

<b>Sector</b>	Urban Development
<b>Sub - sector</b>	Water Supply and Sewerage
<b>Profile No.</b>	UD-07
<b>Project Title</b>	Improvement of Water Supply and Sewerage Systems at Bharuch town

## Project Description

Bharuch, located in South Gujarat, has population of 2.31 lakhs and spread over project area of 28.31 square kilometres, which includes the Municipality and the outer growth area limits.

The present condition of water supply and sewerage system of the town is in wretched condition and needs revival. Hence, GIDB has identified Bharuch town for the up-gradation and improvement of water supply and sewerage system.

The proposed project comprises of the following:

1. Installation of pipeline from Narmada canal to pond
2. Setting up of filter plant
3. Procurement of various machinery and equipments

The proposed project is aimed at providing continuous water supply to 100% population and improvement of sewerage systems.

## Water supply

### Present status

The present supply to Bharuch is primarily from Gujarat Narmada Valley Fertilizer Company Ltd. (14.00 MLD), which is mixed with 2.00 MLD non potable water, having high TDS content, drawn from tube wells.

Moreover, about 25% of town's population does not have access to municipal water. In the out growth areas, about 2,000 connections are not recorded in Municipal records.

Thus, the total water availability in Bharuch is summarized as below:

- Water source GNFC / Tube wells
- Total supply 16 MLD
- Per capita supply 93 litres per capita per day including 15% UFW

## Issues

The major aspects that need to be addressed in the project are:

- Augmentation of the carrying capacity of the present distribution system.

The present water supply to the town is inadequate. The demand in accordance with the population is as follows:

Sr.	Year	Population	Water demand (MLD)
1	2008	180,000	28
2	2023	238,000	37
3	2038	315,000	49

- Developing surface sources for water supply in order to reduce dependency on supply from GNFC
- Provision for buffer storage requirements
- Increasing the extent / coverage of the water supply and sewerage system to 100% population
- Institutional restructuring
- Tax recovery mechanism is good in Bharuch Municipality but the revenues are comparatively low, which indicates that water charges being levied are low along with the low coverage of water supply with high wastages. The booked expenditure cost of the Municipality is also very high. Thus there is a need to increase the water charges coupled with improved water supply. Also the booked and actual O&M cost and the salary cost are also very high, which could be brought down. Hence it needs proper up-gradation of infrastructure along with institutional restructuring and capacity building of the local staff.

Upon analysis of water resource potential and processes of procurement, processing, transmission, storage and distribution from various available sources, the Amleshwar Branch canal supply has been recommended to ensure continuous and sustained water supply to the town.

The cost break up for the proposed water supply project is as follows:

Sr.	Particulars	Cost (INR million)
1	Pipe line	60.062
2	System storage/ pond remodelling	36.320
3	Filtration plant	28.135
4	Other costs	29.237
<b>Total</b>		<b>153.754</b>

Private sector participation is envisaged for carrying out Operation and maintenance of water treatment plant, water distribution system and network.

### Means of Finance

Means of finance for the proposed project is as follows:

1. Government of Gujarat	INR 14.581 million.
2. Government of India	INR 116.651 million.
3. Urban local body	INR 14.582 million.
Total	INR 145.814 million

## Sewerage

### Project Components

The project involves design and execution of all the major components of sewerage system and will cover the core as well peripheral areas of Bharuch.

The proposed system has been designed for 25 years and it should be implemented in phases. The projected population of the city is estimated to be 326,153 by 2031.

The project is designed for a period of 25 years from 2006 to 2031 and would be executed in two phases:

- Phase 1 – Period 2006 to 2021
- Phase 2 – Period 2021 to 2031

### Project Cost

The total estimated project cost for improvement sewerage system for Bharuch is about INR 326.20 million (US \$ 7.25 million). The cost break up is as given below:

Sr.	Description	Cost (INR million)
1	Providing, lowering, laying and jointing RCC pipelines for sewerage collection and conveyance system	224.51
2	Civil work for sewage pumping stations	3.90
3	Providing and fixing pumping machinery	19.00
4	Providing and erecting complete sewage treatment plant incl. civil, electrical and mechanical works	78.79
	<b>Total</b>	<b>326.20</b>

Source: Feedback Ventures

## **Agencies to be contacted**

Gujarat Urban Development Company Limited

Gujarat Infrastructure Development Board (GIDB)

Industrial Extension Bureau

Mott MacDonald India