

PHYSICAL INFRASTRUCTURE

8.1 GENERAL OBSERVATIONS FROM SAMPLE HOUSEHOLD SURVEYS

Apart from electricity and transport facilities, all other facilities have a low level of satisfaction with almost half of the sample households being dissatisfied or partly satisfied. Drainage and sewerage facilities have lower percentage of satisfied households, which could be due to the lower proportion of sample dwelling units connected to these facilities. Transport facility has a good satisfaction level with about 75% of respondent households in Municipal area being satisfied

Only about one third of the sample households were ready to pay extra for improved services.

8.2 WATER SUPPLY

About 92% population is provided with safe drinking water. Source of water for both Sangli and Miraj is Krishna River through the storage created by a Kolhapur Type weir, which is periodically replenished through releases from the Koyana and Dhoni irrigation projects. Both Sangli and Miraj have their own water supply system, which includes, intake structures, treatment plants, elevated service reservoirs and distribution network. Kupwad and Wanleswadi do not get its supply from SMKMC's water supply system. The hours of supply is average 2 hours in morning and evening. Some areas in Sangli and Kupwad get less water and Gunthewari areas of Sangli and Miraj have only partial coverage. Some of the Slums areas are provided with stand posts.

The Sangli water supply system developed in four stages has 2 water treatment plants at Hirabagh and Malbungalow with 19.3 MLD and 36 MLD capacities respectively. The intake source is Krishna River which is a reliable perennial water source, but has possibilities of contamination by SheriNallah which discharges in to the river downstream of the weir. The yearly allocation of water to Sangli is 84.23 MLD, while the total supply is to the tune of 24.03 MLD including 1.02 MLD to public standposts. The distribution system includes 2 Master Balancing Reservoirs and 5 Service Reservoirs.



Miraj, which has an independent water supply system, too draws its supply from the Krishna River with its intake near Krishnaghat. The yearly allocation is 33.78 MLD, which is more than the present supply rates. The treatment plant has an installed capacity of 17.6 MLD. The distribution system includes 3 reservoirs.

There is a proposal to provide municipal water supply to Kupwad and Wanleswadi and there is also a proposal of extension of present network to the uncovered area.

Table 8.1: Information of water supply in SMKMC

Sr. No	Particulars	
1	Quantity of water supplied	8.3 60 MLD
2	Per Capita Supply (lpcd)	130 lpcd
3	Population provided with safe water supply	4,10,000 persons
4	Percentage of population provided with safe drinking water	92%
5	No. of stand post provided	497
6	Population served by stand post	62,000

Sr. No	Particulars	
7	Total no. of connections:	41,463
	Domestic	33345
	Commercial	689
	Industrial	1426

Source: Water Supply Deptt., SMKMC

Kupwad does not get its supply from SMKMC's water supply system. It depends on supply from MIDC and a private well for its water supply needs. The supply rate at which Kupwad residents get water is 40 lpcd.

7.1.1 Problems And Uncovered Areas

At present there is a problem of water scarcity in Vishrambhag, Govt. colony, Kranti Singh Society. The residents in this area face scarcity of water due to low-pressure supply. Gunthewari and slums area are partially covered by present water supply scheme.

The water supply is at very low pressure in Fort area, Nadi Ves, Boudh Vasahat, Pandharpur Road, Kripamai Hospital, Indiranagar and Lonar Gali. Gunthewari and slum areas are partially covered by present water supply scheme.

In Kupwad only about 65-70% residents have access to water supply system. Even this is dependent on MIDC water supply network.

7.1.2 Future Requirements and Plans

As per the population forecasts, the population of SMKMC area in 2021 would be about 620000 persons. The water requirements for this population (inclusive of that for Haripur, continuing the present arrangement) would be about 112 MLD (@ 150lpcd, inclusive of fire demand and 20% system losses). The total existing capacity of Sangli and Miraj is 62.36 MLD. Thus there would be a shortfall of about 50.42 MLD.

SMKMC had initiated a Water supply and Sewerage Project with private sector participation to improve the operation, maintenance and management of the existing system and to develop new projects for meeting the future demands.

Also, Maharashtra Jeevan Pradhikaran had also submitted an Augmentation proposal for Sangli and Miraj and a separate new scheme for Kupwad to SMKMC. SMKMC had resolved to accept the proposal in 1999 and further works are progressing.

8.3 SEWERAGE

About 60% population Sangli city and 67% in Miraj city are served by the sewer system. Kupwad and Wanleswadi do not have sewerage system. Sewerage system of Sangli and Miraj includes pumping stations, oxidation ponds, manholes, and pipe network. Newly developed area, Gunthewari and slum areas are not covered by the present system.



Oxidation Pond, Sangli

Oxidation ponds are used for treatment of collected sewage from these cities. Due to rapid development near existing oxidation ponds these are to be shifted to some other place and modern sewage treatment plant are to be used.

Table 8.2 Information of sewerage systems of Sangli and Miraj

Sr. No	Particulars	Sangli	Miraj
1	Area of city provided with sewer system (Sq.Km.)	22 Km ² (50%)	30 Km ² (70%)
2	Population of city covered with sewer system	1,20,000 (60%)	1,00,000 (67%)
3	Designed population with year	1,00,000 (1985)	80,000 (1983)
4	Capacity of treatment plant (mld)	12.76	9.60
5	Total length of sewer lines (Kms)	54 Km.	40 Km.
6	Total number of house sewer connection	4177	5611

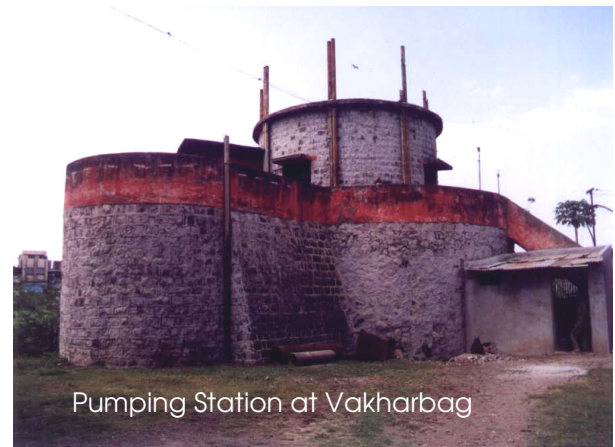
Table 8.3 Total number of service connection

Sr. No.	Category	No. Connection	of Population Served
1	Domestic	33739	3,48,000
2	Non Domestic (Commercial + Industrial)	1610	
3	Industrial etc.	323	

8.3.1 Coverage

In the Municipal Corporation area, there are 68 wards out of which only 51 wards have under ground sewerage facility (with some wards being only partially covered). Sangli and Miraj have separate sewerage system.

In Sangli, only 50% of total area is covered by the present sewerage system. Gaothan of Sangli city is fully covered by the present sewerage system. Newly developed areas, Gunthewari and slum areas are partially covered. The present sewerage system of Sangli was designed for the population of 1,00,000 as for the year 1985. The existing sewerage system caters to only 60% of the populations. The area of city provided with sewerage system is 22 Km² and serves a population of 1,20,000 (which is above the design population). Total length of sewer line is 54 Km and the diameter ranges from 150 mm to 900 mm.



Pumping Station at Vakharbag

The present sewerage system of Miraj was designed for the population of 80,000 and for the year 1983 and Max. Discharge of wastewater was 92 Lac liters per day. The existing sewerage system caters to only 60% of the populations. The area of city provided with sewerage system is 30 Km² and serves a population of 1,00,000 (which is above the design population but still lesser than the existing population). Total length of sewer line is 40 Km.

8.3.2 Future Requirements Plans

With the estimated population of 620000 in 2001, about 74.4 MLD of sewage water would be generated (excluding the storm water run off, which has to be catered by a separate storm water drainage system). The

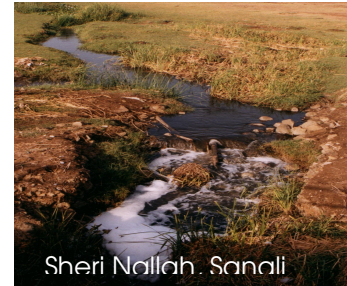
existing capacities in Sangli and Miraj sewerage system are only for 20.7 MLD. Thus there would be a huge deficit of about 53.7 MLD.

SMKMC had initiated a Sewerage Project with private sector participation to improve the operation, maintenance and management of the existing system and to develop new projects for meeting the future demands.

8.4 STORM WATER DRAINAGE

Separate storm water drainage system is virtually non-existent in the SMKMC area, except that under implementation along 100' road and the natural nallahs.

SMKMC area has numerous small natural nallahs apart from relatively larger Sheri Nallah, as depicted in the map enclosed. At many places these nallahs have been filled up or its effective width reduced and the alignment changed to suit the needs for construction activities. Of late the Corporation is active in preserving and improving these nallahs.



Sheri Nallah, Sangli

8.5 SOLID WASTE MANAGEMENT

Total waste generated in corporation area is about 190 ton, out of which 175 tons is collected. Solid waste disposal is taken care of by land filling. Corporation area is divided into four zones and each zone has its own set of sanitary inspector. There are 19 vehicles for collecting and dumping waste to land fill sites. There are 726 person employed for this purpose and corporation has 19 vehicles to collect and dump waste to the landfill site.

There are two landfill sites:

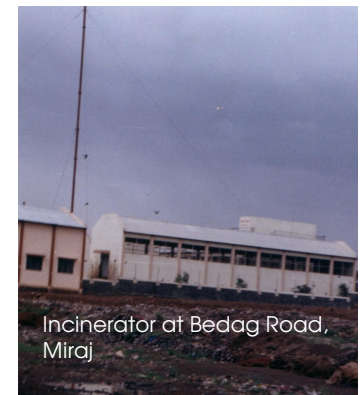
1. For Sangli, solid waste is collected and transported to Samdoli site, 5 Kilometers away from Islampur road. Total area of the site is 32 acres.
2. For Miraj and Kupwad, solid waste is collected and transported at a site 4 Km. away from the Bedag road. Total area of the site is 22 acres.

Facility of *incinerator* (especially for safe disposal of bio medical waste) is provided at the disposal site near Bedag Road.

The problems as reported by the department are the lack of human resource, insufficient number of vehicles and lack of modern vehicles. Lack of good approach road to the dumping site also acts as a hindrance to efficient working.



Solid waste Landfill at Bedag



Incinerator at Bedag Road, Miraj

8.6 TELECOMMUNICATION

There are 11 telephone exchanges in SMKMC, out of which 9 are in Sangli and two are in Miraj. The equipped capacity of the telephone exchange is 48150 and number of working connection is 41335.

Table 8.4 Telephone exchanges in SMKMC

S. No.	Name of Exchange	Type/No. of Exchange	Eqpd. Cap.	Wkg. Conn
1	Miraj	MBM	10100	8954
2	Miraj Industrial Estate	MBM	2000	1582
3	Sangli I	E-10 B	15000	14422

S. No.	Name of Exchange	Type/No. of Exchange	Eqpd. Cap.	Wkg. Conn
4	Sangli II City	RLU	4000	3667
5	Sangli III MIE	RLU	5000	3896
6	Sangli IV Vishrambagh	RLU	5800	5155
7	Sangli V Market Yard	RLU	1300	991
8	Sangli VI Kupwad	RLU	900	873
9	Sangli VII Kupwad MIDC	RLU + 0.5 K CDOT	1850	1267
10	Sangli VIII ISDN	CDOT ISDN	1200	528
11	Sangli XI Patrakarnagar	RSU	1000	0
	TOTAL	48150	41335	

8.7 ELECTRICITY

The source of supply is mainly from two-tap connection. The first connection is 220 Kv Miraj Sub station, which serves the area under Miraj city, MIDC Kupwad & MIDC Miraj and second connection is 110 KV Vishrambhag sub station which serves area under Sangli city.

The total coverage Area in Sangli Miraj Kupwad Corporation consists of approximately 65 sq.km. There are six 33/11Kv substations and total number of 11 KV feeders is 31. The details of substations and feeders are given below:

1. 33/11 KV Sangli City S/stn
2. 33/11 KV Madhavnagar S/stn
3. 33/11 KV MIDC Kupwad s/stn
4. 33/11 KV Chakan Oil Mill S/stn
5. 33/11 KV Prakash Agro S/stn.
6. 33/11 KV Krishna Ghat Miraj

The consumption of electricity is 250 MU per year & max. demand is 75 MW in a year and total number of District Transformer Center is 664. Details of type and number of connections are given in table below:

Table 8.5 Electricity Connections in SMKMC

Sr. No.	Type of connections	Nos.
1	Residential	69721
2	Commercial	17487
3	Industrial	3577
4	Agricultural	1596
5	ST. CT.	248
6	Public Water works	22
	Total	92651

8.8 TO SUMMARIZE

1. The sample household surveys reveal that apart from electricity and transport facilities, all other facilities have a low level of satisfaction with almost half of the sample households being dissatisfied or partly satisfied.
2. About 92% population is provided with safe drinking water. Source of water for both Sangli and Miraj is Krishna River through the storage created by a Kolhapur Type weir

3. Both Sangli and Miraj have their own water supply system, which includes, intake structures, treatment plants, elevated service reservoirs and distribution network. Kupwad and Wanleswadi do not get its supply from SMKMC's water supply system.
4. The Sangli water supply system has 2 water treatment plants at Hirabagh and Malbungalow with 19.3 MLD and 36 MLD capacities respectively. The distribution system includes 2 Master Balancing Reservoirs and 5 Service Reservoirs.
5. Miraj treatment plant has an installed capacity of 17.6 MLD and the distribution system includes 3 reservoirs. The existing water supply network faces problems of coverage and inadequate supply levels.
6. As per the population forecasts, the population of SMKMC area in 2021 would be about 620000 persons. The water requirements for this population (inclusive of that for Haripur, continuing the present arrangement) would be about 112 MLD (@ 150lpcd, inclusive of fire demand and 20% system losses). The total existing capacity of Sangli and Miraj is 62.36 MLD. Thus there would be a shortfall of about 50.42 MLD.
7. SMKMC has already initiated a Water supply and Sewerage Project with private sector participation to improve the operation, maintenance and management of the existing system and to develop new projects for meeting the future demands.
8. About 60% population Sangli city and 67% in Miraj city are served by the sewer system. Kupwad and Wanleswadi do not have sewerage system. Sewerage system of Sangli and Miraj includes pumping stations, oxidation ponds, manholes, and pipe network. Newly developed area, Gunthewari and slum areas are not covered by the present system.
9. The sewerage system of Sangli and Miraj has exceeded their design capacities way back in 1985 and hence needs up gradation, while Kupwad and Wanlesswadi needs to be incorporated into the upgraded sewerage system.
10. Separate storm water drainage system is virtually non-existent in the SMKMC area, except that under implementation along 100' road and natural nallahs.
11. Total waste generated in corporation area is about 190 ton, out of which 175 tons is collected. Solid waste disposal is taken care of by land filling at two sites.
12. There are 11 telephone exchanges in SMKMC, out of which 9 are in Sangli and two are in Miraj. Although the existing equipped capacity is higher than the number of working connection, up gradation is necessary to meet the increased demand during the plan period.
13. The consumption of electricity is 250 MU per year and max. demand is 75 MW in a year. There are two Sub station (220 Kv Miraj, 110 KV Vishrambhag). The total coverage Area in Sangli Miraj Kupwad Corporation consists of approximately 65 sq.km. There are six 33/11Kv substations and total number of 11 KV feeders is 31.