tunnel with constrictions), laboratory tests and presentation of results



**Context**

The existing Wadi M'Kacel main collects stormwater flows running off all the catchments of Wadi Koriche. Following the disastrous floods at Bab El Oued in November 2001, the Algiers district Hydraulic Resources and Water Saving Department (DHW) decided to double the main.

**Description**

The new main has the following characteristics:

- ◆ Design discharge: 63 m<sup>3</sup>/s.
- ◆ Tunnel:
  - 4 m in diameter
  - 4 km in length
- ◆ Double-section box culvert over a distance of about 250 m.
- ◆ 4 vortex drop shafts up to 45 m high, involving a study with two scale models.

- ◆ 1 step-type vertical shaft
- ◆ A sea outfall and stilling structure.
- ◆ Structures to trap sand and intercept the existing mains