Design of Copiapó River Works in the Urban Sector and Master Plan in the Rural Sector, Copiapó

1. CITY: Copiapó, Chile

2. CLIENT: MOP - DOH

3. TECHNICAL DATA:

The length of the study area is 42 km. The hydrological basin reaches 1,053 km2.

4. DESCRIPTION OF THE PROJECT:

The alluvial and flood events that occurred in the month of March 2015 (25M), caused damages in a vast area of northern Chile, of such magnitude that they moved the whole country.

The study includes the detailed design of the river works for the urban sector of the Copiapó River, in about 16 km, and the master plan in the rural sector downstream, to San Pedro Creek. The necessary measures are proposed so that this channel can lead a flood like that of the 25M event and even higher, for a return period of 100 years.

Some specific objectives of the study are:

• Determination of the design variables of the contributing basins, effective for the integral project.

• Field studies and specialties that allow the adequate design project of the works (geotechnical, topography, geology, LIDAR flight, etc.).

• Hydrological studies, determination of detrital flows for different return periods (Tr = 2, 5, 10, 25, 50, 100 and 200 years).

• Engineering of the solutions and the Environmental Impact Study (EIA), respectively.