

# BOLIVIA

## WATER SUPPLY AND SEWERAGE LA PAZ - EL ALTO

<b>Location</b>	El Alto in 4,100 masl
<b>Client</b>	Servicio Autónomo Municipal de Agua Potable y Alcantarillado (SAMAPA), La Paz
<b>Financing</b>	German Financial Cooperation / KfW
<b>Period</b>	1992 - 2000
<b>Value of Services</b>	3.000 million US\$



### Project Description

El Alto which developed as a independent satellite city in the vicinity of La Paz is situated in 4,100 m above sea level. In 1992 it had a population of 400,000 which has been forecast to increase to 1,1 million in 2020.

The project comprises:

#### a) Construction of:

- Sewage System consisting of 267 km of sewer lines (45.5 km main and secondary sewers max. DN 1,100) and 8,000 house connections for some 1,500 ha urban area
- Pretreatment measures of industrial sewage
- Sewage treatment plant in Puchukollo consisting of stabilization/oxidation ponds (2,130 l/s capacity for the year 2000)
- Regional office of 6 floors for El Alto with workshop and warehouse with a total constructed area of 1,584 m<sup>2</sup>

#### b) Rehabilitation of:

- Workshop/storage facilities "Complejo Rumpel" with 1.326 m<sup>2</sup> roofed over area
- Water treatment plants: Achachicala, Pampahasi and El Alto

### Scope of Services

#### Phase I:

- Updating of basic data (urban and population development), water demand, and supply
- Evaluation of the installations of water treatment plants, specifications for the supply of spare parts
- Final design of main and secondary sewers, specifications and quantity survey
- Final design of sewage treatment plant (evaluation of environmental impacts)
- Catastral survey of industrial sewage and tariff study
- Design of regional office and workshop
- Specifications, quantity surveys, tender documents, confidential cost estimates
- Operation and maintenance manuals

#### Phase II:

- Assistance during tendering and procurement of materials and supplies (revision of evaluation of bids executed by agencies)

#### Phase III:

- Construction supervision, quality control
- Reception of material and supplies, cost control
- Elaboration of as-built drawings