

City Development Plan - Jalgaon (Draft)

under UIDSSMT

Jalgaon City Municipal Corporation



GRUPE
SCE
INDIA

Pre Final draft_ 02



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ABBREVIATIONS

JNNURM	Jawaharlal Nehru National Urban Renewal Mission
UIDSSMT	Urban Infrastructure Development Scheme for Small and Medium Towns
IDSMT	Integrated Development of Small and Medium Towns
AUWSP	Accelerated Urban Water Supply Programme
JCMC	Jalgaon City Municipal Corporation
DTP	Department of Town Planning
HUDCO	Housing and Urban Development Corporation Ltd.
CIDCO	City and Industrial Development Corporation
MSRTC	Maharashtra State Road and Transport Corporation
MIDC	Maharashtra Industrial Development Corporation
MJP	Maharashtra Jeevan Pradhikaran
MHADA	Maharashtra Housing and Area Development Authority
MSEB	Maharashtra Electricity Board
MSEDC	Maharashtra State Electricity Distribution Corporation
BPMC	Bombay Provisional Municipal Corporation
NHAI	National Highways Authority of India
PWD	Public Works Department
PHED	Public Health and Engineering Department
UDPFI	Urban development plans formulation and implementation
SCE	Stratégie Conseil Etudes
CDP	City Development Plan
CIP	City Investment Plan
DP	Development Plan
BUSP	Basic Services for Urban Poor
CAGR	Compound Average Annual Growth rate
ESR	Elevated Water Reservoir
GLSR	Ground Level Storage Reservoir
ICT	Information & Communication Technology
LPCD	Litres per Capita/Day
CI	Cast Iron
MLD	Million Litres /Day
GPS	Global Positioning System
GIS	Geographical Information Systems
MIS	Management Information System
ROB	Railway Over Bridge
STP	Sewage Treatment Plant
O&M	Operation and Management
PPP	Public Private Partnership
SWOT	Strengths, Weakness, Opportunities and Threats



PART – I



1.0. PROJECT BACKGROUND

1.1 BACKGROUND

The urban population of India, according to the census of 2001, was 285 million, accounting for nearly 29 per cent of the country's population. About 65% of the urban population in India lives in class I cities with a population of 100,000 or more. At present the number of metropolitan cities i.e. those with million plus population cities has increased to 35. The number of people living in Indian metro is as much as 107.88 million or 37.80% of the total urban population and these numbers are likely to grow in the coming years. Despite impressive economic growth during the last ten years and an appreciable increase in living standards of the middle classes, urban poverty poses a serious challenge.

Most towns and cities have a serious shortage of water supply, sewerage and sanitation, housing, developed lands, transportation, communication, and other civic facilities. A large proportion of the urban population lives below the poverty line¹ and this has resulted in a lack of urban infrastructure, improper civic service and a lack of housing for the urban poor and deteriorating health & environmental facilities for the urban inhabitant. The state of cities and towns in India presents a picture that is generally far from satisfactory, and this is amplified by the rapid growth of urbanization. However, the current state of affairs in most of our town and cities is unsatisfactory on several parameters that include urban governance, level of service delivery and financial resources. All these factors will have a significant negative economic consequence if not addressed in a planned manner. Urban Local Bodies and other institutions are responsible for providing basic services notwithstanding the Constitution (74th) Amendment Act, 1992.

Most of the urban local bodies are weak in financial as well as institutional terms. The main shortcoming of urban local bodies is that they are starved of resources on account of their inability to effectively use their revenue-raising powers, particularly those relating to property tax and user charges. Given the current state of affairs of our cities, their incompatibility with the country's socio-economic objectives and India's growing role in the world economy, the Government of India launched the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in the Financial Year 2005-06. This mission will be in place for the next seven years and it aims at creating economically productive, efficient, equitable and responsive cities and put in place the planned urban perspective frameworks for the next 20-25 years. The Jawaharlal Nehru National Urban Renewal Mission focuses on:

- Improving and augmenting the physical, economic and social infrastructure of cities;
- Ensuring basic services to the urban poor including security of tenure;

¹ According to the Planning Commission, it is 2400 calories/person/day in rural areas and 2100 calories/person/day in urban areas. Converted into rupees, it comes to Rs 228.9/person/month in rural areas, and Rs 269.10/person/month in urban areas. Any household getting less than this much is known as living in Below Poverty Line; - About 26% of total Population living in Below Poverty Line in India – 2006(estimates).



- Initiating wide-ranging urban sector reforms whose primary aim is to eliminate the legal, institutional and financial constraints that have impeded investment in urban infrastructure and service; and
- Strengthening municipal governments and their functioning with respect to the provisions of the Constitution (74th) Amendment Act, 1992.

The Government of India has launched the Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) in the Financial Year 2005-06. This scheme will be in place for the next seven years with an objective of development of urban infrastructure in a planned manner in all cities & town, other than cities covered under the JNNURM in the country. It shall subsume the existing schemes of Integrated Development of Small and Medium Towns (IDSMT) and Accelerated Urban Water Supply Programme (AUWSP). The UIDSSMT focuses on:

- Improve infrastructural facilities and to help create durable public assets and quality oriented services in cities & towns;
- Enhance public-private-partnership in infrastructural development; and
- Promote planned integrated development of towns and cities.

The Government of India proposes to allocate cities funds in the ratio of 80:10 between Central Government & State Government and the balance 10% could be raised by the nodal/implementing agencies from the financial institutions. Allocation of funds among states will be based on the state's urban population (excluding cities covered under JNNURM) to total urban population in the country.

The scheme will cover the **'Admissible Components'** in the following areas:

- Urban Renewal: i.e. redevelopment of inner (old) city areas (this would include items like widening of narrow streets, shifting of industrial/ commercial establishments from non conforming (inner city) to conforming (outer city) areas to reduce congestion, replacement of old and worn out water pipes by new/ higher capacity ones, renewal of sewerage/ drainage/ solid waste disposal systems etc.;
- Water supply (including de-salination plants) and sanitation;
- Sewerage and Solid Waste Management;
- Construction and improvements of drains/ storm water drains;
- Construction/ up gradation of roads, highways/ expressways;
- Parking lots/ spaces on Public Private Partnership basis;
- Development of Heritage areas;
- Prevention and rehabilitation of soil erosion/ landslides only in case of Special Category States where such problems are common; and
- Preservation of water bodies.



‘Inadmissible Components’ are:

- Power and telecommunication works;
- Rolling stock like buses and trams;
- Health and educational institutions;
- Urban Transport (MRTS, LRTS etc.);
- Wage employment programmer and staff component; and
- Maintenance works.

Thus, to be eligible for the grant assistance under UIDSSMT, the Government of India requires cities to:

- Formulate an agreed vision, setting strategic thrusts for short, medium & long - term City Development Plan (CDP) to align with citizens’ interest and priorities;
- Prepare project proposals in accordance with the CDP;
- Capital /City Investment Plan for next seven years origin; and
- Draw up a timeline for implementing the urban sector reforms.

Government of India, Ministry of Urban Development/Ministry of Urban Employment and Poverty Alleviation will sign a Memorandum of Agreement (MoA) with the state government and the city, and release funds in accordance with the payment schedule that will form a part of the Memorandum of Agreement (MoA). The Jalgaon City Municipal Corporation has retained the services of Groupe SCE India Private Limited to prepare the City Development Plan under the UIDSSMT based on the JNNURM guidelines for Jalgaon.

1.2. JALGAON – URBAN INFRASTRUCTURE DEVELOPMENT SCHEME FOR SMALL AND MEDIUM TOWNS (UIDSSMT) PROGRAMME

Jalgaon city has experienced rapid urbanization in the last decade and a half, with population growth and an increase in urbanized extent of the city. The city thus faces an enormous demand for quality civic infrastructure. Apart from being highly strained on essentials like water, drainage and sewerage, Jalgaon faces other common challenges like accumulation of garbage, traffic congestion, deteriorating roads and pollution.

Having formulated the vision for a structured development of the city, it would be binding for Jalgaon city to commit to institutional and financial reforms to create and attract resources for providing adequate infrastructure and effective public-private partnerships for delegated maintenance in the urban infrastructure sector. This would also boost the city’s character as an investment destination. Industry too has a responsibility and a larger role to play in urban governance by adopting a more proactive approach.

1.3 OBJECTIVES

- Improve infrastructural facilities and help create **durable public assets** and **quality oriented services** in cities and towns;
- Enhance **Public Private Partnership** in infrastructural development; and
- Promote planned **integrated development** of Jalgaon.



The CDP further elaborates on how the Corporation intends to manage municipal finances in a modern and transparent way; implementation of designated projects, and to execute urban planning and governance in line with an established framework.

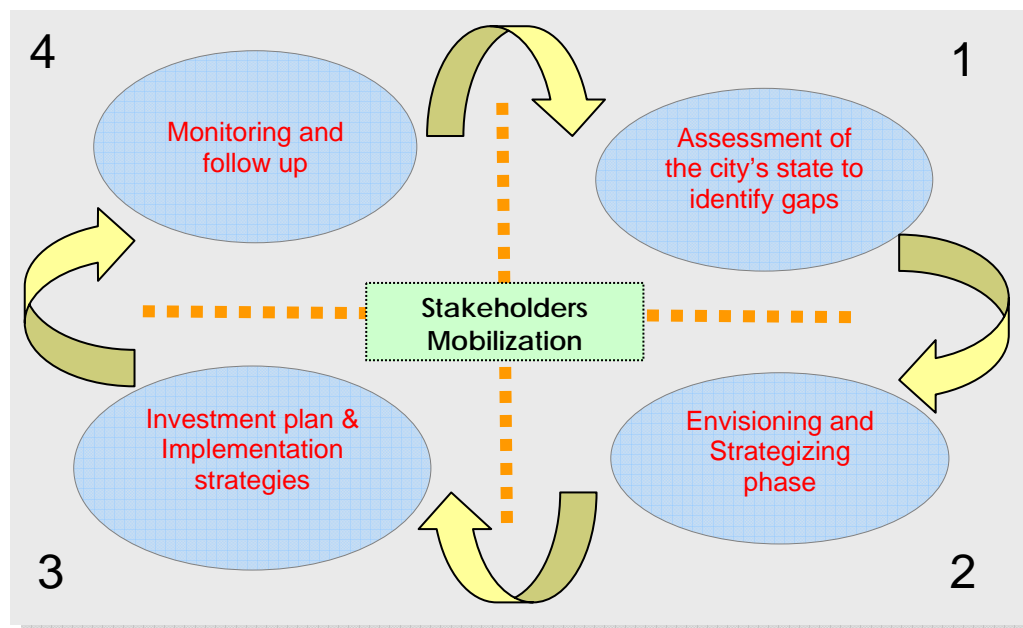
Finally, the CDP reveals the Corporation's strategy to **manage its resources**, i.e. how it intends to increase revenues and expand its tax base to allow for self-sustaining urban service delivery; improve credit worthiness; and recruit and retain a skilled workforce.

1.4 THE CDP PROCESS: APPROACH AND METHODOLOGY

The formulation of the CDP for Jalgaon is divided into the following stages:

1. Identification and Mobilization of Stakeholders;
2. Assessment of the City and Gap Analysis;
3. Formulation of City Vision and Strategic Actions;
4. Preparation of the Investment and Implementation Plans; and
5. Preparation of the Final CDP Document.

DIAGRAM 1: Stages of CDP Formulation



Stage 1 – Reconnaissance, Identification and Mobilization of Stakeholders

The first stage included:

- Collection of data from the Corporation and other agencies to gain a preliminary understanding of the city ;
- Identification of stakeholders from diverse backgrounds like Industries Associations, Business Associations, Resident Welfare Associations, NGOs, citizens' groups, line agencies involved with the Jalgaon City Municipal Corporation (JCMC) and other parastatal agencies such as Public Works Department (PWD), Department of Town Planning, National Highway Authority of India, Maharashtra State Road Transport Corporation



(MSRTC), Maharashtra Industrial Development Corporation (MIDC), the Maharashtra State Electricity Board (MSEB) etc ; and

- Conducting a rapid assessment of the city, identification of underlying issues and emerging opportunities of the city and the Corporation.

Workshops with the JCMC officials:

Based on the findings of the above tasks, a workshop was conducted for JCMC officials and the line agencies to understand their perspective on Jalgaon, its issues and technical details of the existing infrastructure. During this workshop, the objective of the UIDSSMT programme was specified to them, they were asked to identify issues concerning the city, and the strategies required to address these issues and future plans.

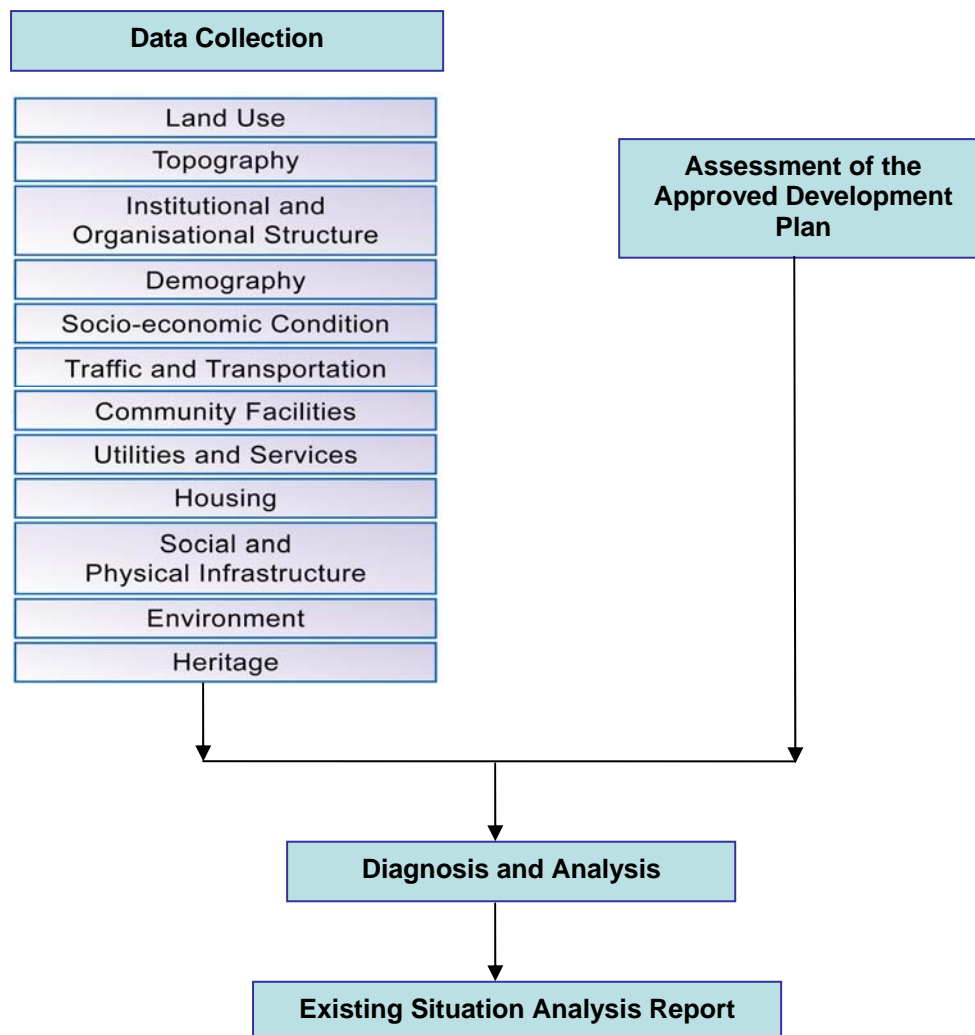
Stage 2 - City Assessment and Gap Analysis

The second stage comprised of collection of data as shown in Diagram 2 (below) and their synthesis to carry out an assessment of the city.

- Collection of data additional data pertaining to all sectors such as demography, economy, civic services, physical features, etc. was also procured and a detailed analysis was undertaken of the existing municipal services and also the operating efficiency of the core municipal services provided by the Corporation;
- Conducted credit assessment to provide insight into the Corporation's current performance and financial management practices, as well as provide an opinion on the ability of the Corporation to meet its financial commitments on a timely basis ;
- Assessing and fixing of norms for each civic service were carried out, based on desired levels of services as per stake holder's views or available policy documents ; and
- Identification of gaps in all core municipal services for a horizon period of 25 years.



DIAGRAM 2: Stages of CDP Assessment and Analysis



A SWOT Analysis was done after the city assessment and gap analysis stage so that the strengths, weaknesses, threats and opportunities of Jalgaon may be ascertained.

Stage 3 - Formulate City Vision and Strategic Actions

The third stage consisted of the development of a perspective vision for the city based on the emerging strengths and weaknesses from the City Assessment stage.

Based on the findings of Stage I and II a workshop was conducted to appraise the citizens about the UIDSSMT process, provide facts about Jalgaon, and urge them to identify challenges, which Jalgaon needs to overcome.

The stakeholders hailed from across the spectrum, including citizens, resident welfare association members, medical practitioners, advocates, and NGO representatives, corporators and the State Government Departments. The stakeholders were appraised about the objectives of UIDSSMT and the CDP process, and the findings of Stage I and II. They were introduced to what the **Options and strategies** were, linking with **reform agenda** and for **prioritization** of projects.



Indicative List of Focus Areas

Water Supply	Urban Renewal i.e. rejuvenation of the CBD and redevelopment of old areas.
Sewerage and Sanitation	
Storm Water Drains	Heritage preservation
Solid Waste Management	Lake Rejuvenation
Roads	

DIAGRAM 3: Focus areas under UIDSSMT

Further, through consultation, a consensus on the identification of issues and strategies in the area of urban infrastructure and an overall **Vision** for Jalgaon for the next 25 years was developed.

Stage 4 - Prepare Investment and Implementation Plans

The fourth stage consisted of:

Identification of Projects for City Investment Plan:

- Based on the available information from Jalgaon, unit cost for each service component was arrived at, and gaps and normative costs were identified;
- Based on the priorities of JCMC and those arrived at through the various consultations, investment phasing was carried out;
- Based on the UIDSSMT funding pattern and JCMC's financial position, investment sustenance was assessed.

Strategic implementation plan:

- An implementation plan for all the prioritized projects/actions has been prepared in a logical sequence based on the phased investment and availability of resources;
- A detailed capital investment plan for the identified projects has been prepared; and
- In addition, a Financial Operating Plan has been prepared to outline the preliminary budget and clarify financing assumptions and responsibilities for implementation.

Stage 5 – Final CDP Document

The Draft Final CDP was then presented to officials of JCMC and the Standing Committee members. Based on their feedback the consultants then adopted the draft CDP for final submission to the Government of Maharashtra.



2.0 JALGAON CITY – STATE OF CITY REPORT

2.1 ABOUT JALGAON

Jalgaon District is located in the north-west region of the state of Maharashtra. It is a major business centre for tea, gold, pulses, cotton and bananas. Its production of bananas and cotton, especially by resorting to drip irrigation, has created a role model for cultivators in other parts of India.

Jalgaon City is the headquarter of the Jalgaon District. It is located within the productive, irrigated agricultural region of Khandesh, and is a significant collection and distribution center of agricultural goods and agriculture-based industry. The leading products are **jowar**, **raw cotton** and **banana**; the region's rich volcanic soil is particularly well suited to cotton production. Jalgaon is an important center for cotton-textile and vegetable oil mills, particularly **groundnut**-oil and hydrogenation plants.

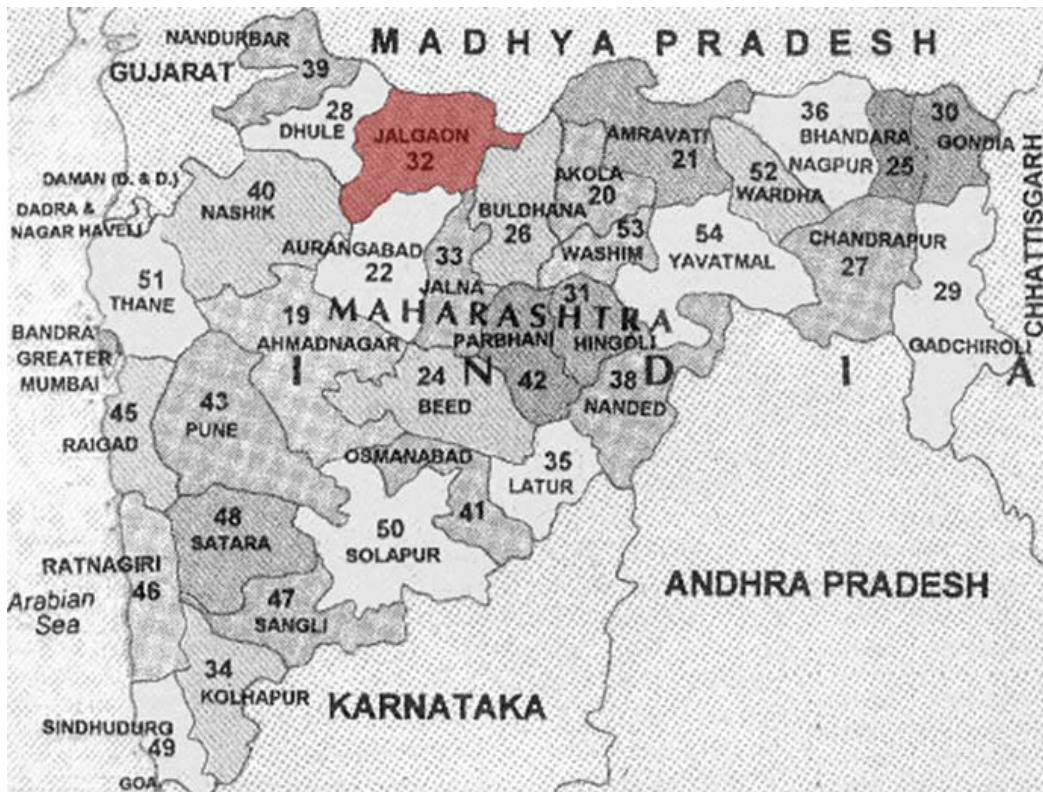
Jalgaon is well known for its **bananas** production. The city is also famous for its gold market, which has a reputation of being pure. The Jalgaon city, on its peripheries, has various well-known & reputed industries such as irrigation, pipe, forging, cloths etc. India enjoys a whopping 25% share of Banana production in the World and the Jalgaon district has a 2% share in the overall banana market². Modern Jalgaon now boasts of vast industrial areas, educational institutes and good hospitals. The Jalgaon railway junction serves routes to Mumbai, Nagpur, Delhi and Surat. The city is well developed with good roads, shopping centers and residential areas with a moderate infrastructure in communication and transport.



Map 1: India map highlighting Maharashtra State.

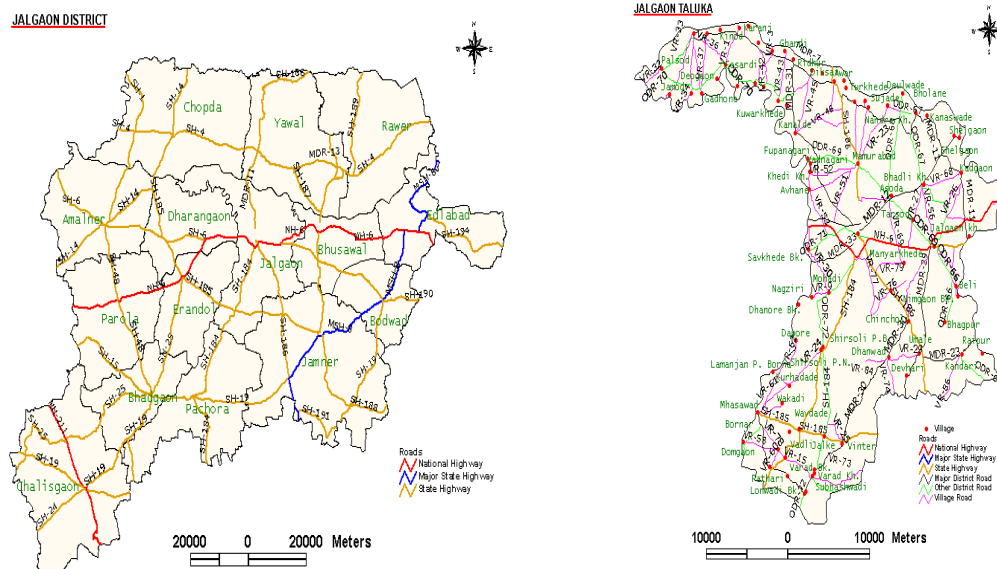
2. Recent survey of Food and Agriculture Organization





Map 2: Maharashtra map indicating Jalgaon district

For administration, Jalgaon district comprises of four sub-divisions, which are Jalgaon Amalner, Bhusawal and Pachora. The **Jalgaon City Municipal Corporation** is responsible for managing the city of Jalgaon.



Map 3: District and Taluk connectivity



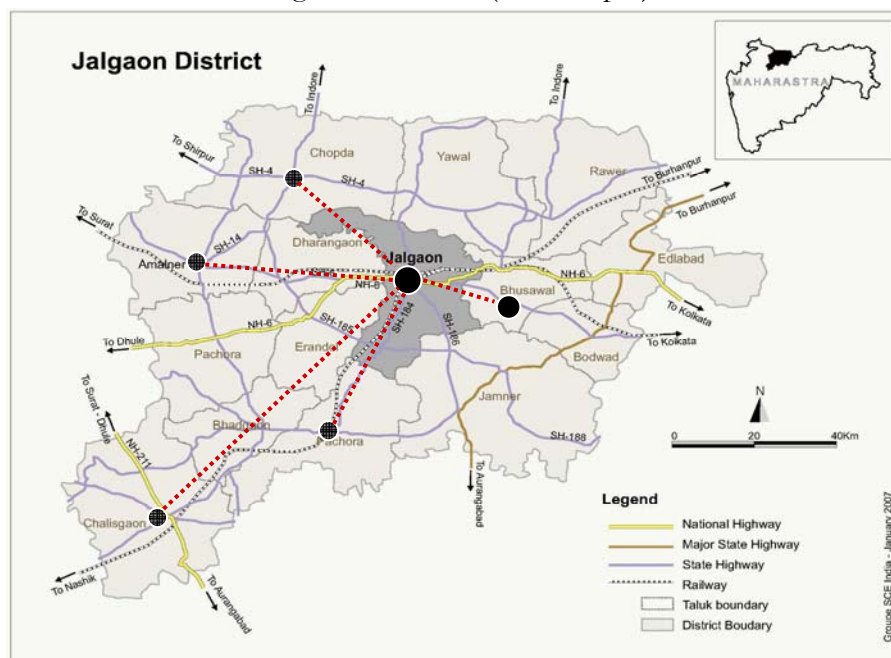
2.2 LINKAGES AND CONNECTIVITY

Road Linkages: Jalgaon city is well connected by road linkages to important places of the State. The National Highway No. 6 from Mumbai – Nagpur passes through the length of the city and is the central axis of the city of Jalgaon. Further, the State Highways are Jalgaon – Ajantha and Jalgaon – Pachora that pass through the South side of the City and the Jalgaon – Mamurabad State Highway that passes through the North of the city. Major district roads are Pimprale – Avhane towards the North – West, Jalgaon – Saokhede on South - West, Pimprala – Mamurabad on North and Jalgaon – Pimprala towards the West.

Rail Linkages: The city of Jalgaon is situated at the centre of the district geographically, and is well connected by the broad gauge lines of Central and Western Railway to Bombay, Delhi, Ahmedabad, and Calcutta. The major railway junction is located about 22 km away from the city (at Bhusawal) which is a major junction of Central & Western railway of the Mumbai – Delhi and Mumbai – Howrah line.

Air Linkage: The nearest airport is situated at Aurangabad, which is 155 km away from the city. A tender has been floated for the proposed development of the Jalgaon Airport on BOOT basis³ or through Public Private Partnership basis.

Regional Linkages: Jalgaon and Bhusawal are the most important towns as far as economic, administrative and educational facilities are concerned. Therefore, they are, termed as regional center for first order settlements. The four towns such as Amalner, Chopda, Pachora and Chalisgaon are the settlements having second level importance, therefore they are, termed as sub-regional centers or second order settlements. Twelve settlements both in urban and rural categories are having third level importance with both agricultural as well as non-agricultural base (refer Map 4).



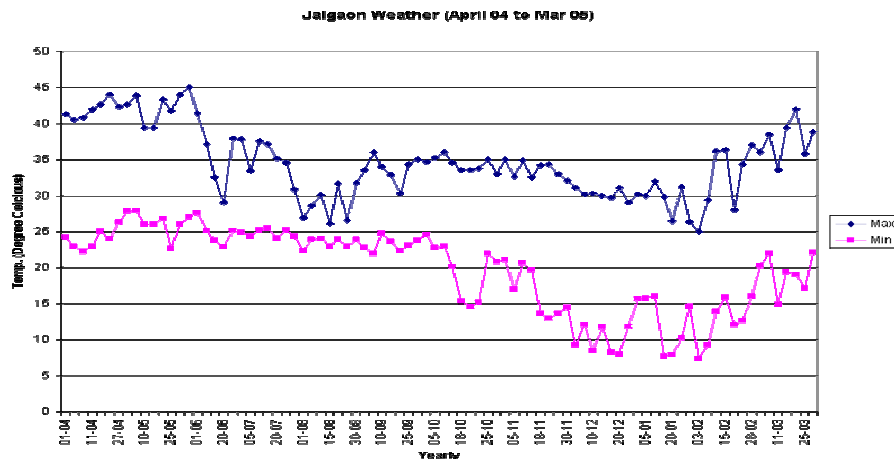
Map 4: Regional Linkages in Jalgaon District



2.3 GEOGRAPHY & GEOLOGY

Climate and Rainfall: The climate of the town is hot and dry except in the monsoon period. Wind directions are generally south - west to north - east. The monsoon months of June to September receive about 99% of the annual rainfall. The average rainfall was about 731.40mm between January and December in the year 1991. The average maximum and minimum temperatures in the year 1991 were 34.93degrees and 10.5 degrees respectively.

Diagram 4: Temperature during the period of April 2004 – March 2005.



(Source: ejalgaon website)

The maximum temperature during the period of April 2004 – March 2005 was 31.8 degree centigrade and minimum temperature was 22.6 degree centigrade, average maximum & minimum temperature during the period was 45.0 & 7.3 degree centigrade respectively.

Topography: The town is situated in a generally flat terrain. A gentle slope is present towards the South, as hilly areas are present along the Shir soli and Mohadi Roads and along the South West along Girna Pumping Station Road. The Girna River runs in the north - south direction along the western boundary of Jalgaon Town near Nimkhedi village. The Mehrun tank is situated at the southern side of the town. The areas around the tank are scenic in nature. The southern and northern sides of the town are rich agricultural lands. The town is situated at 201m above mean sea level. The city is bounded by the Satpuda ranges in North and Ajanta, Satmala and Chandur ranges in South.

2.4. PLACES OF IMPORTANCE & SIGNIFICANCE OF THE CITY WITHIN THE STATE

The world famous Ajantha and Ellora caves are only about 55 & 185kms away from the city respectively. The Jalgaon city forms an important stop over point for transit tourism. Some old temples viz., Balaji Temple, Baliram Temple, Bhawani Temple, Ram Temple, Omkareshwara Temple and Swami Vyankatesh Temple in Jalgaon are some of the places of attraction in the city. Mehrun Lake is a picnic spot of scenic beauty for the people.



3.0. ECONOMY

3.1. Economic Base

Maharashtra is one of the most developed economies in the country. The per capita income in the state stood at US\$ 621 in 2003-04⁴. Jalgaon city is the trade and commercial center of North Maharashtra Region and the base of the Agro- based industries. Favorable government policies and facilitation of infrastructure have seen the industrial development of the city change through various departments such as the Maharashtra Industrial Development Corporation (MIDC). Other than the agro base of the economy some of the other prominent industrial players in the district include Marico, Jalgaon District Co-operative Milk Producer's Union, Jain industries, VIP, Supreme, Orient Cement, Nilons, Wipro, Raymond, K B Brakes and Kwaliti Ice Cream etc.

3.2. Employment Profile

The Workforce Participation Rate (WPR) in the city has slightly increased from 1991-2001. Although, there has been a growth in the absolute number of total workers, the proportion of non-workers has reduced. In 1991, 87.92% of the workers were male with only 12.08% of workers being women. However, in 2001, 87.05% of the workers were male and 12.95% were women indicating increased female participation in work.

Table 1: Total workers in 1991 and 2001

Occupation	1991				2001			
	Male	Female	Total	%	Male	Female	Total	%
Main workers	59228	8135	67363	27.81	89,017	11,456	100473	27.00
Marginal Workers					4,872	2,508	7380	2.00
Non-Workers	67794	17036	174830	72.19	99,607	161,158	260765	70.70
Total workers	59228	8135	67363	27.81	93889	13964	107853	29.30

(Source: Census of India)

⁴ Economic Survey of Maharashtra – 2003-04



3.3. Occupational Structure

The occupational structure of the city is divided into the Primary, Secondary and the Tertiary sectors. Primary Sector includes cultivation, agriculture, livestock, fishing, hunting, mining and quarrying. Secondary Sector includes workers from manufacturing and processing industries, household industries and others. Construction industry is part of the secondary sector as well as tertiary sector. Tertiary Sector includes commerce, trade, transport, storage, communication and other services. The workforce force participation rate in primary, secondary & tertiary sector is 4.7%, 3.2% & 92.10% respectively.

3.4. Industrial Sector

Maharashtra Industrial Development Corporation (MIDC) is responsible for the development of industrial estates / facilities in the State, Region and City. It includes major industrial developments in the three Districts of North Maharashtra region. In 1985, a separate industrial area was established in the southeastern part of city, 1200 industries were established, and 30% of this land is yet to be occupied. There are 24 large and medium scale industries (agro, textile and engineering) supporting about 4,500 employees. The total investment of these units is about 151.55Crores as of 2003-04⁵.



Photos: Industrial facility within the MIDC area

3.5. Trade and Commerce

The city's economy is driven largely by trade and commerce. It receives about 40% of the total market arrivals in the District. The per capita income of Jalgaon city is Rs. 2,666 in constant price and about 22.12 % of the workforce in the city is engaged in trade and commerce. There are 8466 commercial establishments in the city out of which 4534 is municipal establishments and the rest owned by the private. The city acts as a base for exchange of agriculture products & commodities within the region.

The Jalgaon region is well known for the production of jawar, dal, bajra, cotton, groundnuts etc. The bulk of this produce is marketed by the Agriculture Product Market Committee. The chief export commodities of the district are bananas, vanaspathi ghee, milk and milk products, corn, cotton etc. and import commodities are food grain, tea, cloth, oilseeds, fertilizers, medicines, machinery, electrical equipments etc.

About 33.49% of total workers were engaged in Spinning and Weaving and about 21.38% of workers were engaged in Ginning and Weaving. It shows that, more than 54% of total industrial workers are engaged in textile-oriented industries and rest of it is agriculture oriented industrial workers (refer table 2).

Table 2: Industrial scenario in the Jalgaon Region.



Sl. No.	Type of Industries	No. of large scale units	No. of Workers	% of total workers
1.	Dairy products	11	359	2.17
2.	Dal mills	11	179	1.08
3.	Sugar mills	03	1348	8.15
4.	Vanaspati Ghee	02	685	4.14
5.	Oil mills	29	851	5.14
6.	Ginning and Pressing	42	3537	21.38
7.	Spinning and Weaving	07	5541	33.49
8.	Cotton Textiles	1	33	0.20
9.	Printing	02	33	0.20
10.	Chemical products	04	104	0.63
11.	Cement products	06	109	0.66
12.	Iron industries	02	72	0.44
13.	Fabricated Metals	02	71	0.43
14.	Industrial Mechanical	01	32	0.19
15.	Motor Repair	11	826	4.99
16.	Other repair	02	996	6.02
17.	Others	35	1771	10.70
	Total	171	16547	100.00

(Source: Environment Status Report 2004-05)



Photo: Typical trade & services

3.4 Major issues Affecting The Industrial Growth of Jalgaon

- Untreated industrial effluents directly led to the Primary Nallas. As such, there is no common effluent treatment plant in this area for the treatment of effluent generated from Large Scale & Small Scale Industrial Units. The hazardous waste dumping in open land and this area does not have the underground drainage system for collection of industrial and domestic wastewater.
- Lack of a transportation interchange hub within the MIDC area especially for parking, loading and unloading etc.
- Inadequate support & hospitality sectors such as hotels and convention centers/ facilities.
- Lack of shared good quality basic infrastructure such as roads, underground drainage etc



4.0 CITY ASSESSMENT AND SITUATION ANALYSIS

4.1 GROWTH TRENDS

As the District headquarters Jalgaon is the largest urban agglomeration of the Jalgaon District. Jalgaon city ranks 16th amongst other cities in Maharashtra with a total population of 3.68lakhs and decadal growth rate of 51.9%⁶.

The Municipal area consists of the Old Municipal limit, which covers an area of 11.45sqkm and an additional area of 56.78sqkm, which was included in the Corporation limit. The Old Municipal limit comprises of the Jalgaon Gaothana, and the new extensions encompass the Pimprala, Khedi, Nimkhedi, Mehrun, Avhane, Kusumbe, Asoda and Manyarkhede villages. The Development Plan of Jalgaon, prepared in 1991 and sanctioned in 1993, comprises of seven planning sectors (58 wards) and had projected a population of 3.4lakhs by 2011 at an assumed decadal growth rate of 46.3% for 1991-2001.

4.1.1 Physical Barriers and Connectivity:

Jalgaon city is bound by the Satpuda ranges in North, and Ajanta, Satmala and Chandur ranges in South with the Girna River running in the West. Road linkage - National Highway - 06 from Mumbai - Nagpur passes through the breadth of the city and is the central axis of the city of Jalgaon. Further, the State Highway of Jalgaon- Ajantha and Jalgaon- Pachora, pass through the South of the city and the Jalgaon- Marmurabad State Highway pass through the North of the city. Rail connectivity - Jalgaon City is situated at the centre of the district and is well connected by the broad gauge lines of both the Central and Western Railway to Bombay, Delhi, Ahmedabad, and Calcutta.

4.1.2 Demography and Population Growth

The growth rate of Jalgaon city has been on the rise from 1951 to 2001. The city has registered a decadal growth rate of about 51.94% and an average annual growth rate of 5.19% during 1991-2001. For analysis, the area under the jurisdiction of JCMC is considered. The trend of decadal population growth rate has also increased four times during 1981 -1991 due to the extension of the municipal limit and the establishment of industrial units in MIDC area.

4.1.3 Municipal Area and Population Density

The Jalgaon Municipal limit covers an area of 68.24sqkm, out of which 11.45sqkm is the old municipal limit and 56.79sqkm is the extended additional area. This indicates that the Municipal territorial jurisdiction has increased more than four times i.e. from 11.45sqkm to 68.24sqkm. The overall population density of Jalgaon city, according to 2001 census is 53.94 inhabitant/hectares.

⁶ As per the 1991-2001 Census



Table 3: Population Growth: 1951 -2001

Year	Population	Decennial variation	Percentage variation	Annual growth rate %	Incremental increase per decade
1	2	3	4	5	6
1951	75,303	-	-	-	-
1961	88,452	13,149	17.46	1.74	-
1971	1,17,312	+ 28, 860	32.63	3.26	+ 15, 711
1981	1,65,507	+ 48, 195	41.08	1.1	+ 19, 335
1991	2,42,193	+ 76, 686	46.33	4.63	+ 28, 491
2001	3,68,000	125807	51.94	5.19	49121

(Source: Census of India)

In 1991, within the old municipal limits, Jalgaon city was divided into 23 wards and the population averaged about 3,888 inhabitants in the core area. A population of 9, 23,572 inhabitants/ hectare could be accommodated at an average density of 200 person/hectares upto the year 2011 as per the projections of the 1993 Development Plan. In addition to that, seven planning sectors are being introduced to accommodate the future population of the New Municipal Limit.

Table 4: Sector wise population as per DP

Sector wise	Area in Hectares	Population	
		2001	2011
Sector - 1	788.37	10000	25000
Sector - 2	993.45	25000	1,22,000
Sector - 3	547.41	47000	88000
Sector - 4	601.00	23000	45000
Sector - 5	1441.65	15000	60000
Sector - 6	178.00	16500	
Sector - 7	1128.00	35000	

(Source: Development Plan 1993)

4.1.4 Population projection

Population projections were made using the Geometric rate of increase and Compound Annual Average Growth rate method. This was also compared with the estimates determined by various agencies⁷ in the past for calculating the population projections.

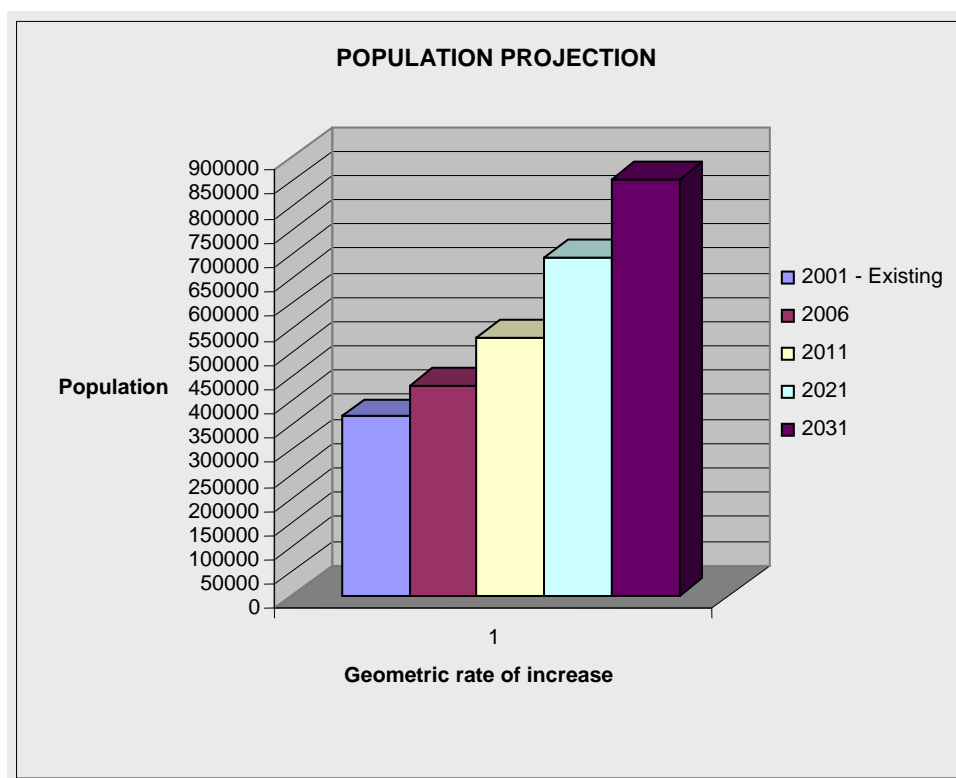
7. Tata Consultancy Services – Comprehensive Traffic Survey



Table 5: Population Projection

Methods	Population Projection				
	Existing 2001	2006	2011	2021	2031
Geometric rate of increase	368000	430903	530607	693214	855821
Compound Annual Average Growth rate		423694	509312	692664	948949
Average		427298*	519959*	692939*	902385*

* Projected

Diagram 5: Population projection by Geometric rate of increase

4.1.5 Migration Pattern

According to the Population Census 2001, the State average of in-migrants was 32.80lakhs (18.2 percent), this included large numbers of in-migrants from other states such as Uttar Pradesh, Karnataka etc. The reason for in-migration is mainly for work and employment, and business and education. The Jalgaon city in-migration is less than the State average. The city is attractive for trade, services, health & education.

4.1.6 Literacy Level and Sex Ratio

i) Literacy level: The literacy rate of Jalgaon City and its constituent parts have been listed in Table 06. The figures have also been studied in comparison to the City, District and State level to understand the position of Jalgaon. Literacy levels in Jalgaon city as per the Census data 1991 was 65.6%; and has grown phenomenally to 86.9% in 2001 with Male and female literacy rates at 92.6% and 80.6% respectively. The Maharashtra State



averages 82.40% & 77.27% respectively for men and women. The city level statistics are slightly higher than the corresponding district and state level data. Jalgaon city has a higher female literacy of 80.6% than the District and State average of 74.20% & 67.51% respectively according to the 2001 Census.

Table 6: Literacy rate

Name	Literacy rate (percentage)					
	1991			2001		
	Male	Female	Total	Male	Female	Total
Jalgaon City Municipal Corporation	72.59	57.90	65.60	92.60	80.60	86.90
Jalgaon District	77.46	50.34	64.30	90.00	74.20	82.40
Maharashtra State	76.56	52.32	64.87	86.27	67.51	76.90

(Source: Census of India)

ii) Sex ratio: According to the 1991 Census, the sex ratio of Jalgaon city was 907 as compared to Jalgaon district & Maharashtra State, which were 921 & 934 respectively. The 2001 Census shows that in Jalgaon city the sex ratio (No. of females per thousand males) has declined from 907 in 1991 to 905 in 2001.

The sex ratio in Jalgaon for the age group of 0-6 years was 843 in 2001. At the District and State level, the sex ratio in the age group 0-6 years was higher than that of the city.

Table 7: Sex ratio

Name	Sex Ratio (Females per 1000 males)		(0-6 years)
	1991	2001	2001
Jalgaon City Municipal Corporation	907	905	843
Jalgaon District	921	932	851
Maharashtra State	934	937	913

(Source: Census)

4.1.7 Scheduled Caste and Scheduled Tribe population:

The Scheduled Castes population of the City as per the Census 2001 was 22,128; it constitutes about 6 percent of the total population. The proportion of Scheduled Castes population to total population in the District and State was 6.20 & 10.2 per cent respectively, which shows that the scheduled castes are lesser in the city than the District and State average.

Scheduled Tribes: The Scheduled Tribes population of the city as per the Census 2001 was 16,448; it constitutes about 4.50 percent of the total population. The proportion of Scheduled Castes population to total population in the District and State was 9.10 & 8.90 per cent respectively, which shows that the Scheduled Tribe population is lesser than the District and State average. Another observation is that in the Jalgaon District the Scheduled Tribe population is higher than that of the State average.



Table 8: Scheduled Caste and Scheduled Tribe population

Name	2001			
	Scheduled Caste	Percentage	Scheduled Tribe	Percentage
Jalgaon City Municipal Corporation	22128	6.00	16448	4.50
Jalgaon District	34566	6.20	50304	9.10
Maharashtra State	98.82 lakhs	10.20	85.77 lakhs	8.90

(Source: Census)

4.1.8 Issues

The major issue related to the population of the city includes:

- The population of the city is at a dynamic or self-motivated stage, it is expected to grow further in the coming decades. It reveals that very high growth rate in population occurred due to transition of city economy from agriculture to industrial.
- Jalgaon attracts migrants from the neighbouring taluks & districts; it is most important nodal center for economic, administrative and educational activities. Hence, planning in terms of infrastructure especially water supply and sanitation facilities for floating population.
- The reason for the high growth rate is due to the influx of population from the rural areas in search of employment/ work/business/ education etc.
- Service oriented agro industries along with trade & commerce have a strong base in Jalgaon and act as a major centre for the North Maharashtra Region.

4.2. LAND USE**4.2.1 Evolution of the city**

Jalgaon city is today the head quarter of the Jalgaon District. The city has emerged as an important marketing place of the Khandesh Region in the past 100 to 125 years. Although before the introduction of the British Rule, Jalgaon was inferior to the neighbouring city of Nashirabad and to Mehrun it later became the great cotton market of the Khandesh and for the ginning mills and pressing mills after the American War (1862 – 1865).

Jalgaon Taluk is bound by the Girna River to the West and the Tapi River to the North. The City itself is not bound by any natural barriers and hence could expand in all directions. However, the main constraint it faces today is in terms of supply of physical infrastructure, even for the existing city limits. In addition, unplanned growth of housing colonies, land locked areas; are some of the key issues the city faces today. Jalgaon's growth has been mainly due to the reason that it lies along the Surat – Kolkata National Highway – 6 and the Central – Western Railway junctions at Jalgaon. Although insignificant before the 19th century, it then attracted merchants and weavers so that it could boast of more than 400 handlooms by 1860. From the late 1800s, it grew steadily, and it is now one of the chief commercial centers of the Khandesh cotton-growing region and the largest banana-growing district in the country.

The growth of Jalgaon City can be observed from its origin when it was defined by the Jalgaon Gaothan and henceforth in four important stages: The first stage was the Master Plan of the original municipal limit, which was prepared under the P.W.R. Scheme No. 139 in 1953. The scope of this plan was limited to the Gaothan area and this plan had limited proposals. In the second stage, the revised Development Plan was prepared in the



year 1971 and came in to force with effect from 1975. In the third stage, the limits of the municipal council was further extended in 1976 to 11.67 sqkm and hence the Development Plan of that extended area was prepared in the year 1979 which was sanctioned and came into force with effect from 1983.

As per the Maharashtra Regional & Town Planning Act of 1966, every development plan was to be revised once in 10 years⁸. Post 1983 developments in the city took place so rapidly, that it became necessary to revise the development plan of entire city. Accordingly, the Development Plan was revised in 1987. It came into force with effect from 1993 an additional area of 56.78 sqkm. The JCMC monitors the development of the city according to the proposals of this Development Plan.

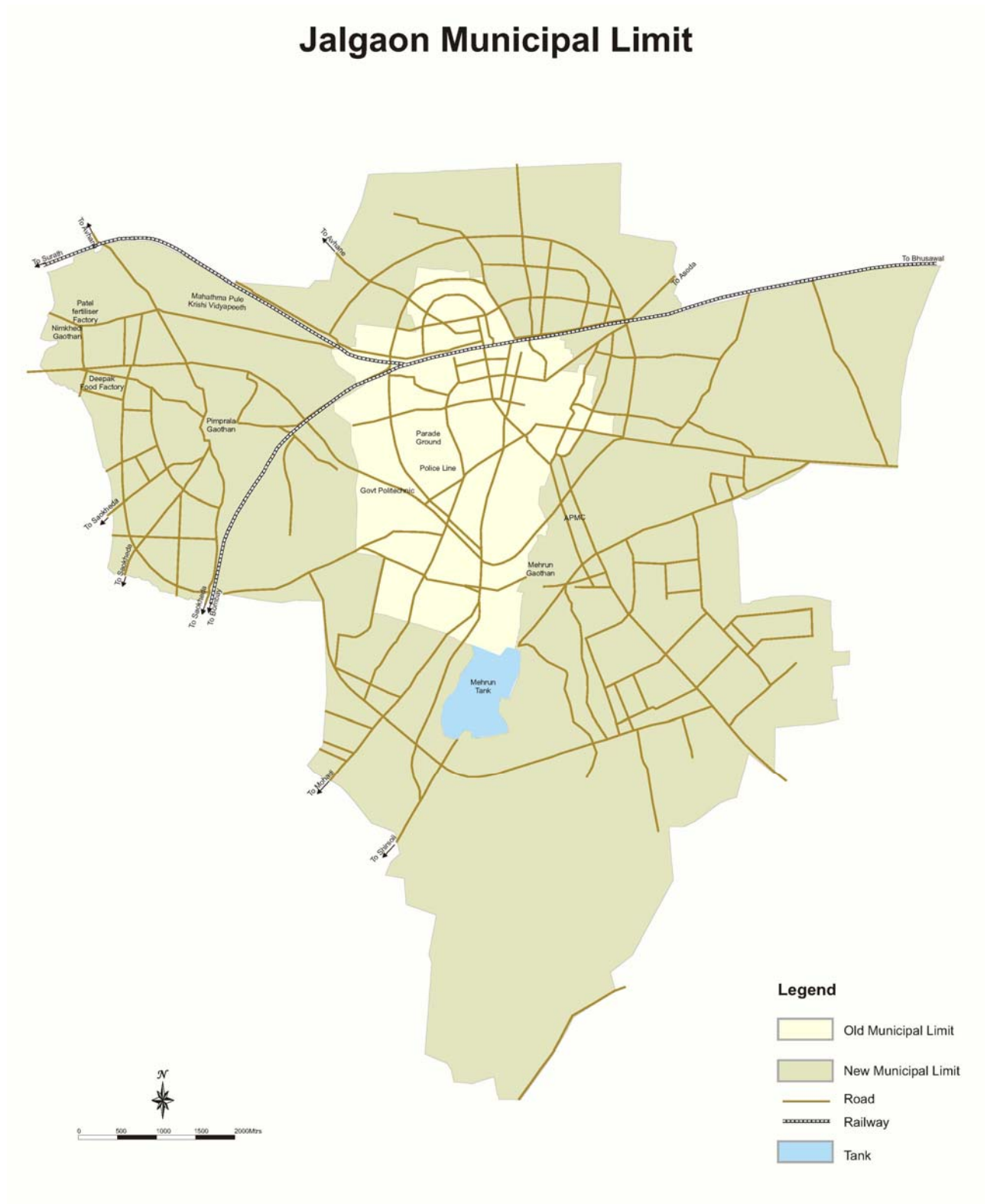
Development Plan:

The Development Plan of 1993 was prepared under the Maharashtra Regional and Town Planning Act 1966. The main objectives of the Development Plan are:

- To plan for optimum utilization of land in the interest of the public;
- Check unplanned and haphazard development;
- Ease communication and transport networks by designing proper road systems;
- To make provisions for urban amenities and services to meet future requirements; and
- To preserve historic and natural heritage.



Map 5: Municipal limits and connectivity



4.2.2 Land use Analysis

Land use assessment helps us to understand the development patterns of the city and its future growth directions. The Development Plan 1993 for Jalgaon was prepared for an existing population of 1.5 lakhs, with population projections of 2.60 lakhs by 1996 and 4.0 lakhs by 2006. Approximately 11.67 Sq.km. (20.55%) of the extended limits was designated as developable area as per the 1993 Development Plan. The new limits have developed significantly with pockets of undeveloped land in the North and the South at Pimprala, Khedi, Mohadi etc. These pockets are also developing rapidly due to trade activities of the city and establishment of the MIDC outside the old municipal limits.

Table 9: Existing land use Analysis – Old Municipal limit - 1983

Land Use	Area in hectares	Percentage
Residential	164.97	14.14
Commercial	19.01	1.63
Industrial	693.27	59.41
Public Semi Public	84.73	7.26
Public utility	8.22	0.70
Transport & Communication – Road and Railway	196.75	16.86
Garden, Play Ground & fair ground etc.	-	-
Total	1166.95*	100.00

(Source: Development Plan Report)

The Land use pattern in the old municipal limit indicates that about 14.14 percent of the area was occupied by residential use, 1.63 percent of commercial use, 59.41 percent of industrial use, 7.26 percent of Public and semi public, 0.70 percent of public utility and 16.86 percent of Transport and Communication uses respectively.

4.2.3 Urbanisable land – Proposed Land use - 2011

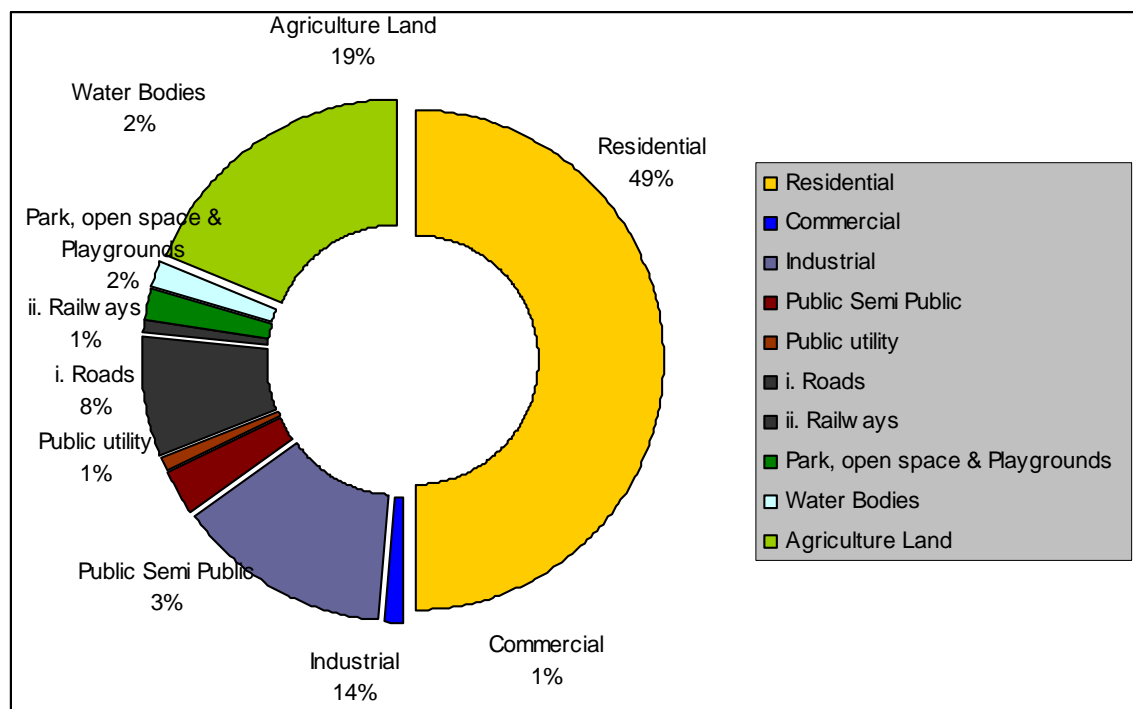
The Development Plan prepared in 1993 proposed an additional area of 56.79sqkm, out of which 44.91 sqkm have been developed. The present municipal area of JCMC is 68.24sq.km currently about 66 percent of the Jalgaon City Municipal Corporation area is already developed.



Table 10: Proposed Land Use analysis of additional area – 2011

Land Use	Proposed land Use – 2011		
	Area in Hectares	% Developed area	Proposed Land use %
Residential	2847.12	63.38	50.13
Commercial	53.45	1.19	0.94
Industrial	799.00	17.26	14.06
Public Semi - Public	173.61	3.86	3.05
Public utility	34.36	0.76	0.60
Transport & Communication			
i. Roads	444.49	9.91	7.82
ii. Railways	37.37	0.83	1.02
Park, open space & Playgrounds	102.21	2.31	1.79
Total Developed area	4491.61	100.00	
Water Bodies	100.62	-	1.77
Agriculture Land	1086.62	-	18.82
Total	5678.85*	-	100.00

(Source: Development Plan Report 1993) * Existing Land use is not included in the above areas.

Diagram 6: Proposed land use break-up

While 50 percent of the additional area is proposed for residential purposes, a significant 14.06 percent of the area is proposed for industrial uses. Each of the land use categories is further detailed below.

Residential: An area of 2847.12 hectares/ 28.47sq.km, about 51.13% has been reserved for residential purposes, with an average density of 200 persons per hectare.



Commercial: An area of 53.45 hectares/ 0.53sq.km, about 0.94% has been proposed for commercial purposes in the Development Plan, considering the existing MIDC industrial area and inadequacy of commercial uses in the new municipal areas.

Industrial: Industrial activity mainly occurs in the MIDC area and Co-operative Industrial Estate on the eastern side of Jalgaon. An area of 799 hectares/ 7.99sq.km, 14.06% has been proposed for industrial uses considering an overall density of 45 workers per hectare⁹.

Approximately 799Ha of land has been allocated as industrial land including the L and SS industries located within the old municipal limit and others located in the new Municipal limit.

Public and Semi-public: An area of 173.61 hectares/ 1.74sq.km, about 3.05% has been proposed for public purposes considering the land requirements of various Government/ Semi Government agencies.

Public Utility: An area of 34.36 hectares/ 0.34sq.km, about 0.60% has been proposed for public utilities and services considering the proposed treatment plant of 27 MLD & 50 MLD and elevated storage reservoir for the Waghur Water Supply Scheme in its first and second stage.

Transport and Communication: An area of 444.49 hectares/4.45 sqkm, about 7.82% has been proposed for Roads and the Railways have covered 37.37/0.37 sqkm, about 1.02%. The Development Plan has proposed to undertake improvements for the following:

- Junction near B-Ed College on NH-6;
- Junction near post-office on Shirsoli road;
- Junction near DSP Bungalow on Zill Road and Mehrun tank road; and
- Junction of Swantraya Chowk.

In the Development Plan of extended area, a 30m wide road has been planned in the peripheral area starting from NH-6 near Shiv Colony (Pimprale Shivar), Mehrun Regional Park, MIDC area and Khedi Gaothan. The JCMC has requested the Dy. Director of Town planning, Pune, to prepare plans for road junctions at the following sites:

- Near S T Workshop on old National Highway;
- Crossing of NH No.6 & Ajantha road; and
- Junction at Shiv Colony National Highway No. 6;

A site for Truck Terminus has been proposed along the National Highway No.6 in Asoda Shivar, which is near to MIDC & APMC, and a site for ST Stand and Depot for MSRTC has been proposed along the Mohali and Shirsoli road in the South as required by MSRTC.

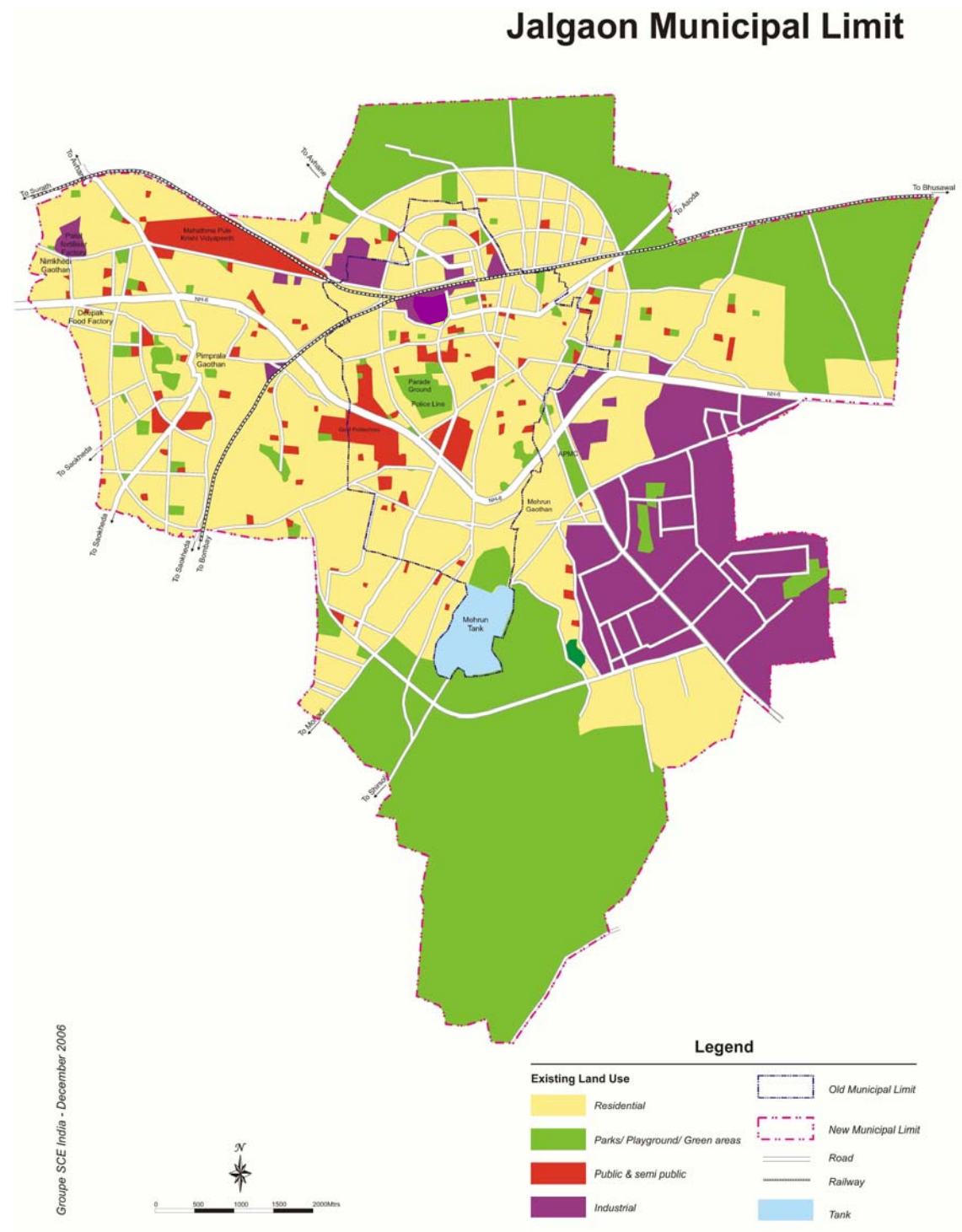
⁹ Development Plan report 1993



Park, open spaces, Playground and Greenbelts: Areas of 102.21 hectares/ 1.02 sq.km, about 1.79% plus 1086.62 hectares/ 10.87sq.km, about 18.82% have been proposed as Non- Development Zones. These zones can accommodate schools, community halls and recreational facilities and provisions for children's park, playground etc.

The city lacks a designated zone for facilitation of logistics functions, including large-scale warehousing and cargo delivery through rail and road modes.



Map 6: Proposed Land use as per the Development Plan

4.2.4 Efforts for planned development

The Jalgaon Municipal Council has also prepared three Town Planning Schemes for the implementation of the Development Plan. The first Town Planning Scheme was prepared in 1978 covered an area of 19.0 hectares mainly for road widening within the Jalgaon Gaothan area. Town Planning Scheme – 2 was prepared in 1979 covers an area of 120 hectares and included implementation of civic amenities as proposed in the Development Plan. The third Town Planning scheme situated to the South of NH.6, covers an area of 65.68 hectares also prepared for realizing Development Plan roads and public amenities as per the Development Plan. The JCMC successfully implemented TP Schemes II and III while TP Scheme I still remains unrealized.

4.2.5 Implementation of the Development Plan

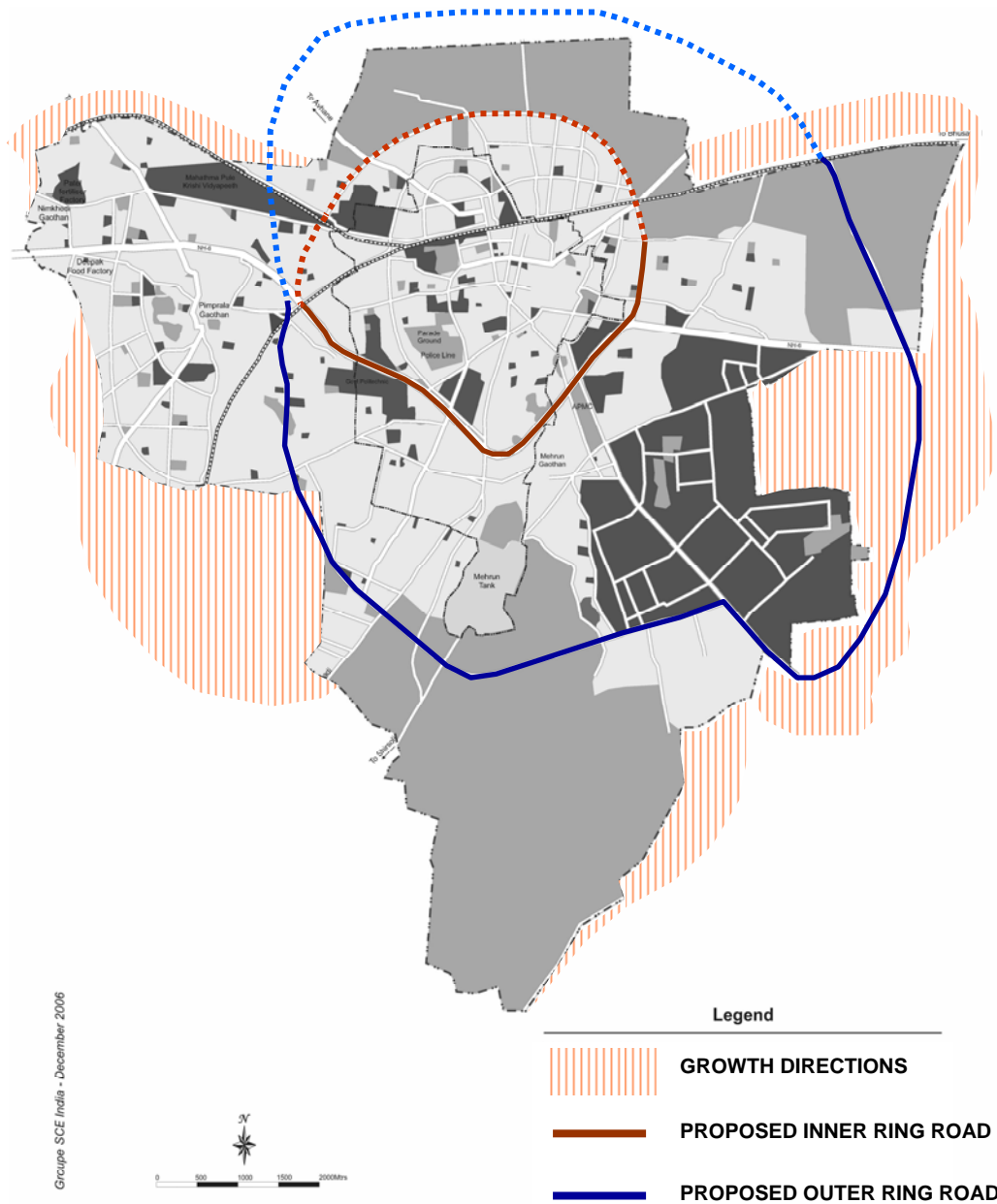
There is no mandate or any single identified institution for the implementation of the Development Plan. The JCMC and the Town Planning Department of Jalgaon are the prime institutions along with the Maharashtra Housing and Area Development Authority (MHADA) that are also responsible for the implementation aspect. Detailed plans in line with DP proposals are prepared by the respective agencies that plan to develop specific parcels of land. The Town Planning Department of Jalgaon has been the only agency, which has been acquiring land in the JCMC areas and developing the same. They then transfer such areas falling in the jurisdiction of JCMC for the purpose of maintenance after five years. Housing and Area Development Authority along with the Town Planning Department of Jalgaon have also developed some Housing Colonies in Jalgaon. In case of industrial development, the City & Industrial Development Corporation (CIDCO) works with the Town Planning department of Jalgaon for future industrial development as per the provisions of the Act.

Apart from these developments, many private developers have also been developing layouts after obtaining the requisite license; permission/ exemption form the Town Planning of Jalgaon. The private developed layouts maintain by the developers for an initial period of one year; subsequently, these are handed over to JCMC for their upkeep, future growth and maintenance.



Map 7: Jalgaon growth directions and future proposals

Jalgaon growth directions



4.2.6 Key issues

- The direction of growth is based on the corridor type of development, which is along the National Highway No.6 towards Dhule – Mumbai and Bhusawal, the State Highway towards Aurangabad and major district roads of Mohadi and Shirsoli;
- There is no natural barrier bound by the city to control corridor type of development. The Development Plan has not made any proposal to address this issue proposing a circular or ring road to contain the corridor type of development.
- Lack of basic services such as good surfaced roads, drainage system and social infrastructure within the old municipal limit and proposed additional area.
- Lack of concrete proposals in Development Plan. The DDP was prepared in 1993 for Jalgaon is more a guideline document and presents only the proposed land use for the estimated urbanisable land and future land requirements. Detailing out the Development Plan and implementation of the detailed plans are left to the respective authority such as JCMC & Town Planning of Jalgaon. This has resulted in a situation where the Development Plan neither has any concrete development proposals nor has it incorporated any inter or intra departmental proposals viz, proposals through MHADA and MIDC that would require major parcels of land to be reserved for specific purpose.
- Institutional duplication of efforts: While the Town Planning Department of Jalgaon prepares the Development Plan, the implementation of the same is carried out by JCMC. However, in this entire process, JCMC has limited role.

4.3. URBAN ENVIRONMENT

4.3.1 Natural and Urban Baseline

The Jalgaon City Municipal Corporation is responsible for maintenance and up gradation of the environment, including lakes, green areas and forested areas, which serve as recreation areas for the people. This section on urban environment establishes the urban environment situation of Jalgaon city, describes the status of the urban environment quality and services, identifies environmental issues, and finally focuses on strategies to address these issues through the City Development Plan.

4.3.2 Issues, Potential and Challenges in environment sector

The most important environmental issue in Jalgaon is attributed to pollution¹⁰.

The various types of pollution are:

- Water pollution;
- Air pollution;
- Noise pollution;
- Soil pollution.

i) Water pollution:

Water pollution includes both surface water pollution and ground water pollution.

- The *surface water* quality status of the city of Jalgaon shows that the ph varies from 7.99 to 9.55⁸ during laboratory analysis. High electrical conductivity, and high COD,

10. Pollution can be defined as the undesirable changes in physical, biological and chemical characteristics of air, water, noise and soil, which can adversely affect human health and property, ecosystem and routine lifestyle.



BOD and chlorides are also present. All the sampling locations of Khawajamiyan and Lendi nallahs showed that the dissolved oxygen levels are below detectable limits. The continuous addition of household waste sewage and sewer lines into the nallah water may be some of the causes for this.

- The *ground water* quality status of the city of Jalgaon was found to be of inferior quality in areas where bore wells are located. Bore wells showed high amounts of chlorides and total solids and dug (open) wells show high amounts of hardness, COD and total solids due to the intersection of sewerage water into the wells.
- The followers of Guru Gorakhnath initially dug up the Mehrun Lake at the time when Gopalpura was the market place of Jalgaon. It is the largest lake in the city limits and has an area of 75 hectares. The Mehrun Lake also contributes to water supply in the drier months of the year as it supplies water to two wards during water supply shortage months.
- Laboratory analysis of the water from Mehrun tank showed a ph variation of 6.24 to 7.45 and electrical conductivity varies from 0.495 to 0.510mili mhos. High chloride concentrations and high BOD and COD values are also present. The reasons for these values are due to human activities such as bathing and washing at the banks of the lake.
- There is a lesser-known tank within the Municipal Corporation limits known as the Ambadzara Tank, which shows signs of neglect and contamination. The preservation and maintenance of both these water bodies combined with the drainage systems they connect to is essential for maintaining a healthy environment in the city.



Picture 2: Water pollution in Jalgaon



Picture 3: Mehrun Tank



Service issues:

- Loss of green cover and open spaces;
- Continuous addition of household waste and sewage into the nallas renders the Mehrun and Ambadzara lakes to be polluted as well. Maintenance of the lakes and water bodies in the city is a priority.

ii) Air pollution: The industrial area covers more than 1,500 acres of the city area with 2000 small and middle scale industries it occupied with mainly small-scale industries. Air quality and noise levels of adjoining residential and commercial areas are affected due to industrial activities. Though the pollution levels are not alarming at present, it may reach threshold levels with further expansion of the industrial belt. Pollution control measures need to be formulated and enforced. The stringent and clear policies of environmental management need to be adopted by the industries and the state highway authority in this area to protect the environment from further degradation.

Services and O&M issues: Degraded air quality: *Jalgaon city* being the trade and commercial centre of the Khandesh region has had a large increase in its population over the years with a 23% rise during 1981-1991 and 19% increase during 1991-2001 and the population today stands at around 4lakhs. The number of vehicles has also proportionately increased and the presence of the National Highway No.6 passing through the city also contributes to the air pollution in the area and traffic levels remain at their peaks on the NH-6 throughout the year. The Nelson Mandela Chowk (Ajantha Chowk) is the busiest spot for heavy traffic flow. The maximum concentration of oxides of sulphur ($55 \mu\text{g}/\text{m}^3$) and oxides of nitrogen ($39 \mu\text{g}/\text{m}^3$) was recorded at this chowk. The levels of Suspended Particulate Matter (SPM) were $396 \mu\text{g}/\text{m}^3$ and Respirable Suspended Particulate Matter (RSPM) was $201 \mu\text{g}/\text{m}^3$ at these spots during the study¹¹. These however are lower than the prescribed limit for residential areas of the city, though during the winter months low wind speeds and less dispersion of the air pollutants can increase these air pollution levels.



Picture 4: Conflict Traffic Intersections

iii) Noise pollution: In the city of Jalgaon surveys and analysis conducted at various locations shows a tremendous increase in noise levels. The morning and evening hours are always characterized by heavy traffic hours at Akashwani, Icchhadevi and Ajantha Chowk. At locations the noise levels range between 80-88dB. Lower levels of noise are recorded in the afternoon session except at Ajantha Chowk.

Services and O&M issues:

- Indiscriminate dumping of garbage;
- Lack of efficient collection; and
- Spread of epidemics and diseases.

Picture 5: Solid Waste Disposal site and Biomedical recycle unit



iv) Soil pollution: in Jalgaon city, the soil analysis samples were highly degraded in the Ganesh Colony Area as compared to samples from other parts of the city. Soil samples from Dadawadi area and Mehrun area show less impact on its chemical and biological properties. All the samples from the city show slight alkalinity, which may be a result of direct run off sewage water. The soil samples from Dadawadi area and Mehrun area show high organic matter, sodium, potassium and moisture content. The high available phosphorus content was noted in the sample from Dadawadi and Mehrun area.

Services issues

- Pollution of ground water;
- Spread of epidemic diseases.

4.3.3 Potential

- Implementation and enforcement of norms of the Pollution Control;
- Protection of Natural Recharge Areas;
- Implement comprehensive plan for ecological Conservation;
- Mass plantation program by the industries and adjoining local pollution will help to control the ambient air pollution levels;
- Plantation of noise absorbing plants especially on the roadside will help to lower the noise levels observed in the area; and
- Awareness on pollution, health impacts of pollution and need for sustainable development amongst the industrial management, workers and population will help to improve the quality of environment in the area.



4.4 URBAN RENEWAL

4.4.1. Introduction

Urban Renewal means rehabilitation of impoverished urban neighbourhoods by large-scale renovation or reconstruction of housing and other public works. Rejuvenation and revitalization of the Central Business Areas are to be based on a mix of renovation, investment, and incentives. The older areas of a city serve as its nerve center and are also the cultural, economic and historical hubs of the city. Rejuvenation of the central business areas of the city are of prime importance to the future growth of the city.

4.4.2. Areas of importance to the city

The Gaothan is the origin of Jalgaon town; the Gaothan includes areas such as the Jalgaon Gaothan (area of 0.25sqkm), Pimprala Gaothan (area of 0.175sqkm), Mehrun Gaothan (area of 0.131sqkm) and the Khedi Gaothan area (area of 0.025sqkm). The Jalgaon Gaothan lies within the old municipal limit. The rest are spread over the new additional municipal area. The business area of the city includes areas such as Shivajinagar, Joshipeth, Navipeth, Balrampeth and Polanpet etc.

4.4.3. The Central Business areas

The two main areas in the city are the **Navipeth area** (area of 2.0 sqkm) which qualifies as the city's Central Business Area (CBA) and the **Shivajinagar area** (area of 0.5sqkm) which houses many industries. Although these areas serve as the economic hubs of the city they also face a variety of problems like for example in the **Shivaji Nagar Area** of the city which is very congested and has a mix of residences and industries. It houses industries that cause noise and air pollution like the timber industries, stone industries, dal mills, and other pulses processing units which are not only detrimental to the physical and mental health of the residents of the area but also the spread of these activities remains unchecked. The main Central Business Area of the city is the **Navipeth area**, which is almost completely commercialized. It houses showrooms, wholesale shops for grains, electronic markets, medicines, and hotels and serves as the image of the city. The other two important areas are the **Polanpet Area** where commercial use is predominant and is expected to become 100% commercial in the next few years. The **Balrampet areas** houses mixed use at the moment and is expected to become 50% commercial in the next few years.

Picture: Central Business Area



4.4.4. The Gaothan areas

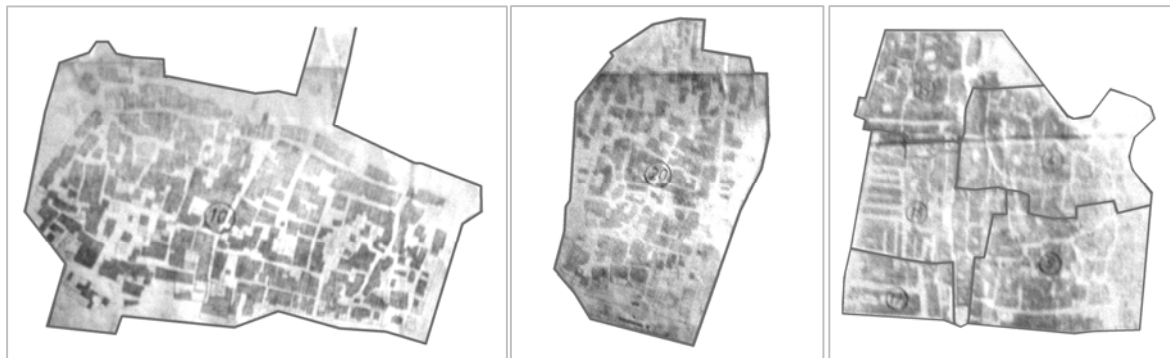
The Jalgaon Gaothan area is increasingly getting commercialized and the solid waste generated in these areas is also much higher when compared to the amounts than are



generated in the rest of the city and disposal systems are ineffective causing unsanitary conditions.

The town planning schemes of TP-I, TP-II and TP-III have been conceptualized in the Jalgaon Gaothan and two of these which is the TP-II and TP-III have been implemented. The TP scheme that has already been implemented included the provisions of schools, parking and parks. Widening of roads in the Jalgaon Gaothan has been envisaged in one of the TP schemes that have not been implemented as yet. The roads meant for widening are: Rath Marg, Old city's ring road, Panjhrapol Road and the Smashan Bhumi to Nashirabad Road and Asodha Road

Diagram 7: Pimprala Gaothan Area, Mehrun Gaothan Area and the Jalgaon Gaothan Area



Traffic and transportation issues in the Gaothan areas vary from roads being very narrow in width and in awkward shapes that do not allow for the smooth flow of traffic. The poor surface quality of roads and kuccha roads leads to vehicular wear and tear, and the slowing down of traffic and dust pollution. Bottlenecks are formed in the Gaothan area, and facilities for parking are highly inadequate.

Many of the structures in these areas are of the load bearing type but as many streets in these areas are very narrow and remain congested and dusty.



4.5 URBAN POOR AND SLUMS IN JALGAON

4.5.1. Introduction

According to Census of India, 2001, the slum areas broadly constitute :- i) All specified areas in a town or city notified as 'Slum' by State/Local Government and UT Administration under any Act including a 'Slum Act'. ii) All areas recognized as 'Slum' by State/Local Government and UT Administration, Housing and Slum Boards, which may have not been formally notified as slum under any act; iii) A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.

In Jalgaon city, the recent survey shows that about 24656 populations are living in below poverty line, and it constitutes about 6.7% of total city population. About 30% of the district population is under poverty line.

According to Act¹²: Slum means “areas where buildings (a) are in any respect unfit for human habitation;(b) are by reason of dilapidation, overcrowding, faulty arrangements and design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light or sanitation facilities, or any combination of these factors are detrimental to safety, health or morale.”

12. The Slum Areas (Improvement and clearance) Act, 1956 of Maharashtra.



4.5.2 Profile of Slums in Jalgaon

As per 2001 Census, about 62,696 Jalgaon population lives in slums, it constitutes about 17% of the total population of the city. The Municipal Corporation has notified Tambapura, Bimnagar, Ambedkarnagar, Mangwada, Bhilwada and Old Cattle Bazaar for slum improvement. According to the survey conducted by the JCMC about 25 slum settlements have been identified as declared slums and about 5 settlements have been identified as undeclared slums in Jalgaon City. More than 75% of the slums are concentrated within the core area and rests were located in suburban areas. About 10240 hutments were located in Jalgaon city, comprising of about 51147 people living in slum area¹³. The lists of declared and undeclared slums in Jalgaon city are as indicated below:

Table 11: List of declared / authorized slums in Jalgaon City Municipal Corporation:

Sl. No.	Declared slums as per gazette	Date in gazette	No of hutments	No. of people
1	Tambapura	26-11-87	2262	11000
2	Sanjay Gandhi Nagar	26-11-87	212	944
3	Indira Gandhi Nagar (Shahunagar)	23-01-87	380	1569
4	Ambedkar Nagar	07-04-88	138	627
5	Samatha Nagar	07-04-88	950	5000
6	Khandrav Nagar	07-04-88	600	2954
7	Harivittal Nagar	11-01-90	900	4403
8	Gopalpura	11-01-90	145	673
9	Ambedkar Nagar Punarvasan	18-07-92	165	897
10	Shanipeth Gurunanak Nagar	18-07-92	175	880
11	Chowdule Plot	18-07-91	566	2289
12	Jhakni Nagar	18-07-91	75	456
13	Phukat Pura Panchsheel Nagar	05-01-95	850	3126
14	Janaki Nagar Thukaram Wadi	04-01-96	588	2817
15	Indira Nagar Khedi	25-01-96	88	402
16	Kasamwadi	04-01-96	365	1660
17	Dhathwadi	25-01-96	138	836
18	Bhilwadi Mehrun	04-01-96	70	317
19	Rajiv Gandhi Nagar- Hari Vithalnagar Madhil	25-12-97	165	897
20	Panjra Pol Bunkarwadi	25-12-97	283	1277
21	Indira Nagar Jhopadpatti	25-12-97	61	2245
22	Dangalgrasth Colony	25-12-97	67	447
23	Shahunagar A- 90	25-12-97	89	530
24	Lakshmi Nagar Kanaldha Road	25-12-97	377	1176
25	Khedi Dandekarnagar	25-12-97	88	480
Total			9486	47902

(Source: Jalgaon City Municipal Corporation)

13. As per JCMC Gazette recorded in the year 1997.



Table 12: List of undeclared / un-authorized slums in Jalgaon City Municipal Corporation

SlNo.	Un - declared slums	No of hutments	No. of people
1	Dandekar nagar	140	575
2	Balaji peth	74	352
3	Shanipeth dalphal	42	154
4	Valmik nagar (aaroda road)	200	908
5	Dandekar nagar railway hae	298	1266
Total		754	3245

(Source: Jalgaon City Municipal Corporation)

4.5.3. Slum up gradation schemes in Jalgaon

The Jalgaon City Municipal Corporation is responsible for providing basic services in slum areas within the municipal limit. The Municipal Corporation had availed finance from HUDCO under the Integrated Urban Development Project for Small and Medium Towns and had identified 3 slums for the provision of serviced plots and core housing. HUDCO had given a loan of Rs. 2.489crores in 1987 for this purpose. 2,000 units were constructed at a rate of Rs.15, 000 per unit where 90% or Rs.13, 500 were borne by the scheme and the remaining Rs. 1500 was borne by the resident. The loan was given at 7% per annum with a repayment of Rs.100 to Rs.110 per month for 22 years.

4.5.4. List of Ongoing Schemes and Programmes**EWS Housing Project**

JMC has under taken the constructions of 11424 houses for following slum population

Sl No	Name of Slum	No of Houses to be Constructed	Tender cost with T.P	Present Status
1	Tamba pura	1616	1342.26	Not yet started
2	Phukat pura	380	303.72	At plinth level
3	Shivaji nagar	808	747.21	726 completed & allotted
4	Mehrun Goathan	916	737.44	RCC framed structure completed
5	Samata Nagar	2390	1913.90	At GF slab level
6	Khandrao Nagar	1912	1536.22	588 completed & allotted at GT- Slab & some are all ff linked
7	Harivittal Nagar	2234	1780.98	156 completed & allotted other are at GF slab level
8	Khedi	480	388.28	80 completed & allotted at GF lintel level
9	Asoda Road Valmiki Nagar	688	521.52	GF link level
Total		11424	9271.53lak s	

This housing project was started in the year 2000 and the project was completely financed by HUDCO. However due to litigation the project has been stopped.



JCMC is now planning to complete this project through the IHSDP scheme, with an additional 10,000 new units.

Before this scheme, JCMC had already completed 3710 units & 1550 units from proposed 11424 units. In all 5260 units were constructed & allotted to slum dwellers.

Sl. No	Name of Slum	Name of School	Primary Schools	Secondary Schools
1	Gendala Mill	MNC No.15	1	-
2	Tambapura	MNC No. 08, 16, 41 and 2 Urdu Schools	3+2	1
3	Harivitthal Nagar	MNC No. 23, 42 and 2 Jijamatha Primary	2+2	1
4	Jainabad	MNC No. 41 New Balvikas Primary	1	-
5	Shahu Nagar	MNC No. 09, 12	2	-
6	Samata Nagar	MNC No. 21	1	-
Total			14	2

(Source: Education Dept Jalgaon City Municipal Corporation)

Slums with health unit provision:

1. Shahunagar Dispensary, Chattrapathi Shahu Maharaj Roganallya in Shahu Nagar Jhopadpatti
2. Division Dawakahana at Shivajinagar, Dada Sahib Bhikamchand Jain. It covers Shivajinagar, HUDCO housing and Genda Lal Mill areas.
3. Chetan Das Mehta dispensary covers Tambapura and Khanjarwada
4. Prathmik Arogya Kendra HUDCO Dispensary located in Suresh Dada Jain Nagar. It covers Pimprala and HUDCO areas
5. Mohammad Yusuf Aryurvedic Dawakhana.



Table 10: List of declared slums / authorized slums in Jalgaon City and access to basic services.

Sl. No.	Name of the Slums	Population	No. of Hutments	Area in Hectares	Access to Basic Services									
					Roads (Length in km)			Water Facilities			Storm Water Drains	Sanitation		Health Facilities
					Good Surfaced Roads	Bad Surfaced Roads	Asphalted roads	No. of Public Tabs	No. of Bore wells	No. of Community Wells	Length of drains (Length in km)	No. of Public Toilets	No. of Personal toilets	No. of Primary Health Units
1	Sanjay Gandhi Nagar	944	212	0.46	0.50	-	-	Individual	-	-	0.300	42	-	-
2	Jhakni Nagar	456	75	0.59	0.70	-	-	Ind	-	-	0.50	20	-	-
3	Thukaram Wadi	2817	588	1.41	1.20	-	-	Ind	-	4	0.800	-	-	-
4	Kasamwadi	1660	365	2.01	1.55	-	-	Ind	-	2	1.00	44	-	-
5	Dangalgrasth Colony	447	67	0.7	0.30	-	-	Ind	-	-	-	10	-	-
6	Harivithal Nagar	4403	900	3.88	0.43	4.21	-	30	11	-	1.767	92	17	3
7	Samta Nagar	5000	950	6.29	0.96	3.37	-	55	22	2	0.12	76	Nil	3
8	Khanderao Nagar	2954	600	1.21	1.29	1.00	-	30	4	-	3.53	40	35	-
9	Tambapura	11000	2262	6.20	-	-	2.30	Ind	13	-	3.81	130	6	-
10	Phukat Pura Panchsheel Nagar	3126	850	0.84	1.35	-	-	Ind	3	1	1.84	40	Nil	-
11	Dhathwadi	836	138	0.95	1.00	-	-	Ind	2	-	1.89	-	15	-
12	Bhilwadi Meharun	317	70	0.25	0.10	-	-	-	-	-	0.2	30	Nil	-
13	Supreme Colony	1176	377	0.85	0.75	0.28	-	Ind	7	-	2.33	10	Nil	-
14.	Indira Gandhi Nagara	1569	380											
15.	Ambedkar Nagar	627	138		0.45		-	Ind	2	-	0.170	48		
16.	Gopalpura	673	145				-					48		
17.	Ambedkar Nagar Punarvasan	897	165	-	-	-	-	-	-	-	-	-	-	-
18.	Shanipeth Gurunanak Nagar	880	175	0.55	0.50	0.25	-	2	4	-	1.0	62	25	-
19.	Chowdule Plot	2289	566	2.70	0.50	-	-	-	3	-	0.750	24	-	-
20.	Indira Nagar Khedi	402	88	0.20	0.40	-	-	Ind	1	1	0.180	24	-	-
21.	Rajiv Gandhi Nagar- Hari Vithalnagar Madhil	897	165	0.28	0.25			6	2	8	.06	-	-	-
22.	Panjra Pol Bunkarwadi	1277	283	0.6	0.10	-	-	-	-	-	0.10	48	-	-
23.	Indira Nagar Jhopadpatti	2245	61	0.1491	0.379	-	-	100 Ind	2	-	0.678	18	-	-
24.	Shahunagar A- 90	530	89	0.650	0.338	0.179	-	50 Ind	1	-	0.317	20	-	-
25.	Khedi Dandekarnagar	480	88	0.130	0.58	-	-	-	2	-	1.10	-	-	-
26.	Laxmi Nagar	1170		1.99	1.439	-	-	7	3	-	0.986	-	55	-
Total		47902	9797	32.88	15.066	9.28	2.3	280+	82	18	23.48	826.00	153.00	6.00

(Source: Jalgaon City Municipal Corporation)



The profile of the slums in Jalgaon indicates that for the majority of the poor in the city the main concern is the security of land tenure, quality of housing and inadequate access to basic infrastructure. Although slum up gradation schemes have been undertaken in the past there is still a huge demand for housing and basic infrastructure.

Surveys have been undertaken by the JCMC to evaluate the availability of services in each slum location and this has been analyzed to understand the access of slum dwellers to basic services such as water supply and sanitation.

For a total population of about 62,696 people (Census 2001) that lives in slums in Jalgaon, there are 18 community wells, 82 bore wells and 280 public water tap connections in all. This means about 380 points from which the urban poor have access to water, viz. 1 access per 164 people. While these indicators itself suggests an uncomfortable living condition, the situation however is not uniform. While some slum locations have piped water supply and some have public borewells like the areas of Samata Nagar, Harivittal Nagar, Khanderao Nagar and the Indira Nagar Jhopadpatti, the rest and a majority of them like the areas of Panjra Pol Bankarwadi, Chowdule Plot and Dangalgrasth colony lack such facilities.

With respect to sanitation, the total number of public toilets is 826.00 and the total number of personal toilets is 153.00 giving a total figure of 979 toilets for 62,696 people (Census 2001) living in slums in Jalgaon. Per person, availability of seats of public convenience is 1seat availability for 64 people. This also indicates the general inadequacy of basic services to slum dwellers in the city.

With respect to education also, there is no uniformity in the distribution of primary and secondary schools. Only six of the slums viz. Gendala Mill, Tambapura, Harivittal Nagar, Jainabad, Shahu Nagar and Samata Nagar have access to 14 primary and 2 secondary schools and are mostly run by Municipal Corporation.

The land market in Jalgaon indicates that the real estate values have also been on the rise and these prices are not affordable by the LIG/ Slum dwellers groups. Also, the lack of any specific proposals for these groups in the Development Plan has led to a shortage of housing for these unprivileged groups.



Map 8: Location of declared and undeclared slums

(Data Source: Jalgaon City Municipal Corporation)



4.6 Social infrastructure

4.6.1 Health facilities: The rural population surrounding Jalgaon is entirely dependant on the city for their health facilities. The number of super specialty hospitals in the city is 4, with 1 government hospital, 4 dispensaries, 6 public health centers, and 203 private hospitals and nursing homes.

4.6.2 Education facilities : The city is fairly well equipped in terms of its educational institutions with the presence of the North Maharashtra University, 2 engineering/diploma colleges, technological institutes, and 4 post graduate colleges.

4.6.3 Fire services: There are five fire stations located in the city at i) Golani market ii) Shivajinagar iii) MIDC iv) Mahabal and v) Girna Tank. The water supply is sourced from Shivajinagar Udyan and individual bore wells. The industrial areas of MIDC where packing, ginning, spinning etc. occurs are the most prone areas for fire to break out. A total of 58 employees work in the fire department and it is understaffed largely. The annual expenditure of the corporation is also low in this sector.

4.6.4 Police stations: There are 4 railway stations present in Jalgaon which are i) Jalgaon Police Station ii) Jalgaon City Police Station iii) Police Karyalaya in Shanipeth and iv) Zilla Highway Police Station. Crime rates in the city have been on the decline for the past 15 to 20 years and this may be attributed to efficiency of the police force, decrease in the cost of living and increase in social cohesiveness.

4.6.5 Hotels: The city serves as a place of halt for tourists bound towards Ajanta-Ellora Caves and other religious destinations such as Padmalaya (Erandol). Other tourist attractions around the city are, Pal wildlife sanctuary (60 kms), Punapdev (hot water streams) 45 kms, Pandav Palace (Erandol), shaking minarets (Farkande 30 kms). Currently, the city does not host any five-star hotels; about 60% of the hotels in the city are located near the railway station, 28% of the hotels are located near bus terminals, and 6% are located in other parts of the city¹⁴. Three and five Star hotels are not present within the city as yet and only two 2 star hotels are present with about 23 rooms. There are 41 other hotels in the city, three guesthouses and two dharamshalas.

4.6.6. Heritage / Important Buildings:

1) Inventory of Heritage areas:

Jalgaon City does not have an officially generated inventory of heritage buildings. The old city precincts including Jalgaon Gaothana, Pimprala and Mehrun Gaothana have traditional networks of streets and heritage buildings. These are mostly in the form of places of religious worship and residential units. The Ram Mandir and Ichhadevi temples are significant. The 100-year-old chariot festival is one of the significant traditions of the city. Several of these are in dilapidated condition. Government buildings such as the Council building (1864), the District office and the city Police station are also noteworthy.

14. Environment Status Report - JCMC



Pictures: Heritage buildings



4.7 MUNICIPAL SERVICES – ROADS, STREET LIGHTING AND TRANSPORT SECTOR

4.7.1. Introduction to Urban Transport: Transport facilities are vital to a city's development as it allows improved connectivity in core areas and accessibility to areas on its periphery and is significant in the growth and development of the town. It also serves as the backbone of the town's economy.

4.7.2. Railways Sector: The first station in the region was set up by the British in 1860 in Bhusawal. This being the larger division has Jalgaon railway station included in it. As the Western and Central Railways both cross the town of Jalgaon, it has the combined advantage of access and connectivity to cities/ towns/ areas that both lines provide. The Western railway has the Bhusawal - Surat passenger, Ahmedabad – Howrah Express, Bangalore Express, Tapi Express and the Ahmedabad Express. The Central Railways operates about nineteen trains, which stop at Jalgaon, including the Mumbai – Howrah mail, Karnataka Express, Punjab Mail, Nashik – Bhusawal Passenger, Dadar – Gorakhpur Express etc.

4.7.3. Public Transport: The Maharashtra State Road Transport Corporation (MSRTC) operates bus services within the municipal area and surrounding villages. The old and the new S T stands run about 38 city bus routes and plying about 96 buses. The average utilization of buses is about 200 kms/day. Services are however not adequate as they ply mostly within municipal limits and do not touch other growing centers. Hence, many commuters opt for intermediate public transport, other than public transport. The modal split¹⁵ indicates that beyond commuting by walk commuters use two wheelers (25%), cycles (20%), bus and auto rickshaws (4%) and car (2%).

4.7.4. Road Sector: The National Highway No.6 and State highways SH-6, SH-184 and SH-186 pass through Jalgaon City and hence the National Highways Authority of India (NHAI) and the Public Works Department (PWD) Government of Maharashtra are responsible for the provision and maintenance of roads within Jalgaon City along with the Jalgaon City Municipal Corporation (JCMC). The Road Structure in Jalgaon City does not reveal that of a planned system. Hierarchies between major and minor roads have not been maintained in terms of 'Rings and Radials' and a consistent pattern of connectivity between arterials and sub arterials need to be achieved.

¹⁵ Comprehensive Traffic and Transport study for Jalgaon – Tata Consultancy Services



Table 13: Road Length in Jalgaon – Bhusaval Region

Sl. No.	Type of roads	Length in km
1.	National Highway - 6	171.60
2.	State Highway	977.10
3.	Major District Roads	1115.69
4.	Other District Roads	752.35
5.	Village Roads	3146.81
Total		6163.55

(Source: Public Works Department, Jalgaon)

i) Road Infrastructure: The available road length in Jalgaon city is **430 km** (this includes the National and State Highways within the city area) and the road density is **1.16** meter per person. The types of roads cover the whole spectrum from unsurfaced (WBM) to bitumen surfaced and cement concrete category. There is a variation in the degree of usage of different roads within the city. Roads such as the ones in the Gaothan area (small lanes and by lanes) are today the least frequently used and fall into the category of least maintained roads in the city. The average speed on the roads is between 15 – 30 kmph and falls into the safe zone as of today. Majority of the delays are caused at interchanges/ junctions that require improvement.¹⁶

Table 14: Key infrastructure development status – Roads

Sl. No.	Road categories	Carriage way width (m)	Directional capacity (PCU/hr)	Roads length in km	Percentage of total route length
1.	Six lane divided	19.0 – 21.0	5400	34.40	8%
2.	Four lane divided	14.0 – 18.0	3600	64.50	15%
3.	Three lane divided	7.0 – 11.0	2200	163.90	38%
4.	Two lane divided	5.5 – 7.0	1100	64.50	15%
5.	One lane divided	3.0 – 5.5	600	103.20	24%
Total				430.00	

(Source: Comprehensive traffic and transportation study, Tata Consultancy Services)

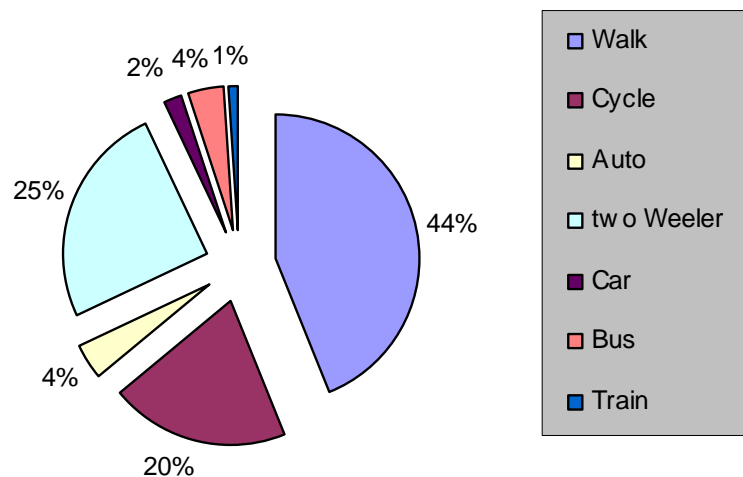
Note 1: All roads in Jalgaon are two- way except two, which include Golani market and the road near SBI.

Note 2: The capacities calculated are based on guidelines of the Indian Roads Congress.

Modal Split: The comparison of various modes of trip making as shown in figure 1 clearly indicates the present preference of the city for non – motorized means of travels; primarily the city inhabitants still prefer the pedestrian mode.

¹⁶ Comprehensive Traffic and Transport study for Jalgaon – Tata Consultancy Services 2002



Diagram 8: Modal split in the year 2002

(Source: Comprehensive Traffic and Transportation Study -Tata Consultancy Services)

An assessment of the quality of city roads revealed that the effective road widths are reduced due to encroachments, absence of pedestrian sidewalks and haphazard parking, which have implications on optimum speed and desirable safety standards.

Table 15: Condition of roads within the city

Sl. No.	Condition of roads	Road Length in km	Percentage	Remarks
1.	Poor surfaced roads	193.50	45 %	Roads that have bitumen but not as per IRC standard.
2.	Average surface quality of roads	172.00	40%	
3.	Good surface quality of roads	64.50	15%	City portion of NH and SH and Acharya Tulsi Road and M G road as per IRC standard.
Total		430.00	100%	

(Source: Comprehensive traffic and transportation study, Tata Consultancy Services)

The need to tackle present problems and plan is evident with the employment of more durable and maintenance free roads. A land use analysis of the roads indicated that 54% of roads are abutted by commercial areas; 29% cater to residential establishments and the remaining 17% are spread along industrial and recreational centers.

4.7.5 Parking sector

Growing industry, trade and commerce and most importantly the rapid growth of private vehicles has increased the need for more parking spaces especially in the central areas of Jalgaon City. This is also due to the fact that Jalgaon City is the head quarter of the Jalgaon District. Both on street and off street parking practices are prevalent in the city;



however, majority of the parking facilities falls in the on street category. Critical locations like that of the central business areas and areas near commercial complexes experience insufficiency and inadequate parking provision.

The effective carriageway width is considerably reduced with haphazard on street parking. Visual observations and quick interviews indicated that in markets such as the Golani market, the owners and tenants use most of the parking spaces and there is a deficit of parking space for the customers/ public.

Table 16: Parking duration of vehicles at various locations in Jalgaon

Location	Number of vehicles parked for duration in hours								Total
	Upto ½	½ to 1	1 to 1½	1½ to 2	2 to 2½	2½ to 3	3 to 3½	3½ to 4	
New S T Stand	616	138	67	60	30	46	36	33	1026
SBI Premises	666	124	70	45	30	12	16	3	966
M Phule market	760	171	81	65	29	26	26	25	1183
Khandesh Mill Compound	796	205	94	60	42	26	31	10	1264
Golani Market	525	105	63	23	22	19	12	14	783
Choube Chowk	1681	309	144	66	45	41	25	22	2311
Navi Peth	538	74	20	16	12	8	2	3	670
Railway Station	874	231	104	78	63	38	24	33	1445

(Source: Comprehensive traffic and transportation study – Tata Consultancy Services)

Parking duration for the majority of vehicles in any part of the city does not exceed half an hour. Fewer vehicles seem to be parked for durations of two or more hours. The locations discussed in the table above include both authorized and unauthorized lots. Morning and afternoon hours see a larger parking demand, which decreases toward the evening. The Tata Consultancy Services report indicates that crucial areas of the city are already parking grid locked and the necessity of parking is an issue of contention in the future.



Table 17: Distribution of authorized parking lots in the city

Location	Number of slots available			Total
	Cars	Two wheelers	Cycles	
Off street parking				
M Phule market	10	350	200	560
M G Market	-	10	15	25
Golani Market	350	25	300	675
Railway Station	8	360	205	573
New S T Stand	-	-	52	52
SBI Premises	5	100	25	130
Khandesh Mill Compound	50	250	300	600
On street parking (length in meters)				
M G Road				350m
Opp to Phule Market				50m
Adj to Old Municipal Building				50m
Tower to Bombay Lodge Chowk				200m
Rear end of G S Grounds				100m
Shanipeth Road				100m

(Source: Comprehensive traffic and transportation study, Tata Consultancy Services)

Parking is also provided in areas in proximity to intersections. This practice is in violation of accepted norms; and need to be rectified in future with certain areas being demarcated as parking free zones and the introduction of off site and pay and use parking policies.

4.7.6 ISSUES, POTENTIAL AND CHALLENGES IN THE ROAD SECTOR

Key Issues:

1. Policy level issues

- Short-term: The National & State Highways passing through the city function as major arterial roads. In the absence of an effective bypass, inter-mixing of regional traffic and city traffic takes place, especially on the National Highway.
- The existing right of way of the roads are not being used effectively and provisions for on and off street parking spaces, road markings and pedestrian sidewalks are not present.
- Long-term: Comprehensive plan for Road, Traffic and Transport sector and off street parking facilities have not been implemented or planned for yet.

2. Operation and Management Issues

- Encroachment by hawkers and unauthorized parking has reduced the effective road widths available and this problem is prevalent especially in the Central Business Areas such as Navipeth etc;
- Though the road surface available is fairly good, much needs to be done to improve the riding quality of the city roads;
- Pedestrian footpaths are non existent in most parts of the city and need to be introduced to avoid mixing of vehicular and pedestrian traffic;
- Roads have faulty alignments, absence of cross drainage works and railway over-bridges, and lack of road markings;
- Majority of the delays on roads are caused at interchanges/ junctions which require improvement;



- Most of the roads are of the two lanes undivided type and pose potential safety hazards.
- Lack of planned and designated bus stops/bays, particularly in the city results in interrupted traffic flow and leads to accidents.
- The city does not have proper drainage system along the roads to run-off rainwater.

4.7.7. Street Lighting

The Jalgaon City Municipal Corporation (JCMC) is responsible for the provision of street lighting in the city. More than 80% of the city is lit by streetlights and work is in progress in the remaining 20% areas. Maintenance costs are about Rs. 4lakhs per month. 14,200 street poles, 12,000 poles with lighting fixture, 10,000 tube lights, and 3347 sodium vapor lamps are provided for on the streets today. The NH – 6 has 200 poles with sodium light fixtures on them. 4 high mast street lights at a height of 21m exist in the city at Curt Chowk, Swatantra chowk, Akashwani Chowk and Nelson Mandela Chowk. They have 48 lamps and are all metal halide lamps with 800wattage.



Jalgaon City Road Network with Improvement Scheme

Legend

- Suggested locations for Junction Improvements
- New Road Schemes
- Road Widening Schemes
- Road links for oneway Schemes & Cycle tracks
- Old Municipal Limit
- - - New Municipal Limit
- Road
- Railway
- Tank

0 500 1000 1500 2000Mtrs

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4.8. MUNICIPAL SERVICES – WATER SUPPLY

The Jalgaon City Municipal Corporation is responsible for providing water supply within the city. There are two water filtration plants: Girna water filtration plant and Dapora water filtration plant, owned by the JCMC. The Dapora natural water filtration plant was constructed by the British in 1985 & Girna artificial water filtration plant was constructed in 1927.

4.8.1 Sources of Water Supply: Water supply in this area at present is mainly served by two water supply schemes, viz., Girna water pumping station & Dapora filtration plant on Girna River. The Girna Dam is located 140 km away from Jalgaon. The Dapora filtration plant is situated 5 km away from the city in proximity to Girna water pumping station. The water source to this filtration plant is through the Dapora dam. After purification and filtration, the water is supplied to Girna water tank through the raising main. The Water sources of Girna water-pumping station is situated 7 km away from Girna Taki located in the western side. Water is pumped through the rising main and supplied to the Girna water tank, which is a ground level water reservoir; located in Mehrun in the old city limits. The total installed ideal capacity of the filtration plant (Artificial Plant) & natural filtration plant is about 30 & 20 MLD respectively, the actual capacity is 14.45 & 14.63 MLD respectively. Additionally, water is drawn from the MIDC filtration plant, with an actual capacity of 11 MLD. Jalgaon currently utilizes the entire actual capacity of 40.13 MLD to cater to the demands of the residential, commercial and industrial areas.

4.8.2 Infrastructure

Table 18: Key infrastructure development Parameters – Water Supply

Sl. No.	Particulars	2000-01	2005-06
1.	Piped water (length in kms)	317.95	345.02
	Extent Coverage (%)	43 (%)	47(%)
2.	Un piped water – additional sources	495(HP)+225(EP)=720	686(HP)+233(EP)=919
3.	Per capita supply (lpcd)	88.00	71.00
4.	Leakages (%)	29.02%	28.93%
5.	Actual Supply	29.24 mld	30.25 mld
6.	Actual Demand	30.67 mld	50.37 mld

(Source: JCMC-WD)

There are 10 Elevated Storage Reservoirs (ESR) and 4 Ground Level Storage Reservoirs (GLSR) in Jalgaon city, out of which 9 ESR's are spread around the city such as; 1) Genda Lal mill located at Shivajinagar, with a capacity of 2 million liters, 2) Akash Wani located behind District Collector's Office with a capacity of 2.5 million liters, 3) DSP Chowk with a capacity of 2.8 million liters, 4) Daulat Nagar Tank with a capacity of 0.3 million liters, 5) Pimprala with a capacity of 0.175 million liters, 6) Mehrun with a capacity of 0.125 million liters 7) Tambapura with a capacity of 0.1 million liters, 8) Khanderao Nagar with a capacity



of 28mld, 9) Nithyanand nagar with a capacity of 28mld and 10) Girna taki with a capacity of 3.5 million liters.

There are 5 GLSR reservoirs of which two are combined; they are the Hari Vittal Nagar with a capacity of 0.05 million litres, Girna Taki 1 and 2 located behind M J College with a capacity of 2.25 million litres, Girna Taki No.3 with a capacity of 4.5 million litres and Girna Taki No. 4 with a capacity of 3.5million litres.

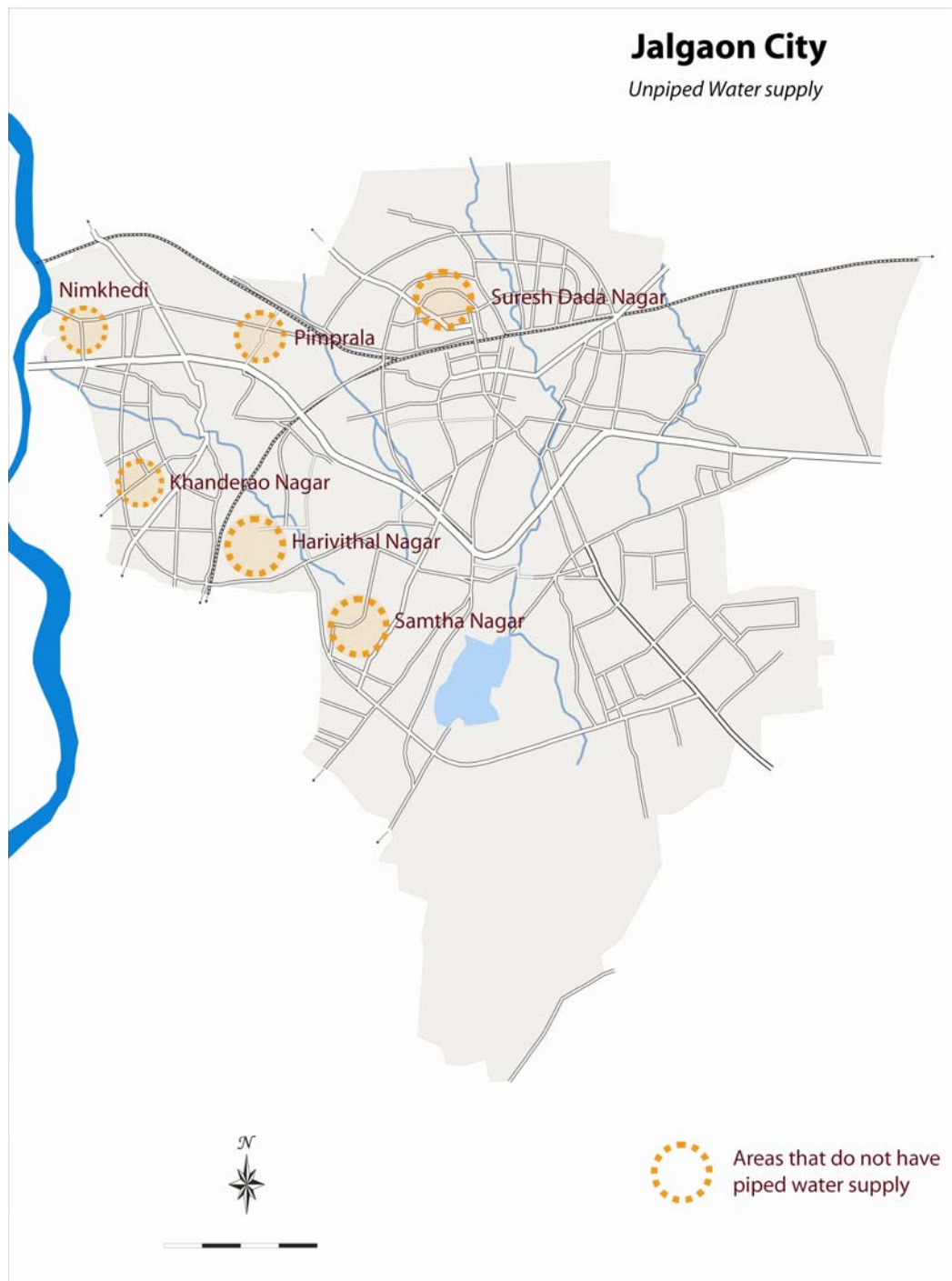
Table 19: Location of wells & tube wells in Jalgaon city

Sl. No.	Water work station	Capacity of pump
1.	Ramesh dada well near Mehrun lake	30 HP
2.	Mahader well	25 HP
3.	Samjik Wanikaran well	12.5 HP
4.	Bari well Harivetthal Nagar	20 HP
5.	Bahare well Harivetthal Nagar	12.5 HP
6.	Jakhete well Pimprala	30 HP
7.	Khote nagar tube well (3 Nos)	80 HP
8.	Nimkhedi tube well (2 Nos)	30 HP
9.	Central Bank Colony Pimprala well	7.5 HP
10.	Mayur colony Pimprala well	12.5 HP
11.	Shivaji Wadayan, near unit of. Meharun	20 HP

Source: (JCMC-WD)



Map 10: Location of areas served by unpiped water supply.



4.8.3 Ongoing Initiatives: Augmentation to Jalgaon Water Supply Scheme Stage V, Phase –I is an ongoing project from the water source of Waghur dam, located 16 km southeast of Jalgaon city. The scheme proposes to serve as a secondary source of water supply to the city whose population by 2030 is projected to be 8,76,700 persons, with a water supply requirement of 149 MLD. The scheme is planned at a total cost of Rs. 159.25 Crores (Rs. 25.00 Crores - Government of Maharashtra, Rs. 47.55 Crores - State Government – Department of Irrigation and remaining Rs. 84.26 Crores - JCMC through a loan from HUDCO).

A. Water Requirement

Table 20: Water Requirement

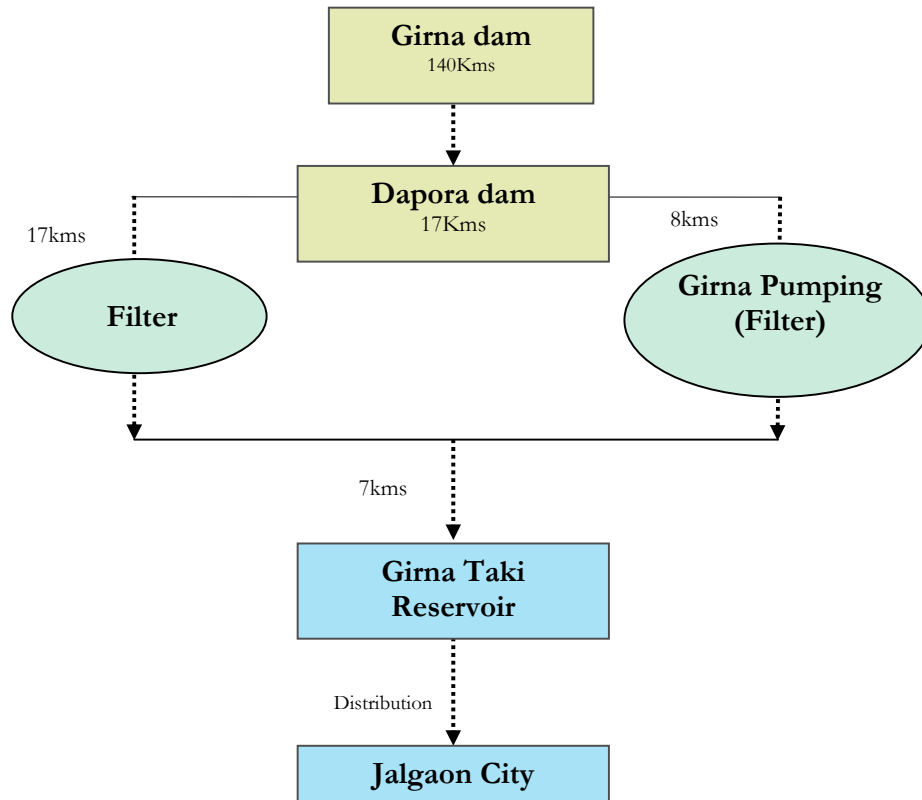
Particulars	Year		
	2001	2015	2030
Population	326500	541000	876700
Per capita supply (LPCD)	200	200	200
Gross Water Requirement	65.3 mld	108.2 mld	175.34 mld

(Source: Jalgaon Water Supply Scheme stage-V phase-I – Volume-I by J.V. Sharma, Engineers & Contractors)

B. Augmented Water Supply Scheme

- Pure Water Leading Gravity Mains:** Pure water leading mains ranging from 600 mm to 1500 mm dia. Pipes of PSC and MS pipes total length about 7772 meters. Pure water will be supplied to the existing GSR at Girna Taki, and proposed new 10 ESRs.
- New GSR, Sump, Pumping Machinery & Rising mains:** Ten numbers of new ESRs have been proposed in this scheme with the capacity of 31.3 million liters.
- Water Treatment Plant:** The total plant capacity of 130 MLD.
- Distribution System:** Reframing & redesigning the estimates based on the location of Elevated Storage Reservoir (ELRs) and capacity.



Diagram 9: Existing Water Distribution Network

Ground Water: In total, the water level has decreased more than 4 meters in last 20 years. In addition to this, pollutants contaminate water resources and groundwater reserves. Inadequate sewage treatment and improper solid waste disposal contributes for incidences of water-related diseases in the district. Water Table level in Jalgaon District is approx. 300feet. According to studies by the Ministry of Water Resources, levels of nitrate; chloride and fluoride are much above the permissible limits. Ironically, overexploitation of water from aquifers in the district has increased ultimately resulting in lowering of water table at the rate of 20 cm per year (pre monsoon 1983-2004).

The present per capita supply is 71 lpcd; water required for minimum domestic need is 54 MLD and actual demand is 50.37 MLD and the actual supply is 30.25 MLD. The capacity of the distribution tanks is 185 lakhs liters, which is 61 percent of the water, supplied directly. The total length of distribution system in Jalgaon is about 345 running km, the distribution network includes CI, AC & PVC pipes which range from 12 mm to 200 mm in diameter. The Piped water - which covers about 43 % & 47% during 2000-01 to 2005-06 respectively, in terms of average per capita supply, is about 71 lpcd, which is lower than the national



standards. The ideal per capita supply is an average about 135-150 lpcd for medium order city.

4.8.4 House Service Connections, user charges and cost recovery

The total number of service connections in the city is about 35118 residential and 678 commercial connections and these cover only 42.45 percent of the total properties assessed¹⁷ indicating a huge gap in cost recovery. The tariff structure is fixed by the Government of Maharashtra across the state irrespective of the cost services, the user charges are levied based on the pipe's diameter size. The revenues collected from the water tariffs is Rs. 4.78 crores + cost recovery is Rs. 7.52 crore and expenditure and O&M cost is Rs. 12.31Crores year 2005-06. Thus, it indicates huge gap in expenditure and revenue.

Present Water Tariff Structure: The tariff structure is fixed by the Jalgaon City Municipal Corporation irrespective of the cost of service. The current water tariff as presented in Table 2 was last revised during 2005- 06. Water charges are collected from the date of sanction of the building plan for that building, the present average cost of water per 1000 kiloliters is about Rs. 7/- , under Waghur Water Supply Scheme cost of water per 1000 kiloliters is estimated Rs. 8.89/-.

Table 21: Water Tariff per month

Size	Domestic	Commercial
12 mm	Rs 67	Rs. 298
18 mm	Rs. 250	Rs. 833
25 mm	Rs. 500	Rs. 1666
50 mm	Rs. 9375	Rs. 18750
75 mm	Rs. 14167	Rs. 28125
100 mm	Rs. 56250	Rs. 112500
200 mm	Rs. 75000	Rs. 225000

(Source: JCMC-WD)

4.8.5 Issues, Potential and Challenges in water supply sector

i) Policy level issues

- Short-term: Clarity on fixation of norms for water tariff and structure with regard to cost recovery and plugging of illegal connections.
- Long-term: At present, The Waghur Water Supply Scheme is on going to cater to the water demand of 2031. The population growth rates should be taken into consideration while upgrading the distribution network.
- Suggest new location on Waghur Dam..

ii) Service and O&M Issues

- Unaccounted, high transmission and distribution losses - Transmission and distribution losses due to leakages, unauthorized connections etc. about 29% of gross

17 Housing stock – 82754 (2005): JCMC – Public Health and Engineering Department



supply thereby making the net supply average at 71 lpcd against a normative standard of more than 135 lpcd;



iii) Potential

- The system is highly dependent on river water source. In the absence of fair distribution network within the city, it is beset by the challenges of 1) Increase supply, 2) reduce distribution losses 3) Augmentation of existing distribution network and 4) upgradation / increase the internal distribution network within the city.
- The Comprehensive master plan for Water Supply Scheme for old & new municipal limit is necessary.
- Service coverage is reported to be very low at about 35 thousand odd house connections against more than 73 thousand households, indicating a large quantum of non-revenue water and consequently, poor cost recovery.
- Enhancement of service coverage along with adopting consumer metering and efficient use water.

4.9. MUNICIPAL SERVICES – SEWERAGE AND SANITATION

The Jalgaon City Municipal Corporation is responsible for providing sewage and sanitation facilities within the city.

4.9.1 Existing Sewerage System

A sewerage system proposal was prepared by Environmental Engineering Department of Maharashtra in 1965 for an estimated flow of 20 mld. The proposed sewer network system was laid on the main roads and no branch sewer in the side streets to pick house connections was provided. At present existing sewerage, system is non – functional. The entire city has an open sewage system with the absence of an under ground drainage network. The present quantum of sewerage generated in the city is quantifiable based on population and water supply. Sewage from houses is being discharged into septic tanks and the effluent is passed either into soak pits or into surface drains creating hazardous and unhygienic conditions in these areas.

4.9.2. Sanitation and public health

The city recorded 1596 and 1768 public and community toilets during 2000-01 & 2005-06 respectively. These are mainly located in the area of Shivajinagar, Tambapura and core area of the city. In addition to that Jalgaon City Municipal Corporation has floated tender for construction of 450 community toilets in different places in the city.

4.9.3. Issues, Potential and Challenges in sewage and Sanitation Sectors**Key Issues****i) Policy level issues**

- Short term: Provision of sanitation facilities to slum dwellers and poor is an immediate need and should be addressed as a policy in the short term.
- Long term: To provide sanitation facilities to all, including efficient sewerage system, public toilets and drainage facilities planned for the year 2030.



- Augmentation of the existing drainage networks, primary, secondary and tertiary.

ii) Service and O&M issues

The continuous addition of household Waste Sewerage and sewer lines into the Nallah water causes the surface water quality to deteriorate and this is on the rise with rapid urbanization.

- The sullage from the city after being collected from five main nallahs is then let into the Girna River treatment plant.
- Mixing up of sewerage and storm water is a predominant issue in Jalgaon. The excess water from the soak pits which is allowed to flow into the drains causing dangerous situations during the rains when there is overflow.

4.10 MUNICIPAL SERVICES – STORM WATER DRAINAGE

The Jalgaon City Municipal Corporation is responsible for construction and up gradation of Storm Water Drains within the city.

4.10.1. Existing system of drains

The storm water drainage system in Jalgaon comprises primary, secondary and tertiary drains. There are five primary nallahs connected to city and its periphery such as Lendi, Khedi, Pimprala, Gujar and Harivittal nallahs and also covered by the secondary and tertiary drains within the city. The general slope of the area is from the South to the North, sloping towards the Mamurabad Naala. Hilly areas are present along the Shirsolli and Mohadi Roads and also along the south - west side along Girna Pumping Station Road. The Girna River runs in the north - south direction along the western boundary of Jalgaon Town near Nimkhedi village. The Mehrun tank is situated at the southern side of the City, the Lendi nallah feeds into it.

Total network of storm water drains is about 185.40 & 190.025 km in lengths during 2001-01 & 2005-06 respectively, out of which about 3.86% covered drains within the city and rest are open. There is a system of primary and secondary nallas where the households send out their sullage, effluents and storm water into a network of existing pucca gutters which then culminate in the 5 main primary nallas.

4.10.2 Infrastructure

Table 22: Key infrastructure development parameters – Storm Water Drainage

Sl. No.	Particulars	2000-01	2005-06
1.	Storm water drains – Constructed & Upgraded	(length in kms)	(length in kms)
	Total Network (length in kms)	185.40	190.025
	Covered drains (length in kms)	7.350	7.350
	Covered drains (%)	3.96%	3.86%
	Uncovered drains (length in kms)	178.05	182.675

(Source: JCMC)

