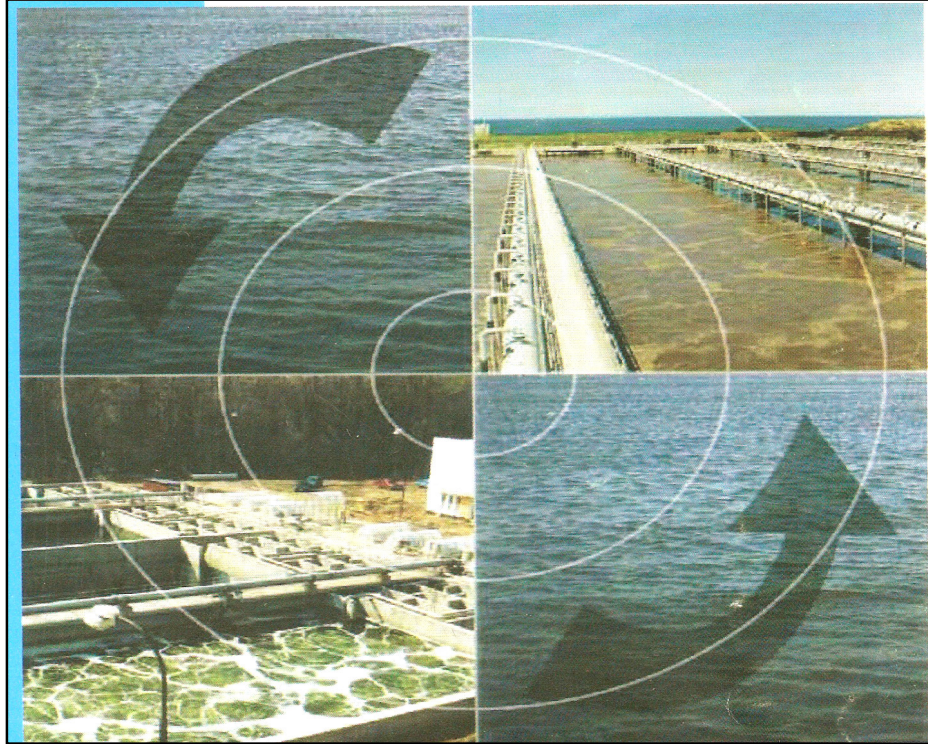


**"महाराष्ट्र सुवर्णजयंती नगरोत्थान महाअभियान"**

## **IMPROVEMENTS TO UNDERGROUND SEWERAGE SCHEME**



### **DETAIL PROJECT REPORT FOR BARAMATI MUNICIPAL COUNCIL, BARAMATI DIST.-PUNE JAN. – 2011**

PREPARED BY  
**KIKALE ASSOCIATES**  
CONSULTING ENGINEERS,  
230, Ramchand Malukchandnagar  
Near New Jain Mandir,  
Baramati, Dist. – Pune.  
PH; 98230 25340

## **EXECUTIVE SUMMARY**

**1.0** The Baramati Municipal Council has awarded the work of preparation of Detailed Project Report, Detailed Engineering and Design of the improvements to sewerage scheme for Baramati Town and Detailed Estimation of the Project to M/S Kikale Associates, Baramati.

**2.0** The survey of the Baramati town is carried out and accordingly sewerage system has been designed based on the Manual on sewerage and sewage treatment published by CPHEEO and also as per the guidelines of UIDSSMT & MSNA.

**3.0** Baramati city has a 'B' class Municipal Council and town is situated about 100 km from Pune. Baramati is one of the major town in the Pune district and is a taluka place. There is a railway station at Baramati. The total area covered by Baramati Municipal Council is 435 Ha. The population of Baramati town is 51343 souls as per 2001 census and the population projected for the year 2040 is 119461 souls. The town gets water from two sources ( viz ) Nira left bank canal and back water of Ujjani dam on Bhima river and the water supplied to the town respectively from above two sources is 6.53 mld and 5.5 mld. The rate of water supply to the town is 135 lpcd.

The details of the improvements to underground sewerage scheme are as follows:

Baramati town is divided in to 4 major drainage zones. There is an existing collection system in the town, executed by Baramati Municipal Council in the zones 1A, 1B, & 2. Hence new collection system is proposed only in zone 3. The total length of existing collection system is about 80km which has been designed for design year 2031 and length of proposed collection system for zone 3 is 6.7km. The flow of the existing collection system is presently being discharged in to the Karha River. Hence in the proposed improvements to sewerage scheme only trunk sewers are proposed to collect the flow of laterals and discharge in to pumping stations. One STP of 10 mld for zone 1A, 1B, 2 & 3 is proposed cater to flows of 2025 year (immediate year)

Project Component consists of collection system, pumping stations, and sewage treatment plant. As the pipes are to be laid in Municipal or Highway Roads, hence no land acquisition is required.

The proposed location of STP is decided in co-ordination with Municipal Council officials and it is understood that there would be no problem in undertaking of land.

Implementing agency should carry out the works in co-ordination with other related organizations (viz) Traffic Police, Public Works Department and other Local Body Authorities and in accordance with code of conduct.

## **SALIENT FEATURES**

### **1) Population**

<b>Year</b>	<b>Population including floating</b>	<b>Wastewater flow (mld)</b>
2010	71173	7.34
2025	92701	9.55
2040	119461	12.00

### **2) Collection System**

Total length = 10 Km  
Diameter = 150 mm to 600 mm  
Pipe material = RCC NP2, NP3 and NP4 pipes

### **3) Rising Main for P.S.1**

<b>Sr.No.</b>	<b>Description</b>	<b>P.S.1</b>	<b>P.S.2</b>
a)	Diameter	350mm	400mm
b)	Length	50m	750m
c)	Material	D.I k9 pipe	D.I k9 pipe

### **4) Pumping Machinery**

<b>Description</b>	<b>P.S.1</b>	<b>P.S.2</b>
a) Pumps (1 DWF)	Submersible pumps	Submersible pumps
Discharge (lps)	47	76
Head(m)	10	16
H.P	10	25
Nos	2W+1S	2W+1S

b) ½DWF	Submersible pumps	Submersible pumps
Discharge (lps)	24	38
Head(m)	10	14.5
H.P	5	12.5
Nos	1W+1S	1W+1S

### 5) Sewage Treatment Plant

Description	STP 1
Capacity	9 mld
Type	SBR Technology

### Current Status

Project is resubmitted by Municipal Council under MSNA to the Director of Municipal Administration Mumbai.

## IMPROVEMENTS TO BARAMATI UNDERGROUND SEWERAGE SCHEME

### SUMMARY OF COST

Sr. No.	Name of Subwork	Amount in Rs.
<b>1</b>	<b>Working Survey</b>	1000000.00
<b>2</b>	<b>Sewage Collection System</b>	
2A	Sewage Collection System For Zone -3	39278754.66
2B	Trunk Sewer and Outfall sewer	48629617.92
<b>3</b>	<b>Sewage Pumping Station No.-1 for Zone 1</b>	
3A	Civil Works of P.S.1	1936052.00
3B	Mechanical & Electrical Works of P.S.1	7506126.00
3C	Rising Main For PS-1	464652.00
<b>4</b>	<b>Sewage Pumping Station No.-2 for Zone 2</b>	
4A	Civil Works of P.S.2	2664728.00
4B	Mechanical & Electrical Works of P.S.2	10165472.00
4C	Rising Main For PS-2	4630106.00
<b>5</b>	<b>Sewage Treatment Plant( STP-1)</b>	70502235.00
<b>6</b>	<b>Miscellaneous Works</b>	2417622.00
<b>7</b>	<b>Effluent Reuse</b>	3802507.00
	<b>Total</b>	<b>192997872.58</b>
	Add Escalation Charge	19299787.00
	<b>Cost of the Scheme</b>	<b>212297659.58</b>
	Add 2% for VAT	4245953.19
	Add 0.25% for T.S.	5307441.49
	Add 5% for P.M.C. charges & Q.C.	10614882.98
	<b>Gross Cost of the Scheme</b>	<b>232465937.24</b>
	<b>Say Rs.</b>	<b>232500000.00</b>

