CRISIL
INFRASTRUCTURE
ADVISORY

CRISIL Risk & Infrastructure Solutions Limited

City Development Plan - Jaora

Jaora Municipal Council, Jaora, Dist. Ratlam, Madhya Pradesh

Urban Administration & Development Department, Madhya Pradesh

Project Coordinator

City Managers' Association, Madhya Pradesh

CMAMP
City Managers' Association Madhya Pradesh

CONTENTS

List of Figures

List of Tables

1 EXECUTIVE SUMMARY

Government of India (GoI) has launched an ambitious programme Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) for improving the infrastructure in urban areas to improve the service levels to support and promote economic development. Though the main objective is to provide investment support to meet the current gap, the major thrust is on reforms in the urban sector in the areas of accounting, administration, institutions, governance and financial sustainability of the local bodies.

Considering the growth in the small towns and the role they would play in the development of the state, GoMP has taken a robust step and has laid emphasis on the importance of developing small towns and hence considered it apt to prepare CDPs for 96 cities in the same way as is conceived under JNNURM.

In this context, GoMP through its nodal agency, Urban Administration and Development Department (UADD), has appointed CRISIL Risk & Infrastructure Solutions Limited, to prepare the CDP for the city of Jaora.

The CDP offers both a perspective and a vision for the future development of the city and involves an extensive consultative process. One of the key features of the exercise would be the stakeholder's workshop. The CDP aims at providing amenities to the citizens of the city. Hence, it becomes essential to consult the citizens who would be the real beneficiaries of the CDP. Moreover, consulting citizens would also catalyze new thinking and provoke debate, which would definitely be a result-oriented process. Therefore, the vision and strategic thrusts of the CDP will be built around the lessons and findings of a comprehensive and rigorous stakeholder consultation and documentation process.

Jaora – City Profile

The city of Jaora is situated in the Ratlam District and is located in western part of Madhya Pradesh i.e. Malwa region between Ratlam and Neemuch city.

The city has gained importance due to presence of historical monuments which includes the famous "Hussain Tekri" a religious place for Muslims, situated at a distance of 4 km on the eastern side of the town. The town is well-connected to major cities such as Mandsaur, Neemuch, Ajmer, Ratlam, Nagda, Ujjain, Indore, Vadodara, Bhopal, and Ahmedabad through a road and rail network. It lies on the State Highway 31 (Ratlam – Neemuch). The highway further links with the National Highway number 3 (via Mhow road) which connect the city with rest of the parts of the country and the state.

The key growth drivers for Jaora are its trade and commerce activity, agricultural activities which is being traded at agriculture produce market committee (APMC), and religious tourism.

⇒ **Agriculture**

Agriculture is the mainstay for the citizens of the town with almost 60 to 65 percent of the population being dependent on Agriculture. The town's economic activity is highly dependent on agriculture. Soyabean, garlic, and wheat are the main crops grown in the region. The city houses the largest grain market (Krishi Mandi) in the district. Agriculture product markets (Krishi Upaj Mandis) have been established to enable farmers to get a fair price on their agricultural output.

⇒ **Tourism**

The town is famous for its historical monuments which include Hussain Tekri, Jama Masjid, Gafoor Khan and Gaus Mohammad ke maqbare, old-fashioned houses, and Ghantaghar situated in the middle of the city, etc. The north side of the town is home to Abu Saeed Dargah. Every year, "urs" festival is celebrated at the dargah. The town is also home to a famous Lord Hanuman temple, a Jain temple known as Dadawadi which is situated at half a kilometer from the city on the Jaora-Khachrod road, a Jain temple in the Pipli bazaar area, and a Jagannath temple near the pipli khal.

The presence of such huge religious institutions supports in developing the tourism industry which would definitely help in economic development of the region and would ample of opportunities to the citizens.

⇒ **Population**

Population over the years is increasing in absolute terms; however, the rate of growth of population is declining continuously since 1981 and has declined from 26% to 14% in 2001.

Based on the historical and future prospects of the city, the population of the city has been projected and arithmetic increase method is considered appropriate and presents the closest of the current population growth trend. **Accordingly, the population of the town is estimated to be 70,711 by 2011; 77,563 by 2021 and 87,323 by 2035.**

Status of Infrastructure services provided by MMC

The principal function of JMC is the provision of basic services to its citizens. Municipal services have a direct and immediate effect on the quality of lives of people in the city. Poor municipal service can also make it difficult to attract business or industry to an area and thus it can limit job opportunities for residents.

⇒ **Water supply**

- River Maleni, a non perennial river, having a capacity of 44 million cubic feet is the main source of water supply.
- The present gross water supply level of 81 lpcd is below the prescribed norm of 135 lpcd.
- The city has a treatment plant having a capacity of 3 MLD which is quite old and requires up gradation.
- Coverage in terms of roads reveals 60 percent.
- Metering of water connections is completely absent; in-equity in charging for service provided.
- Rehabilitation of old and AC and PVC pipe type distribution network is required.

- **Water supply augmentation proposed under UIDSSMT is under implementation.**

⇒ **Sewerage**

- The city does not have an underground sewerage network or Sewerage treatment plant.
- There is a discharge of sewerage into water bodies lakes resulting in pollution and siltation.
- There is a requirement of training for sweepers to clean the public toilets in an organized manner.

⇒ **Storm Water Drainage**

- The network of tertiary drains covers a length of 85 km; i.e. 108 percent of the city is covered with storm water drainage network against a desirable level of 130 percent, which is very good.
- There are about 3 major natural drains and 20 small drains within the city.
- The area near the pilya khal requires re-development and is prone to water logging during the monsoon season.
- Absence of any contour map of city resulting in piecemeal and non-effective effort towards addressing the issue.

⇒ **Solid waste management**

- Compliance to MSW Rules 2000 is not present in terms of door-to-door collection, segregation, recycling/ composting and disposal of waste.
- The total rated vehicle carrying capacity is only 15 metric tonnes against an estimated generation of 12 – 15 tonnes.
- Lack of door to door of collection results in waste on the roads.
- The existing disposal site lacks infrastructure for landfill and composting and waste is merely dumped.

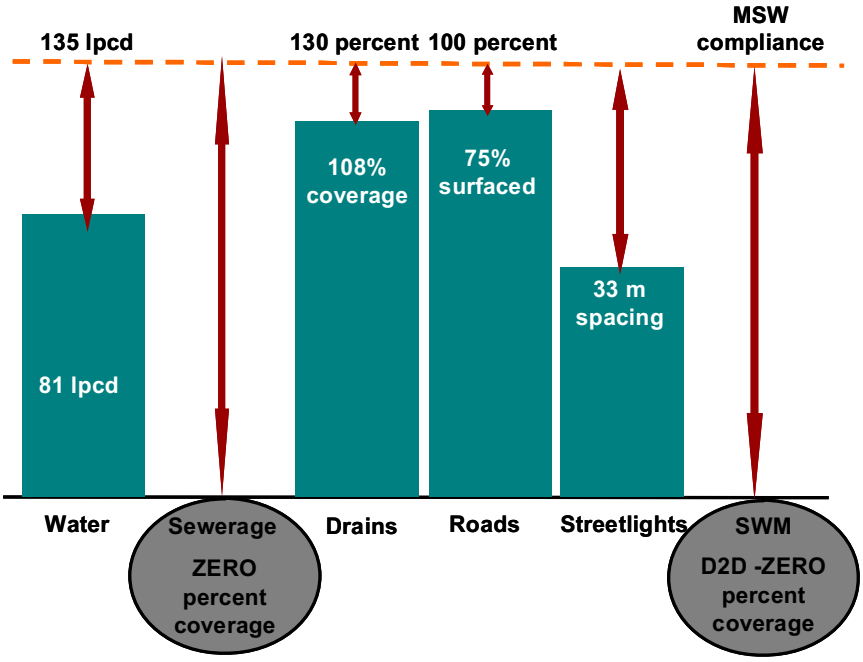
⇒ **Roads, Traffic & Transportation and Street Lights**

- The present road network is about 60.66 km. Based on the data available 50 percent of the roads are bituminous topped with 25 percent being CC surfacing, and the remaining 25 percent is water bound macadam surfaced.
- Outstation traffic adds to the congestion, pollution and disruption in the city traffic.
- Lack of dedicated parking space in the commercial areas has lead to abrupt parking on road sides reducing the effective width of road for flow of vehicles.
- Requirement of an under bridge or over bridge at Chaupati railway crossing
- A bye-pass for the city to avoid entry of heavy vehicles on already congested roads of the city.
- Against the available road length of 60.66 km, the average spacing of streetlight poles is 33 meters, indicating the inadequacy of service when compared to the norms of 30 meters spacing.

⇒ **Services for urban poor**

- The city had a slum population of 51, 203 distributed in 23 wards, which represents huge presence.
- Approximately 30 percent of the household (HH) - semi pucca or pucca houses, 50 percent - kuccha houses and the remaining 20 percent - jhuggi jhopris.
- Many of the slum pockets have absence of storm water discharge network.
- Waste management in slum pockets are not adequately addressed.

- Absence of sanitation facility in slum areas, which is an important criteria defining slums. Only 30 percent of the households have access to public toilet facilities.
- **The project under IHSDP for Rs. 2.43 crore has been approved by the Government.**



Consultation with Stakeholders

The CDP process has been based on the active participation of stakeholders drawn from various walks of life (officials, councillors, industry association, academicians, NGO activists, senior citizens and the like). The stakeholder's consultation was conducted at different stages as follows:

Workshop	Stage	Date
Workshop I	At the Inception stage to familiarize stakeholders with purpose, process and expected outcome of the CDP.	10th Nov' 2009
Workshop II	To develop City Vision and Sector Goals	22nd Feb' 2010
Workshop III	To finalise strategy and priority actions and projects	22nd Mar' 2010
Workshop IV	Outcomes of the CDP	1st Sep' 2010

The views sounded by the stakeholders at the initiation level i.e. the first stage of the CDP and after presenting analysis of the data, did not deviate much. The following common points in various sectors emerged out of the various discussions:

⇒ **Traffic and Transportation**

- Requirement of a ring road and an urgent requirement of bypass road that connects Khachrod and Ratlam.
- Requirement of an over or under bridge at railway crossing.
- Requirement of a divider on the entrance road that leads to the main city.
- Creation of parking space through development of Ghantaghar on PPP basis.
- Requirement of regional bus stands to ease traffic on entering the main city.

⇒ **Environment**

- To make the city look more beautiful, dividers and intersections should be planted with flowers and plants.
- Wards to be appreciated for their work related to environment.

⇒ **Social Infrastructure**

- Improving the hospitality infrastructure near Hussain Tekri through promoting Dharamshalas and Hotels.
- Development of Indoor sports stadium and creating a jogging track in existing mela maidan.
- Upgrade the status of polytechnic college to an engineering college so as to provide ample opportunities to the students of the city and nearby locations
- Increase the number of public toilets and especially ladies public toilets in markets and other public areas.

⇒ **Urban Services**

- Better and timely implementation of water supply project approved under the UIDSSMT scheme and project for Urban poor under the IHSDP scheme.
- Moreover, the stakeholder also laid importance on constructing underground sewerage throughout the city.
- Improving the waste management system through introduction of door to door technique.
- Providing better facilities in slums and improving maintenance within the region with the timely implementation of project sanctioned under IHSDP.
- Feasibility study to be carried out to open a power generation plant at the Triveni where three rivers meet i.e. Maleni, Pingla and Chambal. The opening up of a power generating plant would not only serve the purpose of the citizens of Jaora but would also be beneficial for many other villages.

⇒ **Economic Development**

- Image positioning of Jaora as religious tourism center and promoting tourism industry through different means and ways and increasing the tourism facilities within the city.
- Shifting of existing mandi to new location to increase the trade activity and provide multiple benefits in terms of connectivity to the main city and introduce and plan cheap mode of transportation for small time labourers. Also provide for new and big cold storage facilities, space for parking and use of heavy loaders.
- A strategic focus group (comprising of sector experts, district administration and JMC) should be formed to prepare a road map for promoting small scale industries.

Based on various discussions held during the workshop and other meetings it was observed that the city does have sound **strength** which could further stimulate several activities leading to overall development of the city. For instance, the presence of **"Hussain Tekri"** could help in promoting **religious tourism;** the presence of largest **"Krishi Mandi"** in the district would help in promoting agriculture activities and increasing employment opportunities. Though there are certain **weaknesses** such as out migration due to lack of job opportunities, no underground sewerage network, lack of urban greenery, lack of parking facilities and poor intra-city transport system which would certainly require improvement.

Moreover, it was also observed that the city has **remarkable opportunities** through improving the existing water supply condition by implementation of water supply project in efficient and organized manner, promoting religious tourism, and utilizing the land on which the defunct sugar mill is present. Though it was conceived that factors such as deteriorating urban environment, discouraged economic activity and movement of people to other cities may play a hindrance to overall development and therefore it is important to provide solution to these **threats**.

Based on the town's strengths, futuristic desires and perspectives the **VISION** that emanates is –

"Jaora shall be a city with clean and green environment with economy sustained by agriculture and agriculture related industries"

Strategy and Action Plan

Based on our understanding on the existing status, gaps, City's SWOT analysis and its VISION, a multi prolonged strategy has been developed to achieve its VISION. The strategy would include identifying sector goals and developing projects to achieve the goals as discussed during the workshops with the JMC officials and the stakeholders.

⇒ **Sector Goals**

The following sector goals were emanated from the workshops held at various stages:

- **Traffic and Transportation** – To develop a ring road, bypass road and space for parking facilities.
- **Solid Waste Management** – To implement door to door collection and making the city a dust bin free city.
- **Water Supply** – Water availability on a daily basis and introduction of metering and rain water harvesting system.
- **Sewerage** – Preserving the natural environment and water bodies through re use of waste water by developing underground sewerage network.
- **Strom Water Drainage System** – Protection of Natural drains from getting polluted.
- **Economic** – Increasing the employment opportunities through integrated development of Krishi Mandi and Agro-based industries.
- **Social, Recreational and Tourism** – Improving the hospitality scenario in the city through promoting religious tourism and developing infrastructure for recreational activities.
- **Slum Development** – Utilizing the benefit of IHSDP scheme for providing housing and infrastructure for urban poor.

- **Power** – Carrying out a feasibility to develop hydro power project at the juncture of Chambal, Maleni and Pingla River.

⇒ **Projects and Action Plan**

Based on the overall goals and objectives, projects and action plan were then identified after having discussions with stakeholders, JMC officials and other department officials. While identifying projects for various sectors, we also discussed possible Public Private Partnership (PPP) intervention and reform compliance to be implemented under various sectors. The following projects were identified and discussed:

- **Approved under different Government Schemes**
  - **Water Supply –** The project has already been approved under UIDSSMT scheme and is under implementation. There is a need for organized and timely execution of the project.
  - **Slum Development** – The project has already been approved under IHSDP scheme and would sooner be implemented.

- **Projects Identified**
  - **Sewerage -** Implementation of underground drainage system and development of low cost sanitation units.
  - **Traffic and Transportation** – Development of ring road and bypass road, ROB at Railway crossing, improving Public transport system and developing Parking complexes.
  - **Solid Waste Management** - Implementation of door to door collection system, segregation of waste and development of landfill site.
  - **Social, Recreational and Tourism –** Up gradation of Polytechnic College to Engineering College and promoting religious tourism through improving hospitality services.

- **Public Private Partnership (PPP) explored:**
  - Redevelopment of Ghantaghar for commercial and parking facility on PPP basis. (For instance, in case of parking facilities land could be provided on lease basis and feasibility could be improved through introduction of mixed commercial land use.)
  - Redevelopment of vegetable market cum parking complex on PPP basis.
  - Development of tourism infrastructure i.e. hotels, night shelters on PPP basis.

Investment requirement and sustenance capacity

The project identification has been done through a demand-gap analysis of the services, review of the DPRs as available with JMC and in discussion with JMC officials and stakeholders of the city. Further project prioritisation and phasing of investments is based on the strategies listed out under each service sector. Certain other projects listed as part of the CIP include developmental projects other than those addressing the core service sectors. The total estimated capital investment required for providing efficient services to the present population and future population by the year 2035 is **Rs. 86.90 crores** at constant prices. Of the total identified investment a total of **Rs. 59.49 crores** is proposed for investment till 2014-15.

The table below presents the summary of sector-wise total investment need and investments.

			Rs in Crores
Investment Sector	**Phase I**	**Phase II**	**Total**
Water Supply	12.28	1.63	13.91
Sewerage & Sanitation	18.37	5.76	24.13
Roads & Urban Transport	9.89	10.77	20.66
Drains	9.00	7.24	16.24
Streetlights	0.99	0.73	1.65
Solid Waste Management	1.06	1.36	2.43
Urban Poor/ Slums	2.44		2.44
Other Projects	5.45		5.45
Total	**59.49**	**27.42**	**86.90**

**Other Projects – Development of Ghantaghar, Development of Vegetable Market cum Parking Complex, Development of Regional Bus stands, Development of Indoor stadium, Traffic Management System.*

2 PROJECT INTRODUCTION

2.1 Introduction to the initiation of City Development Plan (CDP) in India

As per the 2001 census, the urban population of India stood at 28.54 crores, which is about 27.8 percent of the country's total population; by 2021, the urban population is estimated to account for above 40 percent of India's population. Thus, cities and towns will play a vital role in India's socio-economic transformation and change. Apart from their contribution to the country's gross domestic product (GDP), which is currently placed at about 50-55 percent, and their growing role in the global markets, cities in India will be the engines of economic growth, the centre-points of innovation and the hub of many socio-economic activities. But the current state of affairs in most of our urban areas is far from satisfactory on all parameters of urban governance like planned growth, share of slum population, reliability of civic infrastructure and financial resources. All these factors will have a significant negative economic consequence if not addressed in a planned manner.

With that reference, the Government of India (GoI) launched an ambitious programme for improving the infrastructure in urban areas and service levels, to support and promote economic development. Though the main objective is to provide investment support to meet the current gap, the major thrust is on reforms in the urban sector in the areas of accounting, administration, institutions, governance and financial sustainability of the local bodies.

In this regard, GoI had launched two schemes, one the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) covering 63 cities (all cities above 10 lakhs population, capital cities and certain special cities). The other urban areas are covered under the Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) and Integrated Housing and Slum Development Programme (IHSDP), which subsume the existing schemes of Integrated Development of Small and Medium Towns (IDSMT) and Accelerated Urban Water Supply programme (AUWSP).

2.2 A robust step by Government of Madhya Pradesh (GoMP)

As per the qualifying criteria under JNNURM, the CDPs of four cities of Madhya Pradesh, viz., Bhopal, Indore, Jabalpur and Ujjain, were prepared and further funded jointly by the GoI and GoMP.

However, considering the growth in the small towns and the role they would play in the development of the state, GoMP laid emphasis on the importance of developing small towns and hence considered it apt to prepare CDPs for 96 cities in the same way as is conceived under JNNURM. A CDP will also for provide a strategic framework for converging and co-ordinating various development inputs to position the city on a development path.

In this context, GoMP through its nodal agency, Urban Administrative Development Department (UADD), has appointed CRISIL Risk & Infrastructure Solutions Limited, to prepare the CDP for the city of **Jaora**.

2.3 Objectives of a City Development Plan

The City Development Plan (CDP) is aimed at identifying an integrated solution to the challenges facing the city. It identifies the economic growth strategy as well as the actions that would be required by various agencies to ensure sustainable development of the city.

The CDP is the Municipality's strategy that presents both a vision of a desired future for the city, as well as mission statements on how the municipality, together with other stakeholders, intends to work towards achieving this long-term vision for the city in the next twenty-five years.

The CDP should lead to the translation of missions into actions and actions into outcomes. The objective of involving stakeholders through a consultation process and securing endorsements of the proposed actions is to minimize the gap between citizen's expectations and actual realization, and to ensure that these mission statements, actions and expected outcomes do not remain only on paper. Consultation at multiple stages would also catalyze new thinking and provoke debate on various issues.

The CDP clearly defines how a municipality will serve its customers (businesses and citizens). For example, the CDP will talk about how the municipality intends to guarantee a basic level of urban services to all citizens; make urban planning responsive to emerging needs; and become responsive to the needs of, and improve its services, to local businesses. The CDP will also outline how the municipality plans to run its business. The CDP will elaborate how the municipality intends to manage public finance in a modern and transparent way; execute urban planning and governance in line with an established framework; and become more responsive -- cost and time-efficient – by availing of technology in its governance and service delivery processes.

Finally, the CDP will reveal the municipality's strategy to manage its resources, i.e., how it intends to increase its revenues and expand its tax base. The CDP will also outline the municipality's plans to achieve self-sustaining urban service delivery; improve its creditworthiness; and recruit and retain a skilled workforce.

2.4 Scope of Work as per the Terms of Reference

The CDP would be prepared keeping in view the toolkit, guidelines and instructions provided by UADD, the State Level Nodal Agency. The detailed scope of work includes the following:

1. Study of existing set-up of Departments, analysis of various projects executed or taken in hand to formulate the background. Consultants shall prepare the CDP with a future vision as envisaged by the Urban Infrastructure Development Scheme for Small and Medium Towns Scheme (UIDSSMT) Agenda.

2. A situation analysis, with regards to demographic and economic trends in the city and their implications for city governance and service delivery systems and structures referring to the jurisdiction of city level agencies involved in provision and regulation of urban public services (i.e., water supply, sewerage, sanitation, solid waste management, road network, urban transport, street lighting, redevelopment of inner (old) city area, basic services to urban poor and other social infrastructure) should be carried out. The financial status of the municipality and agencies concerned with service provision including an analysis of their credit worthiness and efficiency of the institutional framework.

3. A future perspective for the city clearly showing the direction of change as well as economic and basic services vision. (Sector Agenda, reform agenda, quality of life, urban services, social inclusion, etc).

4. Alternatives and Development strategies for Economic development, Governance, Land use, Urban Poor, Core Municipal Infrastructure, and Urban Environment and Cultural heritage with proper prioritization criteria and linkage with Reform Agendas. Preparation of a three-staged action plan with targets for physical and financial investments, reforms, capacity-building, project identification and prioritization.

5. A City Investment Plan (CIP) with clear estimates of investments and financing options, referring to the order of investment needed to implement the perspective and alternative financing strategies

6. A Reform Action Plan stating the mandatory and optional reform preparedness

7. To conduct site visits for physical verification of any component as and when required.

8. To prepare population forecast for next 25 years, i.e., the year 2035 by standard methods and to incorporate the proposed population with the approval of the concerned ULB

9. To consult relevant parastatal departments like TP&VD, DoM, NH, NHA1, Railway, State Electricity Company, and Irrigation Department before preparation of CDP so that projects concerned with them are included in the CDP for the advantage of Municipality.

10. To organize meetings and workshops with various stakeholders and to consider the outcomes and issues arising from such meetings. These outcomes and issues shall have to be considered while framing the CDP.

11. To give special attendance and consideration for the works to be taken in hand for cities that have pertinent potential for developing as tourism centers, cities of historical and heritage importance, coastal towns or tribal towns in the overall regional setting.

12. To represent the Municipality at various levels at State as well as National levels and to provide required assistance for CDP approval.

2.5 Deliverables

As per the Terms of reference, the following deliverables are as follows.

Table 1: Deliverables

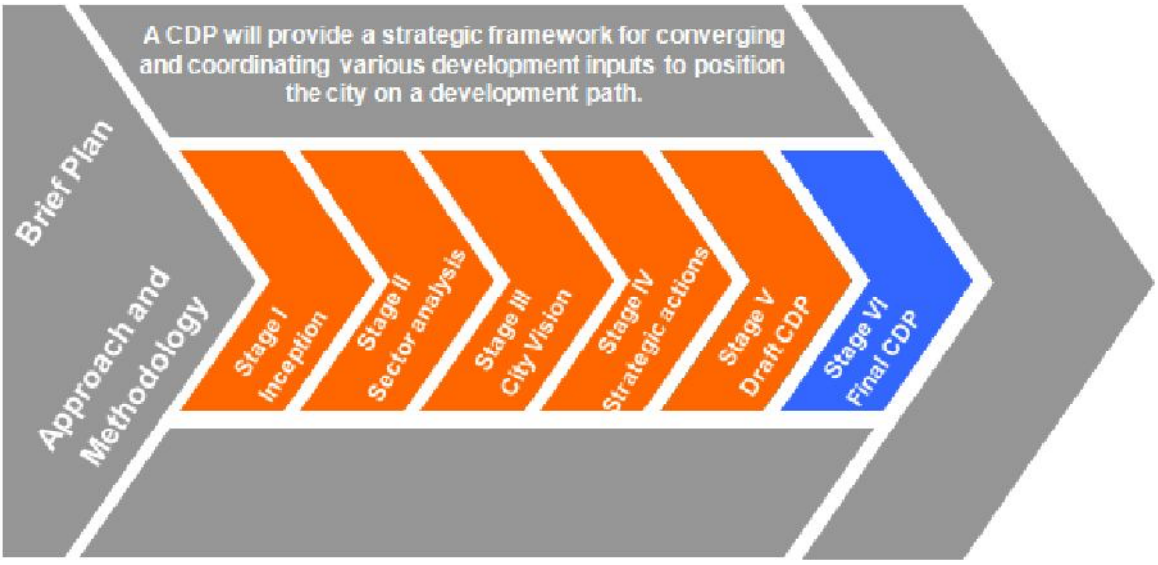
Report	
Inception Report	Approach and methodology, data formats, agencies and officials contacted, output of stakeholder consultation and brief profile of the town, list of participants.
Sector analysis report and city profile	Opportunities, strengths, risks, weakness and gaps, special papers on identified sectors, city profile based on existing situation, emerging issues, SWOT analysis, and projections of present gaps and future projections
Report on 2nd workshop on city vision and sector goals	Copy of handouts used to facilitate discussions, presentation on city profile, vision statement, sector goals, list of participants, and summary of workshop proceedings
Report on 3rd workshop on strategy and priority projects	Copy of handouts used to facilitate discussions, list of participants, listing the strategies and priority projects, and summary of workshop proceedings
Draft City Development Plan and City level workshop	State of city affairs, identified sectoral strategies, identified projects and draft City Investment Plan
Final City Development Plan	Prioritised actions, phasing of investments, final City Investment Plan, draft Financial Operating Plan and incorporation of the feedback from city level workshop

Apart from submission of reports in Hindi and English languages, we will conduct four workshops in multiple stages as identified in our methodology. We will also organize three district and state-level presentations at different stages.

2.6 Assignment execution and present status

In order to achieve the objective of the study, we underwent the following methodology, further shown in figure 2. The focus and application during every task has been to strengthen the process leading to the realization of the objectives and goals of the CDP.

Figure 1: Brief Approach and Methodology



Based on the Terms of References (ToR) and the overall Approach and Methodology as shown in above figure, we have finished all the stages and have submitted our findings.

This document covers **stage VI** of the assignment viz. **"Final CDP".**

3 APPROACH AND METHODOLOGY

The approach to the assignment would be a mix of analytical assessment of the existing situation and consultative discussions among various stakeholder groups, viz., administration, elected representatives, trade associations, educationists, NGOs and active citizens. The inputs from stakeholders would be used to prioritize areas of development and to formulate the strategies in order to make the CDP an implementable document.

Figure 2: Approach

The City Development Plan would be prepared for the period of next 25 years, i.e., 2035, with the involvement of the stakeholders. It will be a forward-looking consensus program for the city that outlines the path with respect to the following aspects:

- **Infrastructure Development** – Assessment, gap analysis, arriving at investment requirement (short term and long term) and prioritisation of various services (in consultation with stakeholders) provided by Jaora Nagarpaishad - water supply, sewerage, storm water drainage, roads, traffic & transportation, street-lighting, solid waste management, fire fighting, education, health, etc.

- **Slum Development** – Prepare a programme for the development of slum pockets in the city. This includes access to all the basic services and housing for urban poor.

- **Economic Development** – The CDP will focus critically on tapping existing potential and identifying key economic development opportunities for the city.

- **Social Development** – The CDP will take into account the social development needs of the city such as the need for hospitals, education institutes, and recreational centres.

- **Institutional Development –** Assessment of capacity-building required for Jaora Nagarparishad to undertake development of city

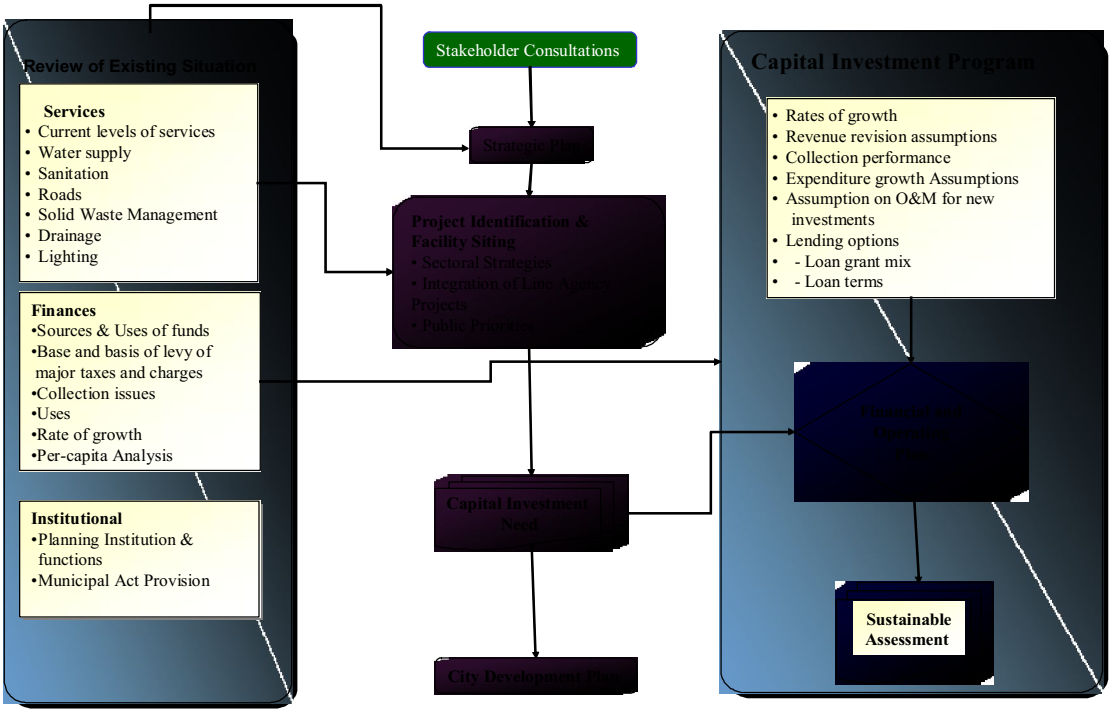
- **Financial sustainability -** The CDP will assess the revenue sources and areas of expenditure and current and future investment requirement of the city. Based on this, it would arrive at a sustainable investment capacity and would suggest measures to improve revenues and control expenditures.

- **Reform action plan** – The CDP will also discuss various reforms to be undertaken by the Nagarpalika to bring about improvements and to access grants from GoI and GoMP. These reforms are in the areas of accounting, e-governance, property tax, user changes, building byelaws, etc.

3.1.1 Methodology

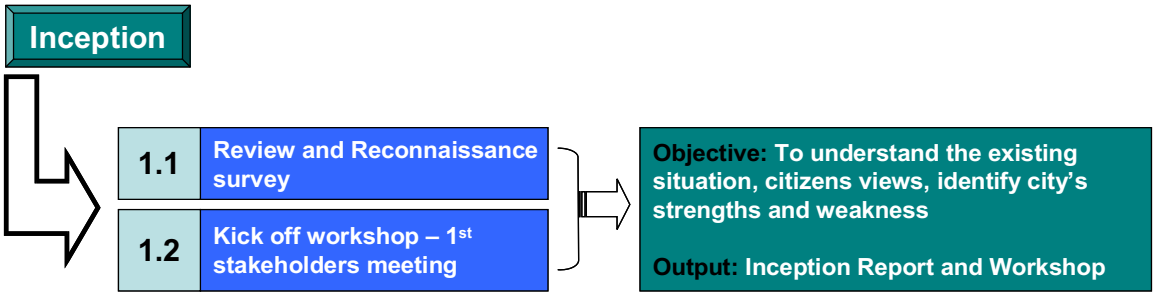
In order to achieve the objective of the study, the following methodology, further detailed as execution tasks, has been adopted. The focus and application during every task to be performed under the assignment is to strengthen the process leading to the realization of the objectives and goals of the CDP. As indicated in the approach, the formulation of CDP will involve substantial inputs, primarily on arriving at strategies, actions and project prioritizations.

The CDP- Analytical Framework



The methodology is detailed under various stages of task execution.

Stage I



Task 1.1– Review and Reconnaissance survey

In order to understand the city environs, we will review the earlier studies, master plan documents, existing proposals, analysis of demographic information, and also review the economic profile of the town. In addition, we will conduct a reconnaissance of the city area to understand the concerns and the growth directions. This would include:

- Meet District Collector, Sub-Divisional Magistrate, Chief Municipal Officer, key officials of the municipal council, and President.
- Determine the composition of city-level Steering Committee.
- Understand the various services provided by the Municipal Council to the citizens, collect secondary data on the city's demographics, basre maps, master plan, reports prepared under past and current urban development programmes, ULB's annual budget reports, other reports giving status of service delivery, and other relevant documents on heritage listing, data on slums and urban poor, and government policy documents.
- Identify the line departments and key stakeholders for urban service delivery and development such as PHED, Town and Country Planning Department, PWD and meet the officials to understand their views regarding the existing situation and future plans.
- Conduct field reconnaissance to determine growth patterns of the city, characteristics of slums and environmentally sensitive areas. This would also include meeting few citizens of the city in person to understand their views on development and various amenities which the city requires.
- Identify economic opportunities such as development of tourism industry and small-scale industries.

Task 1.2 – Kick-Off workshop – 1st stakeholders meeting

CDP aims at providing amenities to the citizens of the city. Hence, it becomes essential to consult the citizens who would be the real beneficiaries of the CDP. Moreover, consulting citizens would also catalyze new thinking and provoke debate, which would definitely be a result-oriented process. Therefore, the vision and strategic thrusts of the CDP will be built around the lessons and findings of a comprehensive and rigorous stakeholder consultation and documentation process.

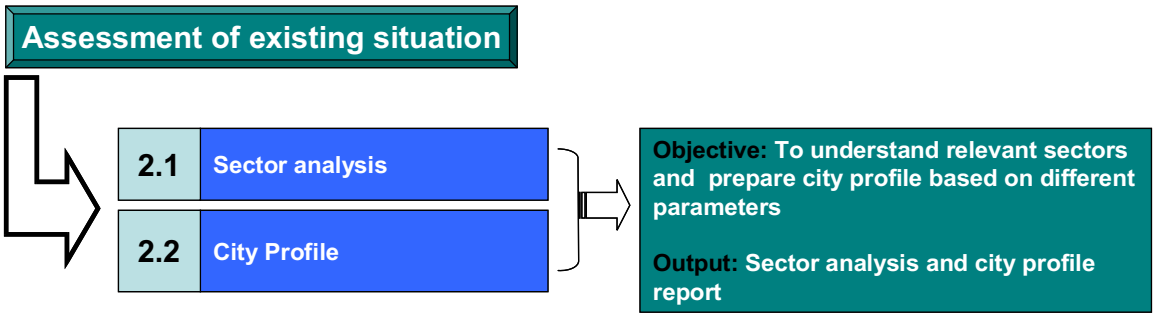
The consultants will organize, with ULB support, a one-day kick-off workshop to familiarize the stakeholders with the purpose, process, and expected outcomes of the CDP, and build enthusiasm, understanding and commitment to the CDP. The kick-off workshop will help in deriving a consensus along with the stakeholders firming the process and agreeing upon a structured programme to take the CDP forward.

The discussions shall primarily aim at making the stakeholders adopt a broader thinking and hence arrive at a consensus towards aspects leading to the development of the city. Based on our discussion with the chief municipal officer, we will finalize the stakeholders for the kick-off workshop. This would include:

- Elected representatives, Mayor/President, Municipal Commissioner/Chief Municipal Officer
- City level planning and service providing agencies, viz., ULB, Town and Country Planning Department, Development Authority, SADA, etc.
- Line Departments of the state government such as the Pollution Control Board, Health Department, Tourism Department, PHED, PWD.
- Private sector agencies such as chambers of commerce and industry
- Non-governmental and community-based organizations
- Representatives of the poor communities
- Representatives of ongoing urban development programmes
- Representatives of media, academic institutions, etc.
- Representatives of industry association, Krishi Mandi association
- Representatives of educational institutions
- Representatives of people belonging to different professions

Based on their preliminary analysis, conferences and stakeholder consultations, we will propose special papers (maximum 3)on specific sectors or issues and propose the names of specialists (approved by the client) who may be commissioned to prepare the same as a part of the sector analysis/survey.

Stage II



Task 2.1 – Sector Analysis

The objective of this activity is to analyze the --

- Economic opportunity and potential for local/regional economic development, with special reference to the poor
- Traffic and transportation aspects with emphasis on low-cost public transport and livelihoods
- Heritage conservation and tourism
- Environmental sustainability through development of parks and gardens
- Access to housing, employment and social and environmental services by the poor
- Gaps in health and education services in the town
- Sectoral issues addressed under the Master Plan (as prepared by the TCPD)
- Analysis of the existing urban infrastructure services provided by ULB such as water supply, sewerage and sanitation, roads and street lighting, solid waste management and measures to improve the services

The gaps in services for current and future population shall be assessed based on the desired levels of services (as also discussed with stakeholders). In addition to gap assessment, the quality of existing infrastructure would also be assessed, but this would primarily be based on the discussion with officials and stakeholders.

In addition to the above tasks, the areas identified at Stage I as special papers, will be worked out in detail with the local counterparts.

One of the key activities at this stage would be to assess the financial health of a ULB. In order to assess the fiscal situation, the consultants shall review the finances for the previous five years of the ULB.

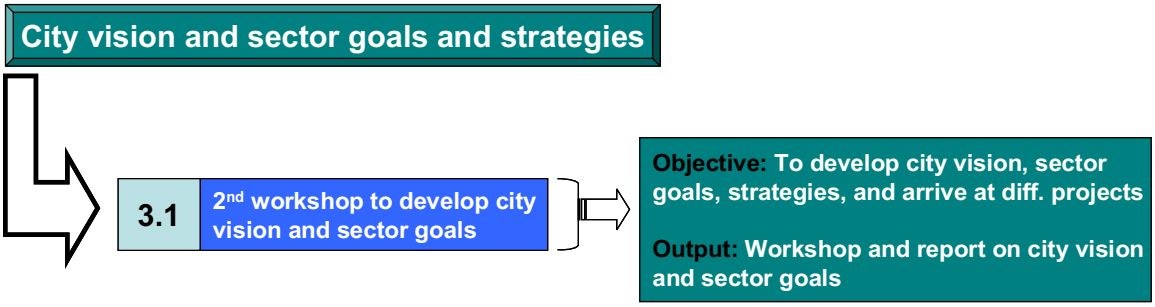
While reviewing the sources and uses, we shall segregate the revenue items and capital items; the revenue income items shall be further classified into own, assigned and grants in order to assess the fiscal dependency of the ULB on external sources. In case of major own source revenue income, a detailed assessment will be undertaken in terms of base, basis, collection performance, revision history and its impacts on ULBs' finances.

The fiscal review would also look into the debt and non-debt liability (power charges, pension and dues to other agencies). The fiscal review would form the base for preparing the financial operating plan and sustainability assessment of the ULB.

Task 2.2 – City Profile

Based on our findings from the sector analysis, we will prepare the City Profile consisting of the assessment of the existing situation in all the sectors identified, emerging issues, SWOT (Strength, Weakness, Opportunities, and Threats) analysis and projection of the present gaps and future requirements. This will be done within the framework of parameters relating to demography, economic base, finance, physical and environmental issues, urban infrastructure, institutions and universalisation of services, especially for the poor.

Stage III



Task 3.1 – Workshop 2: Stakeholders' meeting to develop city vision and sector goals

The spirit of the city development plan is to formulate a shared vision of the ULBs. In order to achieve this, we will conduct discussions with stakeholders as identified by the municipal body for the first workshop.

At this stage, we will, in support with the ULB, organize a second workshop and present them the city profile (prepared after detailed assessment and as per inputs from stakeholders during Stage I). We will also present the relevant cases of national and international best practices and explore if the same can be applied in the relevant sectors to bring in improved and efficient ways of working.

We would initiate discussion to develop city vision, sector goals and discuss the strategies to attain the same. The discussions shall primarily aim at making the stakeholders adopt a broader thinking and hence arrive at a consensus towards aspects leading to the development of the city. Such broad consensus among the stakeholders would as part of the CDP help in arriving at and formulating;

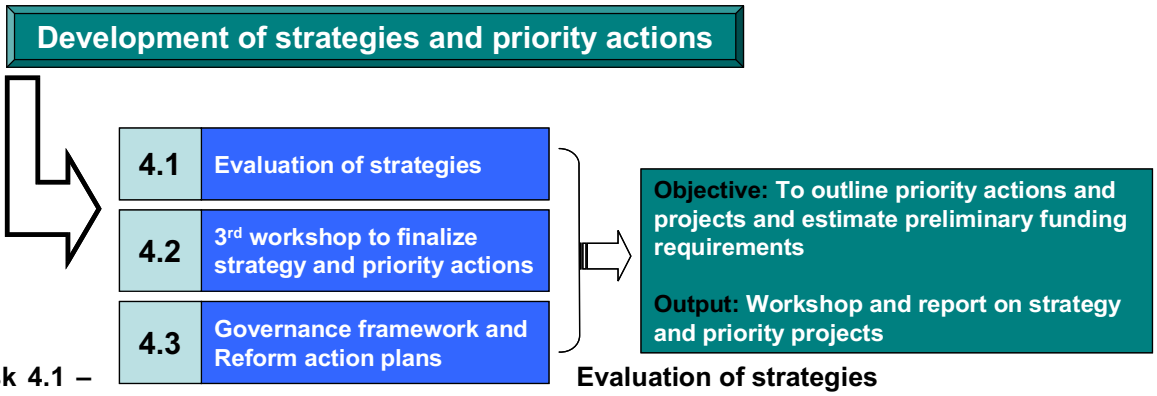
- A futuristic vision for the city
- Sector-specific solutions to identified issues

This exercise would help us in developing sector-specific strategies and an implementation framework for the prioritized actions that may be required in the next five years to move towards vision 2035.

Further, based on our discussion at the district level, we will modify the report and submit the same to the UADD, ULB and District Collector.

At the end of this stage there would be a District Level presentation and a State level workshop.

Stage IV



Task 4.1 – Evaluation of strategies

Based on our analysis and stakeholder consultations at Stage II, we will work on the prime issues based on which sector-specific strategies shall be formulated. While firming up the strategies, we would entail and identify the different agencies involved and the funding options to develop the sector.

Task 4.2 – 3rd workshop to prioritize projects and finalize strategy

We will further organize a third workshop with the stakeholders as identified during the initial stage to discuss the strategies and identify the prioritized projects based on the funding capacity of a ULB and financial assistance available in the form of grants from different institutions and the feasibility of developing projects on PPP basis. We will develop a framework to prioritize projects with the stakeholders. This would include and would address:

- Critical immediate needs
- Improving efficiency of operations
- Maximizing the utility of existing assets
- Supporting quick economic development
- Readiness for implementation
- Timeline for implementation

The strategies to develop the prioritized projects would be further firmed up at this stage.

Task 4.3 – Governance framework and reform action plans

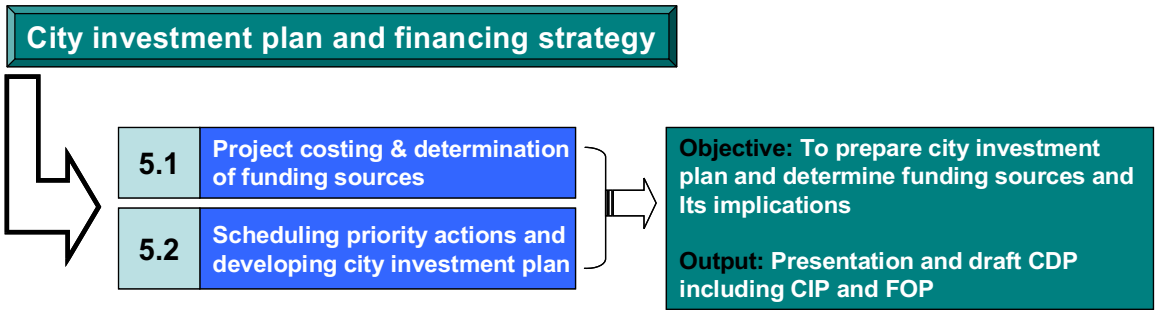
At this stage, we will, in consultation with the ULB officials, representatives of reform programmes and local counterparts, examine whether the reforms currently being carried out and proposed at the state and local levels are sufficient to support the vision and strategic plan and to sustain the planned interventions. If required, additional reforms would then be proposed.

The funding framework under the various schemes in addition to providing capital investment support, also obtains commitment from the ULB and state government to implement certain mandatory and optional reforms. The consultants shall, in co-ordination with the ULB officials, representatives of reform programmes and local counterparts, examine whether the reforms currently are being carried out and proposed at state and local levels are sufficient to support the vision and strategic plan and to sustain the planned interventions. We will then prepare the check list of reforms, the implementation and time frame for implementation of each reform. This reform action plan shall form the basis for planning the

implementation of various projects through the preparation of detailed project reports (DPRs) in line with the proposed implementation of reforms and thereby access and utilize the funding available under different schemes.

The output of this phase would then be an agreed plan outlining the goals, strategies, priority actions and projects with an estimate of preliminary funding requirements in each sector.

Stage V



Task 5.1 – Project costing and determination of funding sources

Based on the above, we will then undertake consultations with different stakeholders to determine types and sources of financing for priority projects from internal resources, state and central governments, local financial institutions, donors, and through public-private partnerships and understand their respective implications.

Task 5.2 – Scheduling priority actions and developing city investment plan

Preparation of Capital Investment Plan

Based on the availability of resources, logical sequencing of actions, gap assessment and potential for immediate implementation, we will then prepare a City Investment Plan (CIP) in consultation with ULBs. The CIP will lay out the cost and revenue estimates of all priority projects in the next five years to meet the current and immediate future gaps and phase the investments as per the citizens' priorities. The preparation of the CIP is a reiterative process, requiring adjustments to individual projects as well as changes in scheduling to make the whole package work financially.

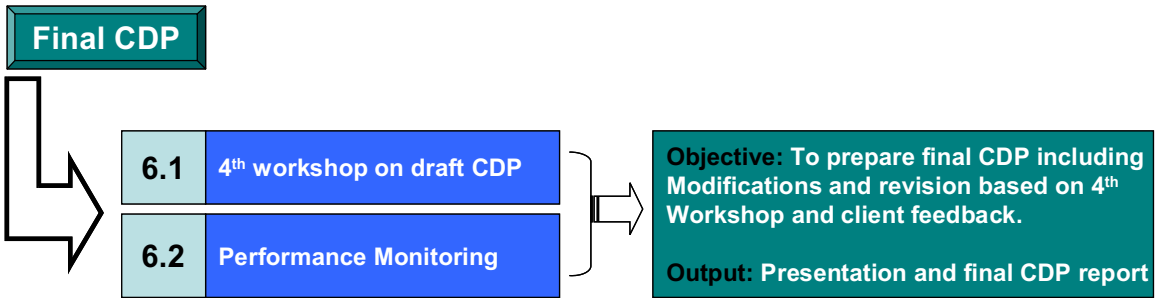
On finalization of the project interventions, project costing shall be undertaken based on broad unit costs if detailed project reports (DPR) are not available and for projects, where DPR/estimates are available, shall be updated for the current year. The City Investment Plan would be supported with a Financial Operating Plan (FOP).

Formulation of Financial Management Framework

Based on the outputs of previous tasks, the Financial Operating Plan (FOP) for the ULB shall be generated; the FOP shall form the basis for preparing the detailed action plan with regard to sustainable investment capacity. Based on the outputs of FOP, a detailed financial framework, reform action plan and implementation strategy shall be prepared.

The FOP is essentially a forecast of revenue and expenses of the ULB during the planning horizon for the identified capital investment requirement. The FOP shall be prepared as per the probable or available financial resources and additionally taking into consideration the financial potential for revenue enhancement and expenditure reduction for various reforms to be proposed, provision for additional O & M expenses for new investment, debt servicing, etc.

Stage VI



We will then compile the draft CDP including the CIP and FOP and will finalize it after feedback from stakeholders.

Task 6.1 – Workshop 4 on draft CDP

With support from the ULB, we will then organize a 4th workshop involving all the stakeholders, who have been part of the CDP preparation process. The workshop will seek an endorsement of the City. Development Plan from the stakeholder group present and agree on procedures for performance monitoring.

At the end of this stage there would be a District Level State level presentation.

Task 6.2 – Performance Monitoring

In consultation with the ULB, we will then identify the performance-monitoring/ sustainability indicators to assist a ULB to review the progress and outcomes of the CDP on an annual basis and to enable them to set the agenda for the future.

Final CDP Document

Following the fourth and final workshop, we will finalize the CDP document, incorporating the feedback from the workshop and the inputs received at the district and state level discussions.

At the end of this stage there would be a District Level State level presentation.

4 STAKEHOLDERS CONSULTATION

4.1 First Workshop

4.1.1 Consultation with the District Collector and Sub-divisional magistrate, Jaora

Venue: Sub-divisional magistrate Office, Jaora
Stakeholder: Mr. Mahendra Gyani, District Collector, Ratlam
Date: 5th Nov' 2009
CRISIL representative: Appeeji Parasher and Achin Biyani
Agenda of the meeting: Discussions on City Development Plan and stockholder's presentation

The consultants met the District Collector of Ratlam District Mr. Mahendra Gyani and the Sub-divisional magistrate Mr. Madan Kumar, Jaora on 5th of November 2009 with respect to preparation of a City Development Plan (CDP) for Jaora city. The consultants had a brief discussion on the CDP, highlighting its features, objectives, desired reforms and crucial role, and finalized the date for the 1st stakeholder workshop.

4.1.2 Consultation with Officers of Jaora Municipality

Venue: Jaora Municipal Office
Date: 27th October' 2009
Stakeholders: Chief Municipal Officer and Municipal officials
CRISIL representative: Appeeji Parasher and Achin Biyani
Agenda of the meeting: Discussions on City Development Plan, stakeholders' presentation and their roles

The consultants met the respective key officials in person and gave a brief introduction of the city development plan highlighting its features, objectives and desired reforms. The CRISIL representative explained the importance of the CDP and the crucial role it would play in the city's development. The officers were also informed about the work plan for CDP preparation and the role of the municipality in the preparation of the same.

The consultants then collected the information according to the formats which were prepared beforehand. We also discussed the service delivery mechanism and the issues with respect to their departments and future plans for the city.

The officers said that the Jaora Municipal Council (JMC) has already been sanctioned grants under two of the schemes, i.e., Water supply project under the UIDSSMT for Rs. 6.63 crores of which JMC has received Rs. 1.5 crores, and IHSDP for Rs. 2.43 crores of which JMC has received Rs. 0.48 crores.

4.1.3 Key discussion points

Venue:	Jaora Municipal Office
Date:	10th November' 2009
Jaora Municipality:	President, Jaora Municipality, Elected representative of Jaora Municipality, Chief Municipal Officer, Department officers, Citizens.
CRISIL representative:	Appeeji Parasher and Achin Biyani
Agenda of the meeting:	Discussions on City Development Plan and citizens' views on development of the city

CRISIL Risk and Infrastructure Solutions Limited, along with the support of Jaora Nagar Parishad, conducted the first citizens' kick-off workshop at Jaora on 10th November 2009. About 35 to 40 citizens belonging to different professions attended the workshop and expressed their views on several issues which require attention to improve the standard of living in the town.

The workshop commenced with a brief introduction of a city development plan, highlighting its features, objectives and desired reforms. The CRISIL representative explained the importance and the crucial role of the CDP in a city's development. The stakeholders were informed about the work plan for preparing the CDP. Further, the house was open for discussion on the UIDSSMT scheme and for discussing issues and future growth and development of Jaora city.

Figure 3: Participants in workshop

The workshop discussed the facilities that should come up in the near future, considering the increase in population for the next 25 years. A questionnaire was also circulated amongst the stakeholders where they expressed their views with respect to improvement in service levels, employment opportunity, social and recreational facilities in the city, etc. The following points were highlighted during the discussion:

1. **General**
   - **a.** The development of a four-lane state highway requires immediate attention -- to open an emergency hospital near the state highway. The hospital would be able to look after the accidents which may have increased over a period of time due to the opening up of the four-lane state highway.

b. To boost the sports activities amongst children and the youth, a multi-sport stadium should be developed, which would also help them in making a career in sports.

c. Emphasis should also be laid on increasing safety measures for the citizens.

d. To increase the level of fitness and to enhance good environment, there is a strong need to develop more parks/gardens for the citizens of the city. The existing areas for gardens have been either subjected to other uses or encroached.

Figure 4: Participants in the workshop

2. Urban Infrastructure

a. Immediate attention is required to develop a bypass road or a ring road for outstation motor vehicles passing through the city and going to different locations. This would result in the slowdown of a number of heavy motor vehicles entering the city, thus decreasing the traffic pressure within the city and thereby increasing the life of the city roads. The city requires increasing the width of its roads as the current width is not enough to hold the city traffic, which adds to congestion in different parts of the city.

b. The city boasts few public toilets and only one Shulabh complex for its citizens. Considering the increase in the population, the city should develop public toilets, urinal toilets and shulabh complexes near the markets, hospital and other specific parts of the city. Immediate attention should also be given to develop a ladies toilet.

c. The water drainage system should be improvised to drain the rain and waste water. There is scope to connect the current open drainage and the nallahs which would improve the drainage system of the city.

d. To solve its parking problems and congestion due to traffic in the city's main bazaar, a shopping-cum-parking complex can be constructed by dismantling the Ghantaghar. This would provide new shops to the existing shop owners of the Ghantaghar which is already in a bad condition.

e. Considering the connectivity Jaora city has with other towns, there is good potential to develop area-wise bus stands on the outskirts of the city so that several buses coming from different places do not have to enter the city and do not disturb the city traffic. All the regional bus stands should then be well-connected among them and also should have proper connectivity with the city.

f. A place should be developed and reserved for those people who are operating through small carts, homes or have arrangements on the footpath for selling various articles.

Figure 5: Participants in workshop

3. Employment Opportunities

a. More employment opportunities should be created for the citizens of the city by developing medium and small-scale industries, based on commodities such as soyabean and wheat which require less water and power.

4. Education

a. The status of the polytechnic college should be upgraded to an engineering college so as to provide ample opportunities to the students of the city and nearby locations.

b. There is a strong demand for a girl's college in the city.

5. Healthcare

a. Immediate attention should be given to increase the number of doctors and other personnel in the Government Hospital as the hospital not only serves the city population but also looks after the peripheral regions, thus serving approximately 1.50 to 1.75 lakh population.

Figure 6: Participants in workshop

6. **Power**

   a. There is an urgent need to check the potential of developing a power generating station where the three rivers, i.e., Shipra, Maleni and Pingla meet, at a distance of 8 km from the city.

7. **Tourism**

   a. The town is famous for Hussain Tekri, a religious place for Muslims. More than 5,000 people visit the place on a regular basis. Measures should be taken to promote the Hussain Tekri festival which happens on the 41st day of Moharram. More urban amenities should be provided at that place.

4.1.4 Conclusion

Based on the stakeholder's workshop, our interaction with the municipal officials, various line department officials, citizens, reconnaissance survey and the data collected from the municipality, we present our first preliminary analysis in a matrix form and our recommendation on the sectors which should be given a priority to improve the standard of living in town.

Table 2: Existing situation vis-à-vis priority sectors

Sector	Existing situation	Remarks as per consultation and initial assessment	Sectors requiring key attention
Urban Services			
Water Supply	Not satisfactory	Though the existing situation is not at satisfactory levels in terms of supply level and hours of supply, however to address this issues a water supply project for the city has been sanctioned under UIDSSMT scheme What is essential is timely, effective, and speedy	

Sector	Existing situation	Remarks as per consultation and initial assessment	Sectors requiring key attention
		execution of the project.	
Sewerage/Undergr ound Drainage	Not satisfactory	Presently there is no sewerage system in the city. Further, since majority of the roads in the town are of cement concrete and newly constructed it is difficult to lay the underground sewerage network as it would cost intensive.	
Sanitation	Not satisfactory	Considering the increase in the population, there is a strong need to develop public toilets, urinal toilets and shulabh complex near the markets, hospital and other specific parts of the city.	
Solid Waste management	Not satisfactory	Although the ULB has tried for door to door collection of municipal solid waste, however, due to lack of awareness amongst citizens, the efforts have not been fruitful. This leads to deposition of waste on streets or near public dustbins post collection of waste by ULB.	☑
Roads, Traffic and Transportation	Requires immediate attention	During consultation with stakeholders following priorities have emerged - 1. Increase in the width of certain section of the roads. 2. Measures to reduce the outstation vehicles entering the city through development of bypass or ring road. 3. Channelizing the traffic movement within the city through proper planning	☑
Street Lighting	Satisfactory	At present the street poles are located at a distance of 26 meters which is satisfactory as per the standard norms of 30 meters.	
Social Services			
Healthcare	Not satisfactory	1. There is an urgent need of mobilizing more doctors and also facilities such as ICU, CRM at the Government Hospital. 2. With the development of the new state highway which is passing the	

Sector	Existing situation	Remarks as per consultation and initial assessment	Sectors requiring key attention
		city, the probability of accidents has increased. It was suggested by stakeholders to construct a subway or foot-over bridge. They also suggested for construction of a emergency hospital to take care of the accidents happening on the highway and such facility shall be unique in the region.	
Educational Institution	Average	1. Status of the polytechnic college should be upgraded to engineering college to provide more opportunities to the students. 2. Improvement in the teacher student ratio.	
Recreation facilities (parks, Play fields)	Not satisfactory	There is a strong demand to develop and improve the existing conditions of the gardens, parks, indoor stadiums and play fields that would help in providing better and sustainable environment.	
Economic Opportunities			
Tourism	Good Potential	The city is known for “Hussain Tekri”, a religious place attracting people not only from India but also from rest of the world. This place is although located outside the municipal jurisdiction, however, a good amount of tourist stay in the city during festival period. There is a need to not only develop the tourist location but also develop the services in the city to the level which makes the tourist stay more comfortable. The town has a good potential to develop “Hussain Tekri”, a religious place for the Muslims and promote it at the international level. This would also open up the economic opportunities for the citizens of the town.	☑
Small scale industries	Not Satisfactory	There is a possibility of developing small scale agro based industries requiring less water and power in the	

Sector	Existing situation	Remarks as per consultation and initial assessment	Sectors requiring key attention
		region which will lead to creation of employment opportunity.	
Others			
Slum development	Not satisfactory	The project under the IHSDP scheme to improve the existing situation has already been sanctioned. However, it was revealed that the funds are not sufficient as the cost has escalated and the municipality does not have funds to bridge the gap.	

Based on our consultation, we will discuss the three identified sectors with the steering committee which will comprise of the stake holders i.e. citizens and the ULB officials.

4.2 Second Workshop

Venue: Jaora Nagar Parishad office
Date: 22nd February' 2010
Time: 4pm to 7 pm
Jaora Municipality: Citizens, President, Vice President - Jaora Municipality, Chief Municipal Officer Elected representative of Jaora Municipality, Department officers.
CRISIL representative: Appeeji Parasher and Achin Biyani
Agenda of the meeting: Presentation on existing city profile and sector analysis to discuss various sectors strategies and action plans in order to emanate city vision.

CRISIL Risk and Infrastructure Solutions Limited, along with the support of Jaora Nagar Parishad, conducted the **Second Citizens' Kick-off Workshop at Jaora on 22nd February 2010**. Approximately 45 citizens belonging to different professions which include students attended the workshop and expressed their views on the sector goals and strategies and also referred to priority action plans necessary in the next five years to move towards the vision 2035. *(The list of participants has been attached as Annexure II in Chapter 3).*

The following pictorial diagram depicts the methodology that lead to the drafting of city's vision.

Figure 7: Workshop methodology for emanating City Vision

Figure 8: Participants in workshop

The workshop commenced with a brief introduction by the CMO and President on the agenda of the workshop and the future steps in preparation of CDP for Jaora.

Based on the information collected, discussions with various officials, CRISIL representative made a presentation in Hindi language to the stakeholders their analysis on current status and future challenges and opportunities on economy, demography, urban and social infrastructure, municipal finance etc. The presentation also emphasized on the town's strength, weakness, and opportunities and threats to arrive at sector goals and vision for the city. The following points were discussed:

⇒ **Population:**

Based on the census figures collected for the past five decades and birth & death for the past five years, it is revealed that though the population of the town has increased in absolute however the growth rate

has declined and a comparison with net addition (birth & death data) and decadal change it is revealed that the populace is migrating to other cities.

To this the stakeholders mentioned that steps are required to increase the employment opportunities and raise the standard of living otherwise the future generation would simply move far away from the city. The steps to improve the standard of living and improve the economic opportunities for the citizens were then discussed at a later stage.

Based on the past trends and future prospects the forecasted population with different scientific methods was presented. The stakeholders were informed about the different scientific methods which were used to arrive at the expected population. The expected population for the year 2035 projected through different methods were then discussed and debated so as to arrive at a consensus figure. The stakeholders gave their nod to "Arithmetic Increase method" and agreed that the likely population of the town for the year 2035 would be in the range of 85,000 to 90,000.

The stakeholders said that while incorporating the new plans for the city few villages which fall within a radius of 5 km should also is considered as the plans would have an indirect impact on those villages also. The villages include Arnyapitha, Bhimakhedi, Borda, Bannakheda, haryakheda, Sejawata, Rojana, Akyaberi, and Lohari having an approximate population of 15,000 to 18,000 people.

Figure 9: Participants in workshop

⇒ **Economic Opportunities: Integrated agro-based industry zone cum krishi mandi cum transport nagar**

The economic activity of the city has primarily been sustained by agriculture activities which is the main source for income for the citizens. The stakeholders once again emphasized the importance of promoting small scale industries within the town so as to provide more employment opportunities to the citizens and enhance the economic development of the town.

It was said that the existing location of the krishi mandi has already saturated and adds to lot of traffic congestion as it is located in the middle of the city. To enhance the agricultural activities and to increase

the employment in the agriculture there is a requirement to increase the capacity of the Krishi mandi from the present capacity of 25000 to 30000 quintals on a per day basis.

Figure 10: Existing Krishi Mandi

The place known as “Arneya Pitha” on the Mandsaur road at a distance of 5 kms from the city has already been located to shift the Krishi Mandi. The total area of the new mandi would be 100 acres with a capacity to handle more than 50000 quintals on a per day basis.

The stakeholders discussed the shifting of Krishi Mandi and also said that by shifting it to new location would reduce the traffice in the city.

CRISIL mentioned that it has discussed with representative of Krishi Mandi, who have highlighted the issue of distance and connectivity with the new location. CRISIL mentioned that the new location can be developed with a larger objective by **developing integrated facilities i.e. developing the area near the Mandi for transport facility (as transport nagar) and small scale agro based industry.** The business at krishi mandi would further flourish if the same is connected by a separate railway track which will facilitate in transport of agriculture produce to rest of the part of the country. The thought was welcomed by the citizens.

⇒ **Urban services:**

Municipal services have a direct and immediate effect on the quality of lives of the people living in the city. Based on the data collected the representatives then presented their analysis of the existing services of the town. Discussions were held on all the services that are being provided by JMC, such as water supply, sewerage, drains, traffic and transportation, solid waste management and streetlight. The representatives before discussing the existing services of the town provided them the standards for each of the services so as to make them realize where the city stands. Once they were aware of the standards, each of the services was discussed at length to arrive at the priority ones which require immediate attention. The stakeholders laid importance on the following services:

1. **Traffic and Transportation** –

   a. **Rail over bridge** - It was revealed that there is an urgent requirement of an over or under bridge on the Chaupati Railway crossing. Though there is definitely a requirement of an over or under Railway Bridge but few of the people suggested that there is already an existing railway under bridge and measures should be undertaken to construct a road and connect it properly to railway crossing and Gaushala road that would provide immediate respite to the citizens.

   b. **Creating parking space by redevelopment of Ghantaghar on PPP basis** – To solve its parking problems and congestion due to traffic in the city's main bazaar, many a people agreed for a new shopping-cum-parking complex by redevelopment of the Ghantaghar.

   c. The citizens also suggested increasing the width of the roads by dismantling the protection wall, and Ratlami gate. It was said that though these monuments holds an historical place in the city's history, but considering today's requirement it becomes necessary to take such harsh decisions and provide space for smoothen traffic.

   d. **Ring road system -** Considering the connectivity Jaora city has with other towns, a plan was discussed to improve the connectivity and avoid any out station traffic within the city that leads to congestion and increased pollution. It was considered that there is good potential to develop a ring road around the city that would also allow developing regional bus stands on the outskirts so that several buses coming from different places do not have to enter the city and do not disturb the city traffic. One of the stakeholders pointed that while planning to develop a ring road would take huge amount of efforts, a bypass joining Khachrod and Ratlam should be considered on an urgent basis.

Figure 11: Participants in workshop

2. **Environment**

    a. **Sewerage** – The city is facing huge problems on account of bad sewerage network. The water drainage system should be improvised to drain the rain and waste water. There is an urgent need to install the underground sewerage and improve the drainage system of the city. Moreover, it was also highlighted that once there is an improvement in the existing water supply with the implementation of water supply project, there would be an increase in the sewerage quantity leading to more chaos in the city. In addition to this, one of the stakeholders, a student of standard Xth of St. Peters senior secondary school raised his voice against the laying of cemented roads, as it becomes difficult to lay down an underground sewerage network on a cemented road because of the various parameters such as cost, etc.

    b. **Solid Waste Management** bears a relation with the socio economic conditions of the society, the climatic conditions of the area, the city growth and development of residential and commercial areas and hence if it is disposed off on land in open areas, it causes a negative impact on the environment, ground water, bad odour, pests etc. Many a citizens suggested implementing the door to door service in the city and making their city a dustbin free city.

The CRISIL representatives wished to show the citizens a small documentary on how the door to door service was successfully implemented in Ranchi, the capital of Jharkhand state, but due to poor power supply the movie could not be shown to the citizens. Henceforth, the representatives spoke about the same which has become a role model for many of the towns in India and has seen few of the towns even following the same path. The authorities as well as the citizens were really impressed on hearing the same and said they would definitely provide the support to implement the same in their city.

3. **Water Supply** – One of the stakeholders highlighted that though the project to improve the existing water supply has been started and would take its own time to get completed, citizens should consider taking small steps such as implementation of “Roof Water Harvesting” in their respective houses. Moreover, it was also said that the same technology should be made mandatory for all the new colonies which are getting developed in the region and the citizens should show responsibility towards “Save water; Save Life”.

One of the very interesting points which emerged during the post workshop discussion on an individual level was the existence of “Royal Children Club - A Child NGO” and their work towards improving the standard of living and services through spreading awareness and conducting rallies and workshops.

A child N.G.O with the ideology **"CHILD DEVELOPMENT IS NATION DEVELOPMENT"** was established in the year 2005. The future project of the NGO is to make Jaora, a beautiful place as it was in history a "GULSHANABAAD". At present there are more than 50 members with a membership fee of Rs. 50 per year which comes from their pocket money.

The following are few of the **RECOGNIZED WORKS** of the NGO:

1. Save water save life program which is in operation since past 4 years. The program involves marching throughout the city with posters and banners on "how to save water" and closing all the taps which are open mid way. The children also distribute pamphlets within the city through newspapers and have opened up a drinking water hut at Railway Station square for the thirsty travellers which are operated only during the summers.
2. Children quest, knowledge program, G.K. competitions and cultural competitions across the schools in Jaora – These competitions saw immense participation from various students.
3. Save trees; Save yourself - More than 100 children marched throughout the city to aware people about environment depletion and planted nearly 30 trees at various places in the city.
4. The children have also taken out a huge rally for martyrs of 26/11 on 26/11/2009 with more than 200 students participating in the same.

RECOGNITION:

1. The NGO has been honoured by Madhya Pradesh Jan Abhiyan Parishad for their works.
2. The media has recognized their efforts and have been quite supporting the NGO through several columns.
3. There has been a huge increase in the awareness among the citizens and their efforts have really been recognized.

Figure 12: Royal Children Club – A Child NGO and their work towards improving the town

अनुकरणीय |

छोटे-छोटे बच्चों के बड़े-बड़े काम

रेणुका श्रोत्रीय, ब्लाक समन्वयक जावरा

''कौन कहता है आसमां में छेद नहीं होता
एक पत्थर तो तबियत से उछालो यारों।''

दुष्यंत जी की इन पंक्तियों को अक्षरशः चरितार्थ कर रहे हैं जावरा के कुछ बच्चे। 12 से 15 वर्ष की आयु के ये बच्चे वर्तमान शिक्षा के प्रतिस्पर्धात्मक बोझ से दबाव निकाल कर समाज के प्रति अपना दायित्व निभा रहे हैं। जावरा, जिला रतलाम के इन मासूम बच्चों ने रायल चिल्ड्रन्स क्लब जावरा के नाम से संस्था बनाई और निकल पड़े लोगों की प्यास बुझाने, गरीब बच्चों को ठंड से बचाने और जावरा को ग्रीन सिटी बनाने। विगत चार वर्षों से बच्चों का यह क्लब सक्रिय है। इनका कार्य बारह महिने चलता है। जब गर्मी में पूरा जावरा जल संकट से जूझता है तो ये बच्चे रेल्वे क्रासिंग पर प्याऊ लगा कर लोगों की प्यास बुझाते हैं। ठंड के मौसम में गरीब बच्चों को कपड़े एवं गर्म कपड़े वितरित करते हैं। यही नहीं वे बड़ों को जागरुक करने के लिए अपने स्वप्न ग्रीन सिटी, ग्रीन सिटी को लेकर रैली निकालते हैं, वर्तमान जल संकट से आगाह करते हुए जल बचाओ अभियान चलाते हैं और शहर में जागरुकता विषयक पेम्फलेट भी वितरित करते हैं।

रायल चिल्ड्रन क्लब की इस टोली में अध्यक्ष श्री आराध्य सेठिया, सचिव श्री पायस पाण्डे और कोषाध्यक्ष श्री प्रसंग शर्मा के साथ श्री रामानुज शर्मा, श्री रौनक लुकड़, श्री शुभम टुकड़िया, ऐश्वर्य पगारिया (कक्षा 9वीं), चिराग जैन (कक्षा 10वीं), प्रगति मंदल्या (कक्षा 7वीं), अवनि चौड़िया सहित लगभग 40 सदस्य हैं। क्लब का खर्च चलाने के लिए प्रति सदस्य मात्र 50 रुपये वार्षिक शुल्क लिया जाता है। क्लब से जुड़े सभी बच्चों की विशेषता है कि ये अपना जन्मदिन नहीं मनाते बल्कि पैसे बचा कर गरीबों को भोजन कराते हैं अथवा जरूरतमंद बच्चों को कॉपी एवं किताब वितरित करते हैं। मैनेजमेंट में पारंगत ये बच्चे रैली, वृक्षारोपण व अन्य कार्यक्रमों में खर्च के लिए प्रायोजक भी तैयार कर लेते हैं। अपने कार्य को लेकर इन उत्साहित बच्चों का कहना है कि क्लब के यह सारे कार्यक्रम स्थाई हैं और निरंतर चलते रहेंगे। अपनी भावी योजना को लेकर बच्चों ने बताया कि इस वर्ष परीक्षा के बाद आतंकवाद की ज्वलंत समस्या को लेकर सभी बच्चे सड़क पर आयेंगे। ये टेरा पेम का जज्बा निर्मित करेंगे। इसके लिये मूल आधार रैलियाँ, नुक्कड़ नाटक व पत्रक सामग्री का वितरण होगा। समूचा देश जिन विषयों को लेकर अक्सर किंकर्तव्यविमूढ़ हो जाता है उसे हल करने के लिये इन बच्चों की अपनी ही योजनाएँ हैं। छोटे-छोटे बच्चों के बड़े-बड़े मुद्दों पर आयोजित कार्यक्रमों में समाज सेवी और जन प्रतिनिधि शामिल होते हैं साथ ही बच्चों से प्रेरणा लेने की बात भी करते हैं। जन-जागृति और विकास के लिये उठे इन नौनिहालों के अद्भुत कार्यों ने समाज में एक प्रश्न जरूर छोड़ा है कि क्या हम सबको भी अपनी गली, अपने मोहल्ले, अपने गाँव, अपने नगर, अपने प्रदेश और देश के लिए जागरूक, समर्पित और निष्ठावान नहीं होना चाहिए ?

आराध्य सेठिया, क्लब अध्यक्ष

अपने कार्य को लेकर उत्साहित बच्चों का कहना है कि क्लब के यह सारे कार्यक्रम स्थाई हैं और निरंतर चलते रहेंगे। अपनी भावी योजना को लेकर बच्चों ने बताया कि इस वर्ष परीक्षा के बाद ज्वलंत समस्या आतंकवाद को लेकर सभी बच्चे सड़क पर आयेंगे।

जावरा को ग्रीन सिटी बनाने के लिए रैली के माध्यम से प्रेरित करते बच्चे।

20 | जअप जनवरी 2009 | मध्यप्रदेश जन अभियान परिषद

जावरा. हरियाली बचाने के लिए निकली रॉयल चिल्ड्रन क्लब की रैली। -भास्कर

बच्चों ने संभाली बड़ों की जिम्मेदारी

वृक्षों को बचाने के लिए बच्चों का ऐलान, रैली में 13 साल से ज्यादा उम्र का कोई नहीं था

उमेश शर्मा, जावरा

'सभी बड़े सो गए हैं अब तो हम बच्चों को ही कुछ करना होगा, इन गिरते वृक्षों को हमें ही बचाना होगा' 'जान है तो जहान है, वृक्ष ही प्राण हैं' 'वृक्ष रहेंगे, हम रहेंगे' 'वृक्ष काटो, जीवन मिटाओ'। जोश के साथ ऐसी नारेबाजी करते हुए रविवार को भरी दोपहर में रॉयल चिल्ड्रन क्लब के बच्चे (सदस्य) शहर की सड़कों पर रैली के रूप में पैदल निकले।

चूड़ी बाजार तिराहे से शुरू हुई रैली में सबसे खास बात यह थी कि इसमें कोई भी बच्चा 13 साल से ज्यादा उम्र का नहीं था। उन्होंने लोगों से कहा कि क्या आप नहीं जानते कि हर दिन पेड़ कम होते जा रहे हैं यदि समय रहते पेड़ों की अवैध कटाई बंद नहीं हुई तो सर्वनाश हो जाएगा। बच्चे घरों में बैठे लोगों की तरफ इशारा कर सख्त लहजे में उनसे पर्यावरण को संरक्षित करने की हिदायत देते चल रहे थे। माइक पर नारेबाजी करते हुए बच्चों की रैली प्रमुख बाजारों से गुजरी। रैली में क्लब अध्यक्ष आराध्य सेठिया, सचिव पायस पांडेय, उपाध्यक्ष प्रसन्न शर्मा, चिराग जैन, रामानुज शर्मा, निकुंभ भटेवरा, शुभम टुकड़िया, दीपक कोलन, रौनक लुकड़, शिवम श्रीवास्तव आदि शामिल हुए।

40 पौधे साथ लेकर चले और बाद में रोपे

रैली के साथ चल रही ठेलागाड़ी में बच्चों ने 40 पौधे रखे तथा प्रमुख मार्गों से होते हुए सीताराम बाग व सेंट पीटर्स स्कूल पहुंचे, जहां बच्चों ने पौधरोपण किया। बच्चों ने कहा कि अब भी अगर कोई नहीं जागा तो अगली बार लोगों के घर-घर जाकर उन्हें जगाएंगे।

बालिकाएं भी पीछे नहीं

रैली में बालिकाओं ने भी बढ़-चढ़कर भाग लिया एवं नारेबाजी की। इनमें निकोल शर्मा, प्रकृति मांदलिया, निहारिका शर्मा, आयुषी रांका, अवनी जैन, दीक्षिता जैन आदि थीं।

चेतना

20-5-06

रतलाम जिला

रायल चिल्ड्रन क्लब ने जल संग्रहण का बीड़ा उठाया

जावरा, (निप्र)। वर्तमान समय में जब कोई बड़ा व्यक्ति गलती करता है तो उसे सुधारने एवं बड़े व्यक्तियों को वह गलती न दोहराने हेतु सुझाव देने या समझाने का कार्य छोटों को करना पड़ता है। यही बीड़ा उठाया है नगर के बच्चों द्वारा गठित रॉयल चिल्ड्रन क्लब ने। खेलने कूदने की उम्र में समाजसेवा का जज्बा मन में लिए १०-१२ वर्ष आयु समूह के ये बच्चे वर्तमान भीषण गर्मी में जल संग्रहण के प्रति नागरिकों में जागरूकता लाने के उद्देश्य से कार्य कर रहे हैं।

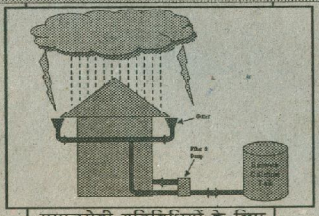
जल बचाओं अभियान के तहत पेम्पलेट का प्रकाशन

हाल ही में रॉयल चिल्ड्रन क्लब द्वारा जल बचाओ अभियान के तहत एक पम्पलेट का प्रकाशन करवाकर उसको नगर में वितरित करवाया। पम्पलेट का विमोचन समारोह बाबूलाल नाहर की अध्यक्षता में एवं सामाजिक संस्था संस्कृति संगम के महासचिव अनिल धारीवाल के मुख्य आतिथ्य में सम्पन्न हुआ।

श्री नाहर ने कहा कि छोटे-छोटे बच्चों ने एक बड़ी जिम्मेदारी अपने कन्धों पर ली है इसके लिए साधुवाद के पात्र हैं। ये बच्चे अभी से अपनी जिम्मेदारी समझते हुए भविष्य के प्रति जागरूक हैं और निश्चित तौर पर बड़े लोगों को भी इनसे प्रेरणा लेकर इनका अनुसरण करना चाहिए ताकि हम अपना भविष्य संवार सकें।

आपने सहज एवं सरलतम तरीके से जल संग्रहण (रिचार्जिंग सिस्टम) को क्रियाविधि प्रायोगिक तौर पर बताई एवं बच्चों की जिज्ञासाओं का समाधान भी किया।

श्री धारीवाल ने कहा कि बच्चों ने जल संग्रहण के लिए जो बीड़ा उठाया है वह प्रशंसनीय है। यह सामान्य बात है कि जनता बड़े बड़े लोगों के निवेदन को नजरअंदाज कर देती है किन्तु जब विनती करने वाला छोटा बच्चा हो तो हम भी सोचने पर मजबूर हो जाते हैं कि आखिर हम इस पुनीत कार्य में बच्चों का सहयोग क्यों न करें। अतिथियों ने संस्था को



समाजसेवी गतिविधियों के लिए हर संभव मदद देने का आश्वासन भी दिया। उन्होंने क्लब द्वारा प्रकाशित पम्पलेट का विमोचन भी किया। इसके पूर्व क्लब अध्यक्ष आराध्य सेठिया ने बताया कि हम बच्चों ने वर्तमान जल संकट की स्थिति को देखते हुए प्रदेश शासन द्वारा किए जा रहे प्रयासों को मद्देनजर उसमें अपनी भी सहभागिता सुनिश्चित करने के लिए निर्णय लिया गया कि हम सर्वप्रथम नगर में पम्पलेट वितरण कर जागरूकता लाने का प्रयास किया जाएगा उसके बाद भी यदि आवश्यकता है तो फिर हम घर-घर जाकर सम्पर्क करेंगे एवं सभी से निवेदन करेंगे कि कार्य पानी न बहाएं, आवश्यकता के अनुसार कम से कम जल का उपयोग करें, अपने घर में नलकूप या हैण्डपम्प होने पर उसकी रिचार्जिंग अवश्य करें। उन्होंने कहा कि हम इस अभियान में यदि थोड़ा भी सफल हुए तो हम समझेंगे कि समाज व देश के लिए हम अपने कर्तव्य का पालन कर सके।

अतिथि स्वागत सचिव पारस पाण्डेय, कोषाध्यक्ष प्रसंग शर्मा, उपाध्यक्ष रामानुज उपाध्याय सहित अन्य पदाधिकारी व सदस्यों ने किया।

निश्चित तौर पर बच्चों का प्रयास सराहनीय तो है ही चिन्तनीय भी है कि जो बच्चे पानी में अठखेलियां करने की उम्र में पानी बचाने का संदेश लेने में लगे हुए हैं ऐसे में बड़े लोग कैसे आंखे मूंदे चुप बैठ सकते हैं। हमें भी अपनी जिम्मेदारी समझकर बच्चों के इस प्रयास को आगे बढ़ाना होगा तभी हम आने वाली पीढ़ी को एक गौरवमयी हरा भरा इतिहास व सुनहरा भविष्य दे पाएंगे।

FREE PRESS
Indore Sunday June 11, 2006

CHILDREN SPREADING AWARENESS

JAORA: 'WHERE there is will, there is a way,' depicts the dogged attitude of Royal Children's Club. The Club members including children between ages 10-12 years have published a pamphlet to spread awareness among the people about water conservation. A programme was organised to release the pamphlet, recently. Sanskriti Sangam general secretary Anil Dhariwal was the chief guest and social worker Babulal Nahar presided over. Appreciating the efforts of children, guests said, 'it feels great to know that these children know their responsibilities. No one can ignore children's request'. Club president Aradhya Sethiya, secretary Pas Pandeya, treasurer Prasang Sharma, vice-president Ramanuj Upadhyay and others were present on this occasion.

लोगों को बच्चों से प्रेरणा लेनी चाहिए

नई दुनिया
21.6.06

जावरा 20 मई (निप्र)। जल संग्रहण के प्रति नागरिकों में जागरूकता लाने की एक बड़ी जिम्मेदारी छोटे-छोटे बच्चों ने ली है। वे साधुवाद के पात्र हैं। इनसे अन्य लोगों को भी प्रेरणा लेना चाहिए।

समाजसेवी श्री बाबूलाल नाहर ने यह बात कही। वे रायल चिल्ड्रन क्लब द्वारा आयोजित विमोचन समारोह में बोल रहे थे। कार्यक्रम के अतिथि श्री अनिल धारीवाल ने कहा कि जनता प्राय: बड़े लोगों के निवेदन को नजरअंदाज कर देती है, किंतु जब विनती करने वाला कोई छोटा बच्चा हो तो हम भी सोचने पर मजबूर हो जाते हैं। संस्था के अध्यक्ष श्री आराध्य सेठिया ने बताया कि संस्था द्वारा नागरिकों को जल संरक्षण के प्रति जागरूक करने के लिए सबसे पहले पर्चे बाँटे जा रहे हैं। इसके बाद यदि आवश्यक हुआ तो घर-घर जाकर लोगों से संपर्क कर इस हेतु सहयोग करने का अनुरोध किया जाएगा। अतिथियों ने इस अवसर पर प्रकाशित पर्चे का विमोचन किया। अतिथियों का स्वागत सर्वश्री पायस पांडेय, प्रसंग शर्मा, रामानुज उपाध्याय आदि ने किया।

समारोह रविवार को दोपहर 2 बजे से होगा। गृह राज्यमंत्री श्री नागेन्द्रसिंह नागोद मुख्य अतिथि होंगे। विधायक डॉ राजेन्द्र पांडेय अध्यक्षता करेंगे। इस अवसर पर पुलिस उप महानिरीक्षक श्री विजय कटारिया, पुलिस अधीक्षक श्री सतीश सक्सेना, अनुविभागीय अधिकारी पुलिस श्री विपुल पांडेय भी उपस्थित रहेंगे।

It was suggested that JMC can work together with such NGOs towards creating awareness towards water conservation, improving green cover, maintaining clean and green environment.

⇒ **Power Supply**

It was said that the feasibility to open a power generation plant at the Triveni where three rivers meet i.e. Maleni, Pingla and Chambal should be carried out. The opening up of a power generating plant would not only serve the purpose of the citizens of Jaora but would also be beneficial for many other villages.

⇒ **Urban Poor & Slums:**

The stakeholders highlighted that majority of the city's population lived in slum areas hence due importance should be given for the improvement of slum areas by providing services such as opening up of Shulabh complex in the slum areas, toilets especially meant for ladies, and strict monitoring should be employed on collection of waste on a daily basis.

⇒ **Municipal Finance:**

The stakeholders were also shown the existing condition of the municipal finance and how it is being utilized for the providing various services to the citizens. It was highlighted that to improve the existing condition of corporation finance and efficient utilization of corporation's finance, corporation would have to think about new methods such as implementation of metering in water connections or may be privatizing the water supply for Jaora.

⇒ **Development of vacant land - Sugar Mill land**

The stakeholder's were keen on re-development of Sugar Mill land. Some of the stakeholders mentioned that the subject land is under litigation and any plan for redevelopment would remain on paper unless the clear titles of land are known. CRISIL suggested that it would speak with the District Collector and UADD in this concern.

⇒ **Tourism –** Image positioning of Jaora as religious tourism center.

Figure 13: Participants in workshop

⇒ **Summary of discussion points**

Particular/ Issue	Problems/ opportunity	Strategies	Stakeholder views
Parking Space	- Lack of parking space in public areas and markets leading to congestion	- Existing Ghantaghar can be redeveloped for commercial and parking amenities on PPP model	- Agreed to our point of view - Suggested that existing vegetable market can also be developed into a proper market and space could be created for parking.
Traffic control system	- NO traffic control system - Heavy city traffic system on Laxmi bai road – congestion and pollution - Encroachment on roads - Violation of rules for one way roads	- Identification of routes which are used quite often and draw a plan so that almost every route is used on a frequent basis. - Awareness among citizens for careful driving through banners - Discussion with Traffic police to implement traffic rules and regulations.	- Agreed to our point of view
Outstation Traffic	- Disruption in city traffic leading to pollution, congestion and accidents	- Instead of by-pass connecting only few roads a ring road should be built.	- Agreed to our point of view but in addition said that there is an urgent requirement for a bypass from Khachrod to Ratlam.
Railway crossing	- Loss of time and traffic congestion	- Road over bridge at the railway crossing. - Discussions with Railways to obtain NOC to construct road and connect the existing under bridge or - JMC to appoint construction of new under/over bridge. consultant for DPR to assess the feasibility either for existing under bridge or new bridge.	- Agreed to our point of view and laid emphasis to construct the road and connect the existing railway under bridge with main road.

Particular/ Issue	Problems/ opportunity	Strategies	Stakeholder views
		- Quick survey for any land acquisition.	
Existing Krishi Mandi – traffic jams and space saturation	- New site is available but lacks connectivity - Far from the main city	- Complete the construction at Aranya Pitha - Need to gather the confidence of the people operating out of the existing Krishi Mandi. - Provide multiple benefits in terms of connectivity to the main city. - Need to introduce and plan cheap mode of transportation for small time labourers. - Provide for new and big cold storage facilities, space for parking and use of heavy loaders - Area to be demarcated as industrial zone for development of small scale agriculture based industries. - Check the possibility to lay down railway track near the new Krishi Mandi.	- The stakeholders gave their nod to our suggestion and also said that it is really important to shift the existing mandi to its new location that would benefit thereby increasing trade and provide multiple benefits to the city traffic.
Power supply	Frequent power cuts	Assess the feasibility of developing a power generating station where the three rivers, i.e., Chambal, Maleni and Pingla cross each other at an approximate distance of 20 kms from the city.	- Agreed to our point of view.
Solid waste management:	- Non-observance of cleanliness - NO cooperation with	- Make the city dustbin free - Awareness through	- Agreed to our point of view and laid importance to the role

Particular/ Issue	Problems/ opportunity	Strategies	Stakeholder views
- Lack of cleanliness - Absence of door to door collection of waste - Segregation - Collection for bulk producers - Waste treatment	sweepers for door to door collection - D2D collection: Lack of awareness and NO cooperation of citizens with sweepers for d2d collection - Segregation – Lack of awareness in ULB and no initiative. - What do you do with the segregated waste? - Mixing of municipal solid waste and waste from bulk producers such as hospital waste, slaughter houses.	installation messages at all public places - Continuous monitoring and vigilance by ULB - Master plan for D2D collection – (trip planning, timing, manpower requirement, and infrastructure) - Segregation – Awareness programme. - Utilization of waste for vermin-composting would further save land. - Identification of bulk producers and call meetings to set up an arrangement for collection. - Issue a notice for disposal of hospital waste as per rules.	of an NGO in getting it implemented in the city
NO Sewerage network	- Waste water is polluting water bodies - NO usage of waste water	- Explore low cost sanitation facility in slum areas. - Requirement of underground sewerage network plant - Identify land for treatment plant. - To explore re-use of waste water generated for non-potable uses. - Avoid construction of cement concrete roads.	- Agreed to our point of view and laid stress on building an underground sewerage network.
Lack of Social Infrastructure	- NO stadium or jogging park - NO indoor sports stadium	- Indoor sports stadium and creating a jogging track in existing mela maidan.	- Agreed to our point of view and said that for stadium locations such as sugar mill compound, area near

Particular/ Issue	Problems/ opportunity	Strategies	Stakeholder views
			Ram bagh, and area if the existing mandi shifts.
Tourism - The city is home to "Hussain Tekri", a world class religious institution which has not been marketed or promoted as a world class tourist destination	- NOT very well known in the tourism circuit. - More good quality services are required.	- Discussions with MP tourism and promote the religious place through its web site. - Discussion with state govt. officials to increase the area of Jaora which should also include Hussain Tekri. - Check the possibility to open a MP Tourism hotel within Jaora.	- Agreed to our point of view
Sugar Mill land (App. 20 hectares land)	Owner – cooperative sector - over burdened with huge losses and have to repay huge sum of money	- The consultant would discuss the issue with the UADD so that the land could be put to use. - Discussions with collector, state department officials and cooperative sector are required.	- Agreed to our point of view and added that it is really important to resolve the issue as huge land parcel would be very beneficial when put to use.

4.3 Third Workshop

Venue: Jaora Municipal Office
Date: 22nd March' 2010
Time: 3.00 p.m. to 5.00 p.m.
Jaora Municipality: Citizens, Office bearers of various Organizations, President, Vice President – Jaora Municipality, Chief Municipal Officer Elected representative of Jaora Municipality, Department officers.
CRISIL representative: Appeeji Parasher
Agenda of the meeting: To develop strategies and priority actions.

CRISIL Risk and Infrastructure Solutions Limited, along with the support of Jaora Municipal Office, conducted the third stakeholder's workshop at Jaora on 22nd March 2010. Approximately 20 to 25 citizens belonging to different professions attended the workshop and expressed their views on the strategies and priority actions plan necessary in the next five years to move towards the vision 2035. *(The list of participants has been attached as Annexure II in Chapter 3).*

4.3.1 Key discussion Points

The following were the key points of discussion during the workshop.

The consultants reiterated on the past activities carried out for preparing the CDP and further stated the agenda for third stakeholder consultation. The consultants mentioned that based on the sector analysis (demand-gap analysis based on normative standards) and past discussion/ stakeholder's suggestions on improving infrastructure of Jaora city an investment plan is prepared. The city investment plan is a shelf of projects required to be undertaken in a phased manner to achieve the vision of the city.

Figure 14: Participants in workshop

The **water supply** project for the city has been approved under Urban Infrastructure Scheme for Small & Medium Towns (UIDSSMT) and is already under implementation. This project is planned to take care of water supply need of the town for next 30 years. Two key aspects to be taken care in this sector are timely implementation of the project to avoid any cost escalation which shall be additional burden for the local body and secondly undertaking metering of all the consumer water connections and bulk points. **Metering** of all water connections is also a reform commitment to avail the grants from UIDSSMT. The metering component was not a part of the project approved under UIDSSMT, hence this particular component is further suggested as an investment need under the CDP.

Post metering of all the water connections, the local body would be required to migrate from flat tariff to volumetric based tariff i.e. the users have to pay only for the amount of water that has been consumed. Metering would also increase the accountability in the city in terms of water supplied, consumed and the losses in terms of leakages and theft. Once metering is in place the local body would be in a position to reduce its non-revenue water (NRW) level, which today in most of the Indian cities is about 40-50 percent. NRW reduction is also a reform commitment and local bodies are required to gradually reduce the NRW level to about 15-20 percent. It will also assist the local body in improving the operation and maintenance cost recovery without any substantial increase in water tariffs.

The stakeholders mentioned that in past some of the water connections in the city were metered, however, they remain un-operational; hence proposing metering is not a good solution for the city at this stage. In response, the consultants mention that mere metering of connections would not serve the purpose; the local body is required to maintain the meters on a regular basis. This can be done through private sector participation on PPP basis.

The consultants further appraised to stakeholders about the requirement for sewerage system for the city. It was mentioned that the city should be planned for the sewerage with a mix of low cost and underground system. However, what is crucial is the construction of cement concrete roads should be avoided.

The consultants further discussed the road map for improving the situation of waste management in the city. The entire city is planned to move to door-door system of waste management, accordingly the investment requirement in SWM is determined. Segregation of waste with door-to-door collection would reduce valuable waste from reaching the dumping site, hence reducing the cost of land-filling in the city. The slum development project for the city is already approved under IHSDP, however, the municipality is facing problem for implementing the same as the project cost has increased and so the contribution of JMC and beneficiaries; this issue will be discussed with the state authorities to identify the road map.

The consultants further mentioned that during past stakeholder consultations it was suggested for improvement of traffic system near Ratlami gate, need for a indoor stadium, development of Ghanta Ghar, vegetable market cum parking complex etc have been included in the CDP. Apart, from that the investment plan also includes development of regional bus stands on the proposed ring road. The consultants also discussed phasing of the investment plan and the sustainable investment capacity of the JMC.

Figure 15: Participants in workshop

One of the stakeholders suggested that there is plot of land admeasuring 200 bigha near the state highway which could be utilized for developing an Agriculture Research Institute, Biotechnology Institute or Indoor stadium.

One of the stakeholder mentioned that the city also requires an over-bridge at Rapat area which would connect Jaora to Malipura. The present road gets submerged during normal monsoon. The other stakeholders also confirm the problem and stressed for inclusion of this as a part of the investment plan. The stakeholder's further initiated the need for economic development of the city to create more job opportunities for the citizens. They mentioned that the proposed land for new grain market at Aranya Pitha should be developed and agro-based units can be promoted in and around the region. The stakeholder's also stressed the need for upgrading the polytechnic college to engineering college and establishing agriculture based research institutions.

The workshop concluded with taking the agenda of metering of water connections for further discussion with the political wing.

4.3.2 Implementation Strategy and Action Plan

Sector	Preparedness/Action Points	Possible PPP Interventions	Reform Compliance
Water	- Resolution in place for metering of all water connections - Undertake road works after water pipelines are laid	- Metering project can be developed on PPP basis	- 100% O&M cost recovery - Metering of all water connections - Reducing NRW to 15%-20%
Sewerage	- Land availability for STP - Undertake road works after sewerage pipelines are laid	- Development of STPs on BOT basis	- 100% O&M cost recovery (sewerage charge can be levied as % of water charges) - Re-use of waste water
Sanitation		- O&M of public toilets through an NGO or community organisations	
Street lighting	- High mast lamps at public places Lighting can be managed by area committees	- Street lighting on PPP basis leading to savings in energy bills	- 100% O&M cost recovery - Reducing NRW to 20%
Solid waste management	- Land availability for STP	- O&M partner for door to door collection of waste and transportation - Development of landfill site on cluster basis	- 100% O&M cost recovery (introduce Rs 10 per month per HH as a charge) - 100% door to door collection of waste
Urban poor		50% grant from GoMP for escalated cost	- 7 point charter reform - Tenure ship, access to basic facilities etc.

4.4 Fourth Workshop

Venue:	Jaora Municipal Council
Date:	1st September' 2010
Time:	11:00 A.M. to 1:00 A.M
Jaora Municipality:	Chief Municipal Officer, Department officers of Municipal Corporation, Present and Past Member of Legislative Assembly.
CRISIL representative:	Appeeji Parasher and Achin Biyani
Agenda of the meeting:	To discuss the outcome of City Development Plan.

CRISIL Risk and Infrastructure Solutions Limited, along with the support of Jaora Municipal Council conducted the fourth and the final stakeholders workshop at Jaora on 1st September' 2010. The workshop was attended by the department officers who expressed their views on the outcome of the City Development Plan.

The Draft CDP was very much appreciated and accepted by the stakeholders with limited alterations.

The workshop commenced with a brief introduction on the process adopted by the consultants to prepare the CDP to derive City's Vision followed by discussion on the future steps.

Based on the data collected, the issues and other discussions held during the last few workshops and various one to one discussions, the consultants presented the City Investment Plan and Financing

Operating Plan for the city. The discussion emphasized on the various initiatives and reforms required to be implemented in the town and discussion on strategies to be followed for the old and the new projects for the town. The consultants also discussed in brief sector wise projects that have been considered in the draft CDP and investments that would be required to implement the projects in respective sectors.

Highlights of the workshop:

- ⇒ The stakeholders emphasized on improving the water drainage system of the city It was expressed that there is an urgent need to install the underground sewerage and improve the drainage system of the city. One of the stakeholders also highlighted that with the implementation of water supply project; there would be an increase in the water supply leading to increase in sewerage quantity that would add to more chaos in the city.
- ⇒ One of the stakeholders expressed that at present there are three nallahs operating within the city and carrying waste water; Sejavata nallah, Piliya Khal and Minipura nallah. At present all the three nallahs does not carry the same amount of waste water with Piliya Khal taking the maximum load. Therefore, there is a need to develop a project to connect all the three nallahs among themselves that would improve the flow of the waste water to the outskirts and hence improve the overall existing situation. Moreover, providing an integrated facility for carrying waste water to te outskirts of the city would help in easing the flow of the waste water leading to less concentration at any one place within the city.
- ⇒ Many a citizens emphasized once again on implementing door to door service for collection of waste thus making their city a dustbin free city.
- ⇒ The stakeholder once again expressed their views for an over or under bridge on the Chaupati Railway crossing. It was said that the corporation should immediately start taking the necessary steps with regards to the development of the bridge as there would be clearances required from various ministries such as Railways.
- ⇒ The citizens expressed their consent on the redevelopment of the Ghantaghar so as to solve the parking problems and congestion due to traffic in the city's main bazaar.
- ⇒ The stakeholders discussed the plan with regards to the development of regional bus stands and ring road system.
    - The consultants shared with the stakeholders there vision with regards to the development of the bus stands. It was well appreciated by the stakeholders and was agreed that with the development of the regional bus stands on the outskirts of the city would help in easing traffic congestion, pollution and accidents. One of the stakeholders pointed out the need of good and proper connectivity within the city and these bus stands which was well taken by everyone.
    - Ring road system – The citizens have realized the importance of congestion free roads, less pollution and avoidance of accidents within the city and thus agreed that the outstation traffic should be avoided within the city. The consultants discussed the plan to improve the connectivity and avoid out station traffic within the city which was well acceptable by the citizens. It was agreed that the city has a good potential to develop a ring road around the city that would also support in developing regional bus stands on the outskirts. One of the stakeholders expressed his view that while planning to develop

a ring road would take huge amount of efforts, a bypass joining Khachrod and Ratlam should be considered on an urgent basis.

⇒ One of the stakeholders expressed his view on developing an over bridge from Hathikhana to Jawaharpeth considering the growth in traffic in near future. This was well accepted by everyone and it was said that this will surely provide a cushion to the traffic movement in near future thereby addressing the problem of congestion and accidents.

⇒ The consultants further discussed on the development of an indoor stadium, vegetable market cum parking complex, and improving the green cover of the city. The citizens gave their consent to the inclusion of these in the draft CDP and said necessary steps should be taken against the same.

⇒ Emphasis was laid on developing more public toilets, urinal toilets and shulabh complexes near the markets, hospital and other specific parts of the city. It was said that immediate attention should be given to develop a ladies toilet.

⇒ The consultants also discussed the importance of various initiatives and reforms required to be implemented in the town. It was revealed that in order to make the corporation self sufficient and to carry out projects on time and receiving of grants from the Government, it was necessary to implement various reform measures and hence the corporation along with the support of the citizens should take immediate steps. The consultants also discussed the importance of taking projects on Public Private Partnership (PPP) and discussed various projects that could be taken on PPP basis in the city of Jaora.

5 JAORA – TOWN PROFILE

The state was founded by 'Abdu'l Ghafur Muhammad Khan, a Muslim of Afghan descent. He was a cavalry officer serving the Pindari leader Amir Khan. He later served the Holkar maharaja of Indore, subduing Rajput territories in northern Malwa and annexing their lands. In return for his services, he was granted the title of Nawab in 1808. The state was confirmed by the British government in 1818 by the Treaty of Mandsaur. The total area of the princely state, with the dependencies of Piploda and Panth-Piploda, was 1471 km² (568 square miles). Jaora state was divided into four tehsils, Jaora, Barauda, Tal, and Barkhera.

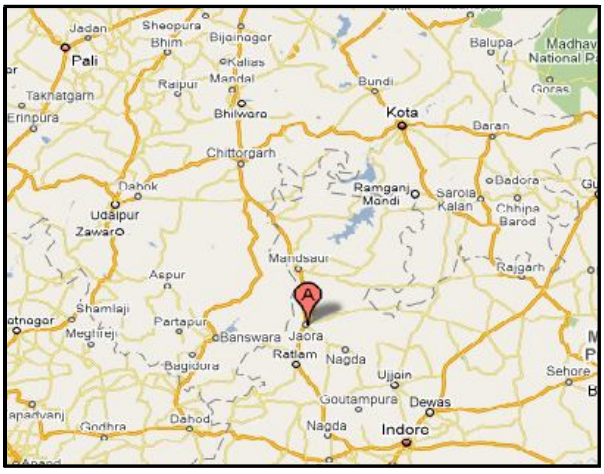
The city has gained importance due to presence of historical monuments which includes the famous “Hussain Tekri” a religious place for Muslims, situated at a distance of 4 km on the eastern side of the town. The city is also famous in the Indian Jain Community because the Jain saint Rajendra Suri performed his "Kriyoddhar" activity under a tree at Khachrod road that is now known as Jain Dadawadi Temple.

5.1 Physical Features

The city of Jaora is situated in the Ratlam District and is located in western part of Madhya Pradesh i.e. Malwa region between Ratlam and Neemuch city. It was the princely state of Jaora before independence.

The town is well-connected to major cities such as Mandsaur, Neemuch, Ajmer, Ratlam, Nagda, Ujjain, Indore, Vadodara, Bhopal, and Ahmedabad through a road and rail network. It lies on the State Highway 31 (Ratlam – Neemuch). The highway further links with the National Highway number 3 (via Mhow road) which connect the city with rest of the parts of the country and the state. The town is 35 km away from the district headquarters Ratlam and 90 kms from Neemuch and 150 kms from the industrial capital of Madhya Pradesh i.e. Indore.

Figure 16: Jaora city



The city lies on the Mhow-Neemuch-Khandwa-Ajmer meter gauge railway corridor which is further linked with the other cities in the state and adjacent states such as Rajasthan.

5.2 Key Economic Drivers

The economic activity of the city has primarily been sustained by agriculture activities which is the main source for income for the citizens. There are only few very small scale industries such as pipe manufacturing and flour mill catering to citizens' employment. Meetings with citizens and various officials revealed the necessity to promote small scale industries within the town so as to provide more employment opportunities to the citizens and enhance the economic development of the town. Apart from agriculture and small scale industries, the city boasts an excellent opportunity to develop and promote the tourism industry through the presence of 'Hussain Tekri", a world famous religious institution.

5.2.1 Agriculture

Agriculture is the mainstay for the citizens of the town. The town's economic activity is highly dependent on agriculture. Soyabean, garlic, and wheat are the main crops grown in the region. The city houses the largest grain market (Krishi Mandi) in the district. Based on our discussion, it was revealed that almost 60 to 65 percent of the population is dependent on Agriculture with remaining involved in factories (very few in number) and retail stores.

The Krishi Mandi of Jaora is developed on a 22 acre plot having a capacity to handle 25000 to 30000 quintal on a per day basis. The following table reveals the trade numbers for the last four years.

Table 3: Annual Trade data for Krishi Mandi (Lakhs quintal per annum)

	2005-06	2006-07	2007-08	2008-09
Trade	10.0	14.0	16.0	22.0

Source: Krishi Mandi, Jaora

The data reveals an average growth of 30 percent for the last four years. Discussions with the officials reveal that for the year 2009-10 the trade is expected to reach 27.5 quintals per annum, an increase of 25 percent from the last year. For the year 2008-09, the trade in terms of absolute value was Rs. 8 crore.

Figure 17: Discussions on Agriculture

Though Jaora mandi is involved in trade of many items such as wheat, soyabean, spices, garlic, and coriander powder (dhania), the bulk of the trade comprises of wheat, spices, soyabean and garlic. At present, there are 350 licences and 150 shops. In terms of agriculture produce, noticeable increase of 117 percent was noticed in the production of Garlic during the period 1995 to 2001 and that of wheat and soyabean increased by 72 and 54 percents respectively.

Moreover, discussions with local citizens revealed that the present location of the mandi adds to lot of traffic congestion as it is located in the middle of the city.

To enhance the agricultural activities and to increase the employment in the agriculture there is a requirement to increase the capacity of the Krishi mandi from the present capacity of 25000 to 30000 quintals on a per day basis.

The place known as “Arneya Pitha” on the Mandsaur road at a distance of 5 kms from the city has already been located to shift the Krishi Mandi. The total area of the new mandi would be 100 acres with a capacity to handle more than 50000 quintals on a per day basis. In addition to this, the new mandi would also be able to generate more employment. At present only few shops, platform for trading purpose have been constructed. The compound requires construction of boundary wall and an approach road.

5.2.2 Small scale Industry

Once known for it sugar mill, the city at present has close to nothing in terms of industry. At present there are few flour mills, and pipes manufacturing units providing employment to very few people. Based on our discussion with citizens and various officials it was revealed that the town requires few industries so as to provide employment opportunities to the citizens.

5.2.3 Tourism

The town is famous for its historical monuments which include Jama Masjid, local dharamshalas, Gafoor Khan and Gaus Mohammad ke maqbare, old-fashioned houses, and Ghantaghar situated in the middle of the city, etc. The north side of the town is home to Abu Saeed Dargah. Every year, “urs” festival is celebrated at the dargah. The town is also home to a famous Lord Hanuman temple, a Jain temple known as Dadawadi which is situated at half a kilometer from the city on the Jaora-Khachrod road, a Jain temple in the Pipli bazaar area, and a Jagannath temple near the pipli khal.

Together with the pace of increase in agriculture business the city has gained importance due to presence of historical monuments which includes the famous “Hussain Tekri” a religious place for Muslims, situated at a distance of 4 km on the eastern side of the town. The city also provides quality education to its students and serves the near by locations. These institutions have played a strong role in growth and development of the city.

The town is most famous for Hussain Tekri, a religious place for Muslims, which is situated at a distance of 4 km on the eastern side of the town. On the 41st day of Moharram, a huge festival is organized which is attended by people from different countries. It is estimated that approximately 1,50,000 – 2,00,000 people visit this place during the festival. It is said that the shrine is famous for curing people who are suffering from severe diseases.

At present, there are approximately 40 to 45 dharamshalas, more than 250 shops, and more than 30 eating joints near the Hussain Tekri area to cater to the needs of the pilgrims. On a daily basis, approximately 5000-6000 people visit the holy place. The number of people visiting the shrine increases to 10,000 every Thursday.

Figure 18: Hussain Tekri

With the presence of such a huge religious institution, there is a chance to develop the tourism industry which would definitely help in economic development of the region and would ample of opportunities to the citizens. In this regard, the Hussain Tekri Board is in with dialogue with the Madhya Pradesh tourism to build a hotel and to mark the place on their tourism map thus highlighting the importance of the place. The board has submitted a Rs. 5 crore project to Madhya Pradesh Waqf board to develop more hotels, provide space for medical facilities, banks, post office, residential quarters and development of parks and lawns within the premises. It was revealed that the shops within the premises would be taken outside the premises and would be given space there.

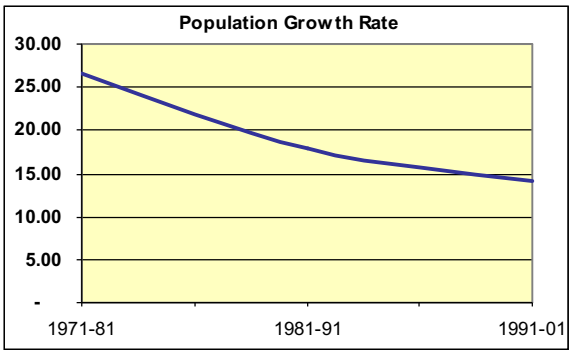
5.2.4 Emerging Issues in Economy

The economic activity of the city has primarily been sustained by agriculture activities which is the main source for income for the citizens. There are only few very small scale industries such as pipe manufacturing and flour mill catering to citizens' employment. Meetings with citizens and various officials revealed the necessity to promote small scale industries within the town so as to provide more employment opportunities to the citizens and enhance the economic development of the town. Apart from agriculture and small scale industries, the city boasts an excellent opportunity to develop and promote the tourism industry through the presence of 'Hussain Tekri", a world famous religious institution.

5.3 Demographic Profile

5.3.1 Population Growth Trends, Area and Density

The population of Jaora has doubled in the past five decades. Population over the years is increasing in absolute terms; however, the decadal rate of growth of



population is declining continuously since 1981 and has declined from 26 percent to 14 percent in 2001.

The area of the municipal jurisdiction have not changed, hence, the population density has been increasing over the years and is higher compared to other similar sized cities.

Table 4: Population Growth in JMC Limits

Census Year	Population	Decadal Change	Growth Rate (%)	Area (Sq.km)	Density (persons/ Sq.km)
1951	29,598				
1961	31,140	1,542	5.21		
1971	37,499	6,359	20.42	5.54	6769
1981	47,458	9,959	26.56	5.54	8583
1991	55,986	8,528	17.97	5.54	10106
2001	63,859	7,873	14.06	5.54	11478

Source: Census of India, respective years and JMC

5.3.2 Demography

Population over the years is increasing in absolute terms; however, the decadal rate of growth of population is declining continuously since 1981 and has declined from 26 percent to 14 percent in 2001.

As per the birth and death data for the past five years, on an average every year about 2073 persons add in the city implying that in a decade about 20,000 persons. However, a look at the past decadal addition reveals that the decadal change has been only 7873 persons during 1991-2001, clearly indicating an out-migration trend which is to the tune of more than 10,000 persons every decade. The slum population in the city was 51,203 for the year 2001, thus representing 80 percent of the total population.

Sex ratio in 2001 was recorded as 946 which is below the district but higher than the state level. The city has an average literacy rate of 73.5 percent, higher than the national average of 59.5 percent: male literacy is 58 percent, and female literacy is 42 percent. The WPR is 30 percent just meeting the desired level but comparatively lower that that of district and the state.

5.4 Population Projection

As per the birth and death data for the past five years, on an average every year about 2073 persons add in the city implying that in a decade about 20,000 persons. However, a look at the past decadal addition reveals that the decadal change has been only 7873 persons during 1991-2001, clearly indicating an out-migration trend which is to the tune of more than 10,000 persons every decade.

Table 5: Birth and Death

S. No.	Particular	2005	2006	2007	2008	Average
1	No. of Births	2448	2566	3408	1924	2587
2	No. of Deaths	571	466	578	439	514
Net Addition		**1877**	**2100**	**2830**	**1485**	**2073**

Source: JMC

The master plan for Jaora City has been prepared for the period 2001-2011. The plan envisaged a population of 67193 and 80474 persons for the year 2001 and 2011. The 2001 population as anticipated in master plan was just above the census actual figures.

Further, based on the past trends, the population of the city was projected for the year 2011, 2021 and 2035 by different scientific methods, viz., polynomial 2nd and 3rd order, arithmetic, incremental and geometrical increase method. This has been presented below in the table.

Table 6: Population projection by different methods

Particular	Population			
	2001	2011	2021	2035
Polynomial 2nd order method	63,859	76,559	89,629	1,10,582
Polynomial 3rd order method		66,659	62,749	45,233
Arithmetic increase method		**70,711**	**77,563**	**87,323**
Incremental increase method		73,337	85,441	1,06,750
Geometrical progression method		73,320	84,184	1,02,149

Source: Analysis

Thus, based on the past trend of natural increase & out-migration, projections by master plan & actual census survey in 2001, the population increase on arithmetic increase method is found appropriate.

5.5 Socio-Economic Profile

Jaora is an important administrative center in the district and constitutes 5.25 percent of district population and 18 percent of the district's urban population.

The demographic characteristics have been analysed in terms of decadal growth and spatial distribution of density in the town. The town as per 2001 India census, has a population of 63, 589 (Municipal limits) distributed over an area of 5.54 sq km. Males constitute 52 percent of the population where as females 48 percent. Sex ratio in 2001 was recorded as 946 which is below the district but higher than the state level. The city has an average literacy rate of 73.5 percent, higher than the national average of 59.5 percent: male literacy is 58 percent, and female literacy is 42 percent.

The WPR is 30 percent just meeting the desired level but comparatively lower that that of district and the state. The decadal growth rate of the city is considerabely lower than that of district and the state.

Table 7: Comparative Analysis of demographic indicators

S.No	Demographic Indicators	State	Ratlam District	Jaora
1	Population 2001 (in lakhs)	603.48	12.15	0.64
2	Decadal growth rate	24.3%	25.05%	13.58%
3	Area (Sq.Km)	308245	5061	5.54
4	Density (Per Sq.Km)	196	240	11478
5	No. of Household	10912025		10,248
6	Average HH size	5.53		6.0
7	Sex Ratio-Females per 1000 males	919	952	946

S.No	Demographic Indicators	State	Ratlam District	Jaora
8	SC/ST Population as proportionate to Total Population	35%	39%	8.32%
9	Literacy rate	63.7%	67.6%	73.5%
10	Female Literacy rate	50.3%	-	42%
11	Work Participation Rate (Main and Marginal)	42.7%	57%	30%

Source: Census 2001

Based on the data from JMC, the slum population in the city was 51,203 for the year 2001, thus representing 80 percent of the population. It is distributed in over 23 wards in the city.

5.6 Physical Planning and Growth Management

Jaora Municipal Council was established in the year 1954 and it had 22 wards. With the increase in population, the number of wards in the city was 30 in the year 2001.

The city has mainly expanded between west part of Mhow-Neemuch railway corridor and road. The old area of the city is located in the western part of the city. The major reason attributed to this is most of the administrative activity institutions such as Municipal Council, Tehsil office, court etc. were located in this belt. Growth was seen on the western side of the city due to sugar mill and accordingly housing and other retail activities started flourishing in this area. The growth in the eastern part of city is geographically hampered due to Piplya Khala natural drain. The future expansion of the city is mostly expected in the south-west part of the city due to industrial zone and towards polytechnic area in the south.

The master plan for Jaora City has been prepared for the period 2001-2011. The plan envisaged a population of 67,193 and 80,474 persons for the year 2001 and 2011. Given below is the land utilisation status of 2001 and proposed utilisation by the year 2011 by their type.

Table 8: Land use

S. No.	Land use	Year 2001		Year 2011		Year 2011
		Area (hectare)	Density (per 1000 persons)	Area (hectare)	Density (per 1000 persons)	Share (% of total area)
1	Residential	156	1.95	485	3.9	38.3%
2	Commercial	18	0.22	125	1.0	09.9%
3	Industrial	42	0.52	138	1.1	10.9%
4	Public & Semi- public utilities	83	1.03	129	1.0	10.2%
5	Social and recreational	17	0.21	101	0.8	08.0%
6	Transportation/ Circulation	120	1.5	288	2.3	22.7%
Total		**436**	**5.45**	**1266**	**10.1**	**100%**

Source: Jaora Development Plan

The key salient features and the aspects envisaged in the master plan are discussed below:

- The master plan intended to carry ahead the mixed land use pattern in the city.
- All the residential areas should be well connected with key economic activity areas.

- The master plan envisaged parking facility near the old Krishi Mandi and Ghantaghar. During stakeholder consultation, this aspect has emerged and it was suggested that the old Ghantaghar (which is under PWD) should be re-built and should incorporate parking facility.

- Based on the past agricultural growth in the region and the inadequate area under existing Krishi Mandi and traffic congestion around the Mandi, about 40-50 ha of land was newly reserved for Krishi Mandi at Aranya Pitha and related activities, transport nagar, godowns. The proposed commercial landuse also envisaged other markets such as fruits and flower market, wholesale vegetable market and other retail activities. These were also in line with the proposed residential landuse in the western part of the city near village Bannakheda.

- At present the Krishi Mandi has not been shifted to the desired location as the facilities such as approach road, boundary wall and platforms and other things used for trading activities. The proposed mandi is located about 5 kms from the city and due to lack of good approach road the traders are reluctant to move to the new location.

- The master plan envisaged that the commercial activities are distributed across the city especially in the old city area and on-loading and off-loading of goods take place near the commercial areas creating traffic congestion. A lot of traffic currently is attributed to the Krishi Mandi. Hence to avoid the same a separate transport hub was envisaged under the master plan, to avoid disruption of regular traffic in the city.

- The master plan also discusses about the pollution control mechanism for the sugar mill in the centre of the city. However, at present this factory is not operational and the stakeholders have suggested putting the land for public use.

- The master plan also envisaged area for solid waste disposal facility near village Banamkhedi and Bannakheda; however, these areas were developed as housing colonies and hence a new location was desired. At present, the dumping site is located at 'Gurodiya-Deda, Mhow-Neemuch road' about 8 kms from the city. The present area of the disposal site is about 21 ha (8.5 acres) which is sufficient uptill year 2015.

- The master plan increased the area for recreational activities in the city from 17 ha to 101 ha for gardens, stadium, exhibition ground, swimming pool, picnic spot and lake development other recreational activities. The stakeholders voiced for recreational activities in the city as those envisaged in the master plan have not been realised.

- The master plan also envisaged the development of Hussain Tekri which has about 55 ha of land and proposed that the land should be developed in discussion with the concerned authorities. In this regard, the Hussain Tekri Board is in with dialogue with the Madhya Pradesh tourism to build a hotel and to mark the place on their tourism map thus highlighting the importance of the place. The board has submitted a Rs. 5 crore project to Madhya Pradesh Waqf board to develop more hotels, provide space for medical facilities, banks, post office, residential quarters and development of parks and lawns within the premises. It was revealed that the shops within the premises would be taken outside the premises and would be given space there.

- The master plan has also proposed shifting of certain commercial, industrial and bus stand from the city to other areas and also laid down the re-use of these areas for other desired purpose.

- The master plan also strongly points out the slum population in the city and mentions that the slums have been provided land *(government patta),* however, there is an urgent need for improving infrastructure within the slums.

5.7 Projects and their status

JMC has submitted three detailed project reports and has received sanction for two of their projects. Given below is the status of these projects: (Need to revisit the numbers and status)

1. Water Supply Project, Jaora
Name of the project: Water Supply project
Name of the scheme: UIDSSMT
Year in which the project was sanctioned: 2007-08
Project Cost: Rs. 6.63 crores (cr)
Grant received: Rs. 1.5 cr
Current status: Excavation at the site has just started.

2. Integrated Housing & Slum development programme (IHSDP), Jaora
Name of the project: Housing and Slum development
Name of the scheme: IHSDP
Year in which the project was sanctioned: 2007-08
Project Cost: Rs. 2.43 crores (cr)
Grant received: Rs. 0.48 cr
Current status: No step has been taken so far.

3. Sewerage Project, Jaora
Name of the project: Sewerage project
Project Cost: Rs. 3.25 cr
Current status: Technical sanction awaited

6 CITY INFRASTRUCTURE

The principal function of Jaora Municipal Council (JMC) is the provision of basic services to its citizens. Municipal services have a direct and immediate effect on the quality of lives of the people living in the city. Poor municipal service can become a hurdle in different ways such as attracting business or industry to an area which could limit the job opportunities for its residents, degrading the standard of living of the people through poor management of sanitation and sewerage services. Capability building, corporatization, and partnerships in municipal services are some of the key reforms required to improve municipal service delivery. Therefore, the biggest challenge for the municipal council is to provide its citizens with reliable services that are financially and environmentally sustainable.

This section details the quality of urban services offered by JMC to its citizens. The areas covered in the section include water supply, sewerage and sanitation, storm water drainage, solid waste management, street lighting, roads and public transport, fire service.

6.1 Water Supply System

Water supply in Jaora is a function of JMC which undertakes regular operation and maintenance and capital works within its jurisdiction and is responsible for billing and collection of user charges from the consumers.

6.1.1 Source, supply levels and treatment facilities

River Maleni, having a capacity of 44 mcft is the main source of water supply. It supplies around 2.96 MLD to the town. The city has around 92 tube wells and dug wells located in different parts of the town yielding 2.50 MLD of water. A total of about 5.5 MLD of water is supplied zone wise on alternate days during the morning hours. At present, the per capita gross supply level is 81 lpcd; the actual supply level at consumer end would be 25-30 percent lower than the gross considering the real/ technical losses in the system.

The town has a water treatment plant for the city which has a capacity of 3 MLD. Water drawn from the river is chlorinated for disinfection through mixing of alum and chlorine. The treatment plant built in 1974 is quite old and requires up gradation. Based on our discussion with the authorities, there is a requirement of new treatment plant which has been proposed in the UIDSSMT scheme and has been approved. The new filter plant would have a capacity of 6.5 MLD.

Figure 19: Treatment plant

6.1.2 Storage and Distribution

The water drawn from the river is transported to the WTP, where it is chlorinated and stored into the reserve tanks and further it is pumped to the elevated storage reservoirs (ESR) through rising mains. At present there is one underground reserve tanks of aggregated capacity of 0.50 lakh litres and 3 ESRs of aggregated capacity of 43.13 lakh litres. The total storage capacity is 79 percent of the water supply which however appears satisfactory given the supply level. The present storage capacity at 135 lpcd supply level is about 40 percent, which is decent. Based on our discussions with the authorities, it was revealed that storage reservoir at Kailash mann needs some repairing work as the stair case which leads to the top of the tank is now not in working condition.

The city has a distribution network of 48 kms thus covering 60 percent of the road length indicating a poor coverage.

The city has different categories and sizes of pipelines used for the distribution network. Following table reveals the data for the same.

Table 9: Data for pipeline distribution

Category	Pipeline diameter
CI Titon	300, 250, 200, 160 MM
PVC	325, 280, 215, 160, 110, 90, 75, 63 MM
GI	150, 100, 50, 25 MM
AC	250, 200 MM

Source: JMC

Based on our discussion, it was revealed that 60 percent of the pipeline belongs to PVC category. The AC and PVC pipes are no longer recommended by CPHEEO and hence would require rehabilitation.

6.1.3 Consumer Connections and User Charges

The total number of water connections in the city in 2008-09 was 4,197; of this, 90 to 95 percent are domestic and the remaining either commercial or industrial.

Table 10: Details of House Service Connections

Items	2004-05	2005-06	2006-07	2007-08	2008-09
	No. of Connections				
Domestic	4,084	4,074	4,101	4,074	4,197
Growth of HSCs (%)		(0.24)	0.21	(0.08)	0.68

Source: JMC

Charges to individual user/ HH or the commercial users are based on the diameter. For domestic connection, the water charge is Rs 80 -100 per connection per month based on the diameter and for commercial Rs 100 – 150 per connection per month. The Polytechnic institute and the defence area are levied Rs 3750 per month.

The Demand Collection Balance (DCB) statement indicates average collection efficiency is 72 percent of the total demand over the review period indicating a fair level. Arrears account for 30 percent of the total demand on an average.

Table 11: Water Charges – Demand Collection Balance Statement

Items	2004-05	2005-06	2006-07	2007-08	Avg
	Rs. Lakhs				
Demand					
Arrears	23.00	21.64	15.95	13.74	18.58
Current	43.00	44.48	43.98	46.70	44.54
Total demand	**65.99**	**66.12**	**59.93**	**60.44**	**63.12**
Collection					
Arrears	11.03	10.41	12.76	9.18	10.85
Current	33.31	35.69	34.08	35.37	34.61
Total Collection	**44.34**	**46.10**	**46.84**	**44.55**	**45.46**
Collection Efficiency	**67%**	**70%**	**78%**	**74%**	**72%**

Source: JMC

6.1.4 Cost Recovery

The income and expenditure statement of water supply indicates that the average income from water charges (excluding tax and new connection fee) is Rs 46 lakhs, whereas, the expenditure on O&M (salaries, chlorination, repair and maintenance of network and energy charges) is about Rs 59 lakhs indicating that JMC has to pool resources from other sources to meet the O&M. The average cost recovery measure over last five years is 81 percent against a 100 percent recovery.

Table 12: Income and Expenditure Statement – Water Supply

Items	2004-05	2005-06	2006-07	2007-08	2008-09
	Rs. Lakhs				
Income	44.76	46.49	47.48	45.12	46.76
Expenditure	74.82	70.93	50.77	45.04	53.85
Surplus	**(30.07)**	**(24.44)**	**(3.28)**	**0.08**	**(7.09)**
Cost Recovery	**60%**	**66%**	**94%**	**100%**	**87%**

Source: JMC, Annual accounts

6.1.5 Future Proposals by JMC

JMC has proposed for augmentation of water supply and storage capacity for Jaora city. The proposal is prepared keeping in mind the rise in population. JMC has already submitted the detail project report (DPR) in this concern which has been approved under the UIDSSMT scheme. The sanctioned amount is which was Rs. 6.63 crore has been revised to Rs. 11 crore of which Rs. 5.5 cr is for stage I that would be used for barrage construction and the remaining Rs. 5.5 crore for stage II that would be utilized for laying of pipeline distribution network, construction of filtration plant, and installation of pump house. It intends to supply water at 135 lpcd to its citizens.

6.1.6 Emerging Issues in Water Supply

- Present gross water supply of 80 lpcd (net supply 25-30% below due to technical losses in the system) is below then the prescribed norm of 135 lpcd by Central Public Health Engineering and Environment Organisation (CPHEEO).
- Few areas have low pressure supply as they are located at elevation or are far from the reservoir tanks.
- The distribution network coverage as per road length is only 60 percent.
- Rehabilitation of old and AC and PVC pipe type distribution network is required.
- Concerns in using PVC pipeline for distribution network as it becomes difficult to find accessories in case of break of the pipeline.
- Kailash Mann reservoir needs repairing with regards to its staircase.
- Decent O&M cost recovery to the tune of 87 percent (average for past 5 years); scope for further improvement.
- As per discussion with JMC water supply department, high energy cost is incurred in pumping of water. One of the reasons towards this is old pumping machinery and secondly capacities of pumps installed are lower then what is required.
- Augmentation of water supply and related works already approved under UIDSSMT scheme. Implementation is in progress.
- Metering of all consumer connection and bulk points required at all points.

6.1.7 SWOT Analysis in Water Supply

Strength	Weakness
➢ Water Supply Augmentation scheme proposed under UIDSSMT under process. This means that water supply would reach 135 lpcd for every citizen. ➢ Cost recovery on water supply is 87 percent against 100 percent recovery, which is quite decent.	➢ Metering of water connections completely absent. ➢ Coverage in terms of road is only 60 percent and needs further improvement which could be tackled under the approved project.

Opportunity	Threats
➢ Funding under UIDSSMT scheme ➢ Inclusion and implementation of reforms such as metering of all connections under the approved project. ➢ An opportunity to include those wards and colonies which do not receive water supply due to low pressure and non existence of pipeline network.	➢ If the water scheme is not executed in a time bound manner, it may lead to increase in costs. Moreover, during our interaction with the officials it was heard that the cost has increased a little bit. ➢ As highlighted in workshops, people might not be willing to pay for individual household connection.

6.2 Sewerage & Sanitation

6.2.1 Generation, Network and Treatment

As per CPHEEO norms, about 4.25 MLD (80 percent of water supply) of sewerage is estimated to be generated in the town. Data reveals that the town does not have an underground sewerage network and sewerage treatment plant facility.

6.2.2 Sanitation

Based on the interaction with the JMC officials, the city has 22 public toilets of which 18 are located in slum areas. Other than these public toilets, there are 2 Shulabh complexes of pay & use type; both of them are located in slum areas. The total number of seats as per the information is 132 in free public toilets and 24 in pay & use toilets. In terms of maintenance infrastructure, JMC has 1 tanker each for toilet flushing and cleaning septic tanks. During the reconnaissance survey it was realized that these public toilets have not been maintained properly.

Moreover there is a requirement to build few public toilets near the main market specifically for ladies.

6.2.3 Emerging Issues in Sewerage

The city does not have any sewerage system and the waste water generated gets disposed off in water bodies leading to pollution and unhygienic environment. During stakeholder consultation, pollution of river Maleni was reported.

6.2.4 SWOT Analysis in Sewerage and Sanitation

Strength	Weakness
➢ With close to 90 percent of the roads falling under Bituminous and WBM category, it wouldn't be that difficult to lay sewerage network as it would have been in case of cemented roads.	➢ NO underground sewerage network. ➢ Less number of public toilets especially Shulabh complex throughout the city and poor maintenance of the existing public toilets.
Opportunity	**Threats**
➢ Organized planning for laying down an underground sewerage network within the city. ➢ Implementation of training programs. For example training for sweepers to clean public toilets in an organized manner.	➢ With the implementation of water supply augmentation project the total water supply would increase from 81 lpcd to 135 lpcd leading to an increase in discharge of waste water. Therefore, it becomes essential to plan for an underground sewerage network beforehand.

6.3 Storm Water Drainage

The storm water drainage system in Jaora comprise of tertiary drains. The tertiary drains are the roadside drains either *pucca* or *kutcha*. The network of tertiary drains in the town covers a length of 85 km. This is about 108 percent of the present road network in the town.

Table 13: Storm Water Drains

Drain Type	Length (in Kms)
Kutcha Drains	49.70
Pucca Drains	29.70
Pucca Closed Drains	5.00
Total	84.40
Indicators	
% Road covered with Storm water drain	108%
% Road covered with Pucca Storm water drain	44%

Source: JMC

There are three nallahs flowing through the city. The Piliya Khal nallah, which runs from east to west, carries both rain water & waste water and the water from this nallah is used for agricultural purposes. The second nallah is situated towards the north of the city where only rain water flows, while the third nallah is situated at Tal naka.

Figure 20: Piliya Khal

Based on our reconnaissance survey and discussion with the officials, it was revealed that area near the pilya khal requires re-development and is prone to water logging during the monsoon season. The area could be used for plantation of trees on the both sides of the piliya khal to beautify the environment. The stakeholders too have voiced strongly for improving the storm water drainage system in the city and the beautification through plantation on the side of its nallahs.

Figure 21: Open drainage

6.3.1 Emerging issues in Storm Water Drains

- About 108 percent of the city roads are covered with network of tertiary storm water drains.
- Only 45 percent of the drains are pucca and covered, the rest are subjected to disposal of solid and other road side waste resulting in clogging of drains and spread of malaria.
- Water logging and flooding during monsoon, resulting in health hazard (malaria and diarrhoea vomiting).

6.3.2 SWOT Analysis in Strom Water Drainage System

Strength	Weakness
➢ 108 percent of the city is covered with storm water drainage network.	➢ Water logging and flooding during monsoon in few areas (especially Piliya Khal) resulting in health hazard problems. ➢ Majority of the drains are open drains and hence need to be covered. ➢ Dumping of solid waste into the drains lead to blockage and siltation.
Opportunity	**Threats**
➢ Implementation of Storm water drainage master plan so as to increase the network coverage to 130 percent within the city. ➢ Covering of all open drains. ➢ Spreading awareness through advertisement, local news channel, schools and NGO's for not dumping solid waste into the drains.	➢ City without proper drainage would lead to flooding and logging of water at various places thereby creating problems for citizens and spreading diseases.

6.4 Solid Waste Management

'Solid wastes" is a term generally used to describe non liquid waste materials arising from domestic, trade, commercial, agriculture, and industrial activities and public services. It is an unwanted material left over from places of human and animal habitation. Generally, solid waste is heterogeneous in nature and a mixture of vegetables, food items, paper, plastics, rags, glass etc. It bears a relation with the socio economic conditions of the society, the climatic conditions of the area, the city growth and development of residential and commercial areas and hence if solid waste is disposed off on land in open areas, then it causes a negative impact on the environment, ground water, bad odour, pests etc.

6.4.1 Current Practice of Solid Waste Management in Jaora

JMC is responsible for street sweeping, collection, transportation and disposal of all solid waste generated in the town. The department is headed by a health officer and supervise the operations are managed by sanitary inspectors. The department does have a dedicated Health officer but have a dedicated conservancy staff of 122 people comprising of workers, daroga, and sanitary inspector. JMC has an additional temporary staff of 160 people on contract basis for road sweeping and sanitary purporse.

At present the waste which is being generated in the city is being collected at the collection depot or the dust bins located at different parts of the city from where it is being transported to the trenching ground located at a distance of 8 kms from the city.

6.4.2 Waste Generation

The primary sources of solid waste in Jaora are local households, construction waste markets, commercial establishments and hospitals. The total quantity of waste generated per day is about 12 tons at 156 grams per capita per day. Around 75 percent of the waste is generated from households, 20 percent commercial and remaining 5 percent from Industrial houses. There are 4 vegetable markets in the city and 2 slaughter houses, whose waste gets currently mixed with the rest of the waste.

The city has more than 60 hospitals/ dispensaries; hazardous waste from hospitals gets mixed with the municipal solid waste.

6.4.3 Storage & Segregation

There is no organised practice of waste storage and segregation at source. As is typical in most Indian cities, the waste is not segregated and is generally picked up by rag pickers or dumped by the generators in local dustbins or open ground from where collection is under taken by the municipality.

6.4.4 Collection

Waste generated is either dumped in dustbins/collection depot or thrown on the streets. The predominant mode of primary collection is therefore through street sweeping from where it is being taken to collection depot. Municipality has around 40 for collecting waste from households/ commercial establishments and streets.

JMC has placed about 18 open dustbins and 40 container bins with capacity ranging from 3.5 to 5.5 cum and are located in different parts of the city from where the waste is lifted. This implies that the dustbins are placed at a distance of around 1.3 Kms. With a sweeper staff strength of 160 personnels the road length per conservancy staff is about 490 meters. The distance between the dustbins and the road length per conservancy staff, indicate a satisfactory level.

JMC has tried for door-to-door collection of waste in some wards of the city, but has not been successful due to non-cooperation from the citizens.

6.4.5 Transportation

Waste from the collection points is either transferred into the tractors (open) or lifted by dumper placer. Difficulty is faced in manoeuvring the vehicles as majority of the roads in the town are narrow and congested. JMC has 3 tractor trolleys of 2.5 cum each, 1 dumper place with a capacity of carrying 3-4 dustbins which is being used in transporting the collected waste directly to the disposal site. On an average these vehicles makes 2 trips per vehicle per day. The total rated capacity of the fleet is 15 metric tonnes which is adequate to handle the waste generated in the city.

6.4.6 Processing and Disposal

The present disposal site is located at 'Gurodiya-Deda, Mhow-Neemuch road' about 8 kms from the city. Waste is known to be dumped on this site. The present area of the disposal site is about 21 ha (8.5 acres) which is sufficient uptill year 2015. At present, no practice is being followed to dispose off the waste scientifically

6.4.7 O&M Expenditure on Waste Management

O&M of waste management accounts for an average of Rs 85 lakhs (Rs 7 lakhs per month) of which majority accounts for staff salary.

Table 14: Solid Waste Management – Service Level Indicators

S. No.	Indicators	Value	Units
1	Waste generated per capita (2009)	179	Grams
2	% Waste collected as per ULBs Estimate	85	%
3	% Waste collected as per vehicle capacity	100	%
4	% HHS covered by door-to-door collection by ULB	-	%
5	Road length per conservancy staff	489	Meters
6	Total rated capacity of vehicles	15	Tonnes
7	% rated capacity to waste generated	125	%
8	No. of trips per vehicle/day	3	Nos.
9	Average spacing between dustbins	1.3	Km
13	Mode of disposal	Dumping	
14	O&M per annum including salaries (avg. of last 5 years)	85	Rs lakhs

6.4.8 Emerging Issues in Solid Waste Management

- Compliance to MSW Rules 2000 is minimal in terms of door-to-door collection, segregation, recycling/ composting and disposal of waste.
- The total rated vehicle carrying capacity is only 15 metric tonnes against an estimated generation of 12 – 15 tonnes.
- Adequacy of conservancy staff to handle the waste at present.
- The distance between the dustbins (1.3 kms) and the road length per conservancy staff (489 meters), indicate a satisfactory level.
- The existing disposal site lacks infrastructure for landfill and composting and waste is merely dumped.

6.4.9 SWOT Analysis in Solid Waste Management

Strength	Weakness
➢ Adequacy of conservancy staff to handle waste in the town. Hence, if modern methods of collecting waste are applied in the city, the process of collecting waste would definitely improve. ➢ Presence of **Children NGO** provides support in spreading awareness on the importance of disposing waste and implementing reforms within the city.	➢ Lack of collection bins at few places results in waste on the roads. ➢ Lack of training to staff at regular intervals disrupts coordination of sweepers and local citizens thereby affecting the overall process of collecting waste.
Opportunity	**Threats**
➢ Implementation of reforms such as Compliance to MSW rules 2000 which would include door to door service, segregation of waste, recycling/composting. ➢ Spreading awareness through advertisement, local news channel, schools and NGO's for proper collection and segregation of waste. ➢ Training programs for sweepers on regular intervals covering various aspects of solid waste management. ➢ A possibility of PPP intervention through introducing O&M partner for door to door collection of waste and transportation.	➢ Lack of opportunity with regards to revenue realization through selling of composite made from waste. ➢ Deteriorating urban environment if the waste is not being handled carefully. ➢ As highlighted in workshops, people might not be willing to pay for individual household connection.

6.5 Roads, Traffic, and Transportation

JMC is the primary responsible with the city roads and is responsible for its maintenance and construction of new roads within the municipal limits in line with the DP proposals. The buildings and roads division of PWD constructs and maintain SH and district roads.

6.5.1 Road Network and Condition

Based on the information collected so far, the town has approximately 60.66 km of roads as per the 2007-08 records. 25 percent of the roads are made of cement concrete, 50 percent fall under bituminous topped and the rest 25 percent falls under water-bound macadam. The average road width in the city is around 10 to 12 ft. and is subjected to traffic congestion. In addition to this, the main commercial streets in the city are encroached with informal activity leaving very little space for the smooth movement of

traffic. Moreover, outstation traffic also adds to the congestion as a lot of vehicular movement happens within the city when the outstation vehicles cross the main city to go to another city.

Table 15: Road networks and length

S. No.	Surface Type	Length in Km	Percentage
Municipal Roads			
1	Cement Concrete	5.90	10%
2	Black-topped	39.63	65%
3	WBM	15.63	26%
Total		**61.16**	**100%**
% Roads Surfaced			74.4%
PWD Roads			17 kms
Total road length in the city			78 kms

Source: JMC

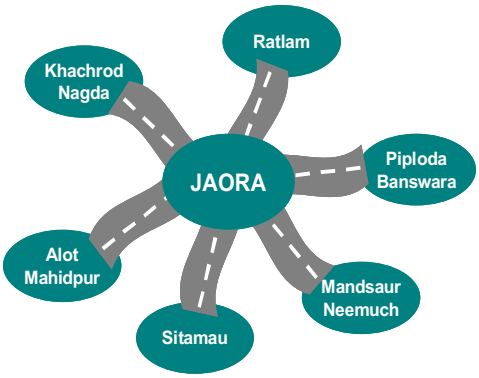
During the reconnaissance survey, the key features that were observed are as follows:

1. Many road sides have seen increase in encroachment in terms of hawking across the major commercial streets.
2. With the increase in the number of vehicles the city lacks parking facilities.
3. The average width of the road within the city is approximately 10 meters.
4. The city does not have traffic lights system to control the increasing traffic.
5. There is a lot of disturbance due to outstation vehicles.

Figure 22: Congestion due to parking

The town is connected via six different routes as shown in figure 4. Now, if a vehicle is coming from Khachrod and has to go to Ratlam or Piploda, the vehicle has to cross the main town which disturbs the city traffic adding to congestion, increasing the pollution and reducing the life of the town roads. At present, approximately 250 to 300 numbers of trucks passes the town on a regular basis.

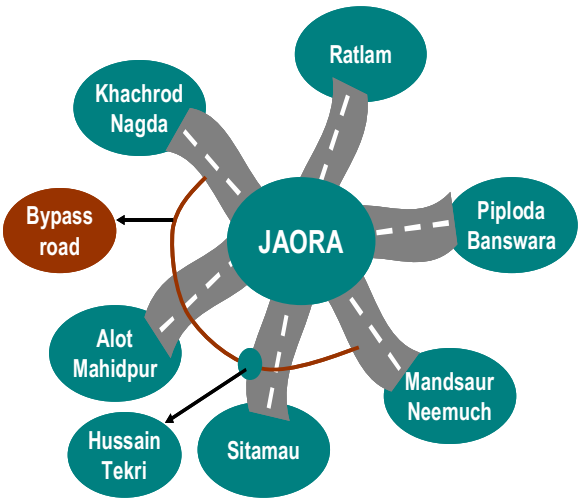
Figure 23: Jaora and its connectivity



A little relief in the same direction has already been provided by PWD department. PWD department looks after the major district roads and buildings work for the Jaora town. Based on our interaction with the PWD department, it was revealed that the department has submitted reports to build and develop certain stretches near the Jaora town which will provide relief to the citizens of the town and the outstation vehicles which had to enter the town to go to another place. The details and the status are as follows:

- MPRDP has sanctioned a Rs. 200. crore 2 lane highway project covering a stretch of 100 kms from Jaora to Ujjain passing through Khachrod and Nagda. Pre qualification tenders have already been floated for the same. The project has proposed a bypass road of 6 to 7 kms stretch from **Khachrod – Alot – Hussain Tekri – Jaora Mandsaur 4 lane highway**. Once developed, this particular bypass road would provide relief to the vehicles coming from Khachrod and going towards Mandsaur as the vehicles would then not be entering the town saving time for themselves and a big relief to the citizens.

Figure 24: Proposed Khachrod– Alot - Hussain Tekri – Jaora Mandsaur 4 lane highway



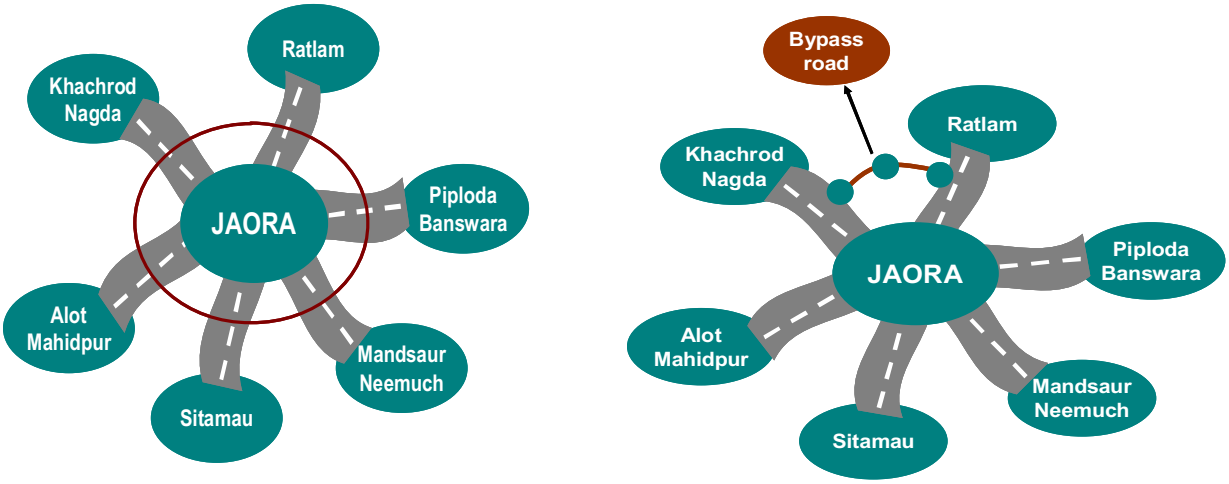
Other than this the department has also submitted the following reports for which the sanction is awaited. The details are as follows:

- Inter state route covering **Jaora – Piploda – Jalandharkheda** which is a stretch of 25 kms. A report to develop the route has already been submitted in August-September 2009 under the E & I central scheme. The cost of the project is Rs. 12 crore.
- **Jaora – Kalukheda – Dodar** which is a stretch of 23 kms. A report to develop the route has already been submitted in August-September 2009 to Madhya Pradesh Government. The cost of the project is Rs. 9 crore.
- **Rakloda – Kalukheda** which is a stretch of 20 kms. A report to develop the route has already been submitted in August-September 2009 to Madhya Pradesh Government. The cost of the project is Rs. 8.5 crore.
- The department maintains 17 kms of stretch within the Jaora town. To improve the condition of these roads, the department has submitted a report to the Town development authority in the year 2008-09 for a cost of Rs. 5.5 crore.

If sanctioned, all these routes would definitely provide solace to the citizens thus reducing the number of outstation vehicles entering the city and improving the traffic situation of the town roads.

Furthermore, to reduce the heavy vehicular movement within the city it was revealed that a possibility should be drawn to build a ring road around the Jaora town connecting all the routes whereas to provide better connectivity for vehicles entering Khachrod and proceeding towards Ratlam, a possibility should be drawn to build a bypass road that would connect **Bhuteda– Gunavad – Chaurasi Badalia** – **Jaora Ratlam 4 lane highway**. Bhuteda is approximately 5 kms away from Jaora and the total length of the bypass would be approximately 15 to 16 kms.

Figure 25: Possibility of a ring road and **Bhuteda-Gunavad-Chaurasia Badalia** bypass road



Furthermore, during the reconnaissance survey it was observed that the majority of the commuters use only a few roads to go from one place to another (Refer figure 5: Ratlami gate road) of which the road crossing Ratlami Gati is prominent. This particular stretch also happens to be one of the busiest commercial places of the city. Therefore, based on our discussion and preliminary analysis we felt that if a

proper plan is being laid out for the use of city roads, there would certainly be an improvement in the traffic movement.

Figure 26: Ratlami Gate

Apart from the above, another factor which was highlighted was the development of an over bridge or under bridge at the railway crossing which disrupts the vehicular movement and causes traffic jams. At present there are only two major rails crossing of which 95 percent of the vehicles use only one railway crossing which is the Chaupati railway crossing.

Figure 27: Congestion due to railway crossing

Based on our discussion with the railway authorities it was revealed that approximately 12 passenger trains and 25 to 30 goods trains passes through Jaora on a regular basis. The pass of one train leads to an average closure of the railway crossing for approximately 15 to 20 minutes. Therefore it can be said that during the whole day the railway crossing is closed for approximately 8 hours which in itself is an alarming signal.

Our discussion with the citizens and authorities revealed that there is an immediate requirement of an over bridge or an under bridge. Moreover, it was also revealed that there is already an under bridge which is approximately 1.5 kms from the chaupati railway crossing. Though at present the condition of the under bridge is not up to mark but if improved it will definitely provide some relief to the citizens.

Figure 28: Existing under bridge

6.5.2 Urban Transport

Commuting within the town is generally done by own vehicles and private auto-rickshaws and tempos. Those commuting for jobs to other cities either use the railway service or bus service of Madhya Pradesh State Road Development Corporation (MPSRTC) or buses, omni bus, jeeps that are being operated by private operators.

Data obtained from road transport office (RTO) Ratlam, reflects that the number of vehicles registered has been increasing for the past five years. Following data reflects the total number of vehicles registered with the RTO office for the Jaora district.

Table 16: Vehicles registered with RTO, Jaora district

	2004-05	2005-06	2006-07	2007-08	2008-09
Number of vehicles	10843	12798	15796	17620	17911

Source: RTO, Jaora

Based on our discussion with the RTO authorities, it was revealed that out of the total vehicles registered with the RTO office approximately 25 to 30 percent vehicles would specifically be operating within Jaora city.

Based on our survey and discussions with RTO authorities revealed the following:

1. People driving within the city need training in particular as they do not operate as per the traffic rules and regulations.
2. With the increase in the number of vehicles, there is a need to introduce traffic lights system within the city.
3. Many a vehicle especially tempos and autos operating for public are quite old and needs replacement as they are adding to sound and air pollution.

6.5.3 Emerging Issues in Roads, Traffic and Transportation

- A reconnaissance survey of the town reveals re-carpeting of roads in few parts of the city. As per the data 75 percent of the roads are surfaced with BT and concrete.

- Few of the roads in the old city are subjected to water logging during monsoon affecting the strength it and hence requires re-carpeting on an annual basis.
- Traffic congestion within the old city, near bus stand and main commercial streets.
- Lack of dedicated parking space in the commercial areas has lead to abrupt parking on road sides reducing the effective width of road for flow of vehicles.
- Disruption in traffic due to cattle movement on the roads.
- Need to introduce traffic lights management system within the city and creation of proper intersection at various places.
- Requirement of an under bridge or over bridge at Chaupati railway crossing
- A bye-pass for the city to avoid entry of heavy vehicles on already congested roads of the city. The need for a bye-pass and traffic management on certain roads was strongly recommended for improvement during stakeholder consultation.

6.5.4 SWOT Analysis in Roads, Traffic and Transportation

Strength	Weakness
➢ The city has a decent road network that covers most of the part of the city.	➢ The present parking scenario is constantly reducing the existing capacity of the road. ➢ Heavy vehicular movement within the city leads to congestion, pollution and accidents.
Opportunity	**Threats**
➢ Development of under or over bridge at Railway Crossing for better movement of vehicles and to prevent loss of time. ➢ Development of Multi level parking on PPP basis could be a good way to generate revenue. ➢ Development of ring road or bypass road on PPP basis would avoid heavy vehicular movement within the city.	➢ Increase in vehicles will lead to congestion on roads, hence there is need to develop bypass road or ring road and also implement traffic management system at important junction. ➢ NO parking zones or hawkers zones would lead to disruption in vehicular movement and would also decrease the width of the road.

6.6 Street Lighting

The provision and maintenance of streetlights is an obligatory function of JMC which is responsible for the installation, replacement, repairs, operation and maintenance of streetlights in the town. There are about 2,344 street lights of which 55 percent are tube-lights, 32 percent are high power lamps, and the rest 13 percent are bulbs installed in the town.

Table 17: Distribution of Street lights

Number of Lights by Type	Numbers of streetlights
Tube lights	1,300
Sodium Vapour Lamps	554
Mercury Lamps	140
Halogen Lamps	
High masts lamps	50
Others	300
Total	**2344**
Indicators	
Spacing Between Lamp Post	26.1
% Tube lights	55.5
% High Power Lamps	31.7
% Other lights	12.8

Source: JMC

Against the road length of 60.66 kms, the average spacing of streetlight poles works out to over 33 meters, which is above the standard norms of 30 meters spacing indicating inadequacy.

JMC plans to install solar system to minimize energy charges.

6.6.1 Emerging Issues in Street-Lighting

- Increase the number of street poles and lights to reduce the spacing between the two lamp posts.

6.7 Fire Services

JMC is responsible for providing fire service in the Jaora district. At present, the city has 2 fire brigades (having a capacity of 5000 litres and 2000 litres respectively) providing rescue services to the the Jaora city and the peripheral regions. In terms of manpower, there are 8 people working in different shifts. As per discussion, the position of fire officer is not filled. As per discussion with the fire department, there is an immediate need to increase the man power from 8 people to 18 people, and other than that there is a requirement of 1 foam tender, hydraulic system and other advanced technology.

As per UDPFI guidelines, the fire infrastructure (with respect to number of fire stations) is adequate.

6.7.1 Emerging Issues in Fire-fighting

- Absence of means for mitigating different forms of fire
- Shortage of manpower at fire station.
- Equipments with latest technology are required to deal with growth in the city.

6.8 Power Supply

Madhya Pradesh State electricity board distributes power to Jaora through its sub station. The city faces shortage due to thefts and low maintenance. Based on our consultation, there are power cuts which are

spread throughout the year. With respect to consumption of power, the residential units are the highest consumers followed by commercial and industrial units.

7 URBAN POOR & SLUMS

This section below discusses about slums and urban poor and their access to urban basic services in Jaora town, drawing from secondary information and interactions with stakeholders.

7.1 Slums

As per a slum survey conducted in the year 2001 by JMC, the city had a slum population of 51, 203 dispersed in over 23 wards across the city.

To understand the existing situation and the problems that are being faced by the people living in slum areas, we visited few areas such as Arab colony, Mahrendra Nagar, and Manchapuran. Following are the common problems which were highlighted by the people:

1. The public toilets/seats to people ratio is very poor and needs immediate attention.

2. It was disclosed that sweepers do not turn around to collect the waste and clean the area on a regular basis. Moreover, it was said that even if they clean it they leave the waste near the homes adding to unhealthy environment.

Figure 29: Interaction with slum dwellers; open well cause to accidents

3. Many areas did not have street lights which became a reason to small accidents because of poor visibility. Though, there were few places where street poles were laid down but there was no light.

4. There was lack of proper maintenance in public toilets, roads, drainage system, solid waste management, and sewerage.

5. Many a people said that they faced the problem of electric supply.

Figure 30: Interaction with slum dwellers; picture showing no street lights

(Please note that the left hand side picture was taken with flash whereas the right hand side picture was taken without flash. This has been done to show that this area does not have street light and hence are prone to accidents.)

7.1.1 Geographical Distribution

- There are approximately 7500 to 9000 households distributed in 23 wards. The largest of the slum pocket in the city is in Bargundapura, Jabran colony, back side of the Dhyan mandir, Manchapura mandir.
- 100 percent of these households resided on government/ municipal land.
- About 45 to 50 percent of the total House Holds lived below poverty line.

7.1.2 Housing condition

- In terms of type of housing infrastructure, about 30 percent of the households have either semi pucca or pucca houses, 50 percent lived in kuccha houses and the remaining 20 percent lived in jhuggi jhopris.

Figure 31: Interaction with slum dwellers (Manchapura); no electricity on pavement

7.1.3 Infrastructure

- About 70 percent of the households have access to water supply. This is either from municipal connection, public stand post/ well or borrowed from the neighbour.
- Approximately 70 percent of the slum pockets have absence of storm water discharge network. Even though where there were few slum pockets where there was the facility available, there was no proper maintenance.
- About 70 percent of the roads are pucca roads while rest are kuccha roads.
- Waste management in slum pockets not adequately addressed. About 90 to 95 percent of the people surveyed admitted that municipal staff (sweeper) do not sweep there localities.
- Absence of sanitation facility in slum areas, which is an important criteria defining slums. Only 30 percent of the households have access to public toilet facilities.
- 20 to 25 percent of the people surveyed confirmed there localities duly lighted. In many of the pockets street poles have been placed and very shortly lights would also be placed.

7.1.4 Social Infrastructure

- Approximately 80 percent of the households surveyed admitted that they to do not have proper health and education facility within the locality.

7.1.5 Integrated Housing and Slum Development Programme (IHSDP)

Under this scheme, the GoI intends to fund projects related to construction of shelter, infrastructure (water supply, sewerage, roads, streetlight, and public toilets/ baths), health and education centres for slum dwellers. The financing would be based on sharing basis of 80:20 between GoI and State Government/ ULB/ Parastatals. The scheme follows the mandates as prescribed in JNNURM/ UIDSSMT. Detailed project report (DPR).

With respect to this, JMC has prepared a DPR for slum development and the project is already approved by GoMP and GoI. About 48 lakhs has been received out of Rs. 2.43 crores in this regard. In discussion with ULB official, it was revealed that the cost of the project has escalated and ULB lacks sufficient funds to implement the project.

7.1.6 Emerging Issues in Urban Slum

As per a slum survey conducted in the year 2001 by JMC, the city had a slum population of 51,203 dispersed in over 23 wards across the city, thus accounting for 80 percent of the total population. In the year 2008-09 there are 23,265 people living below the poverty line. 100 percent of these households resided on government/ municipal land. In terms of type of housing infrastructure, about 30 percent of the households have either semi pucca or pucca houses, 50 percent lived in kuccha houses and the remaining 20 percent lived in jhuggi jhopris.

A project for slum development has been approved for the city under the IHSDP scheme of GoI. About 48 lakhs has been received out of Rs. 2.43 crores in this regard. In discussion with ULB official, it was revealed that the cost of the project has escalated and ULB lacks sufficient funds to implement the project.

8 SOCIAL INFRASTRUCTURE

The section below discusses the status of social infrastructure in the city which primarily includes health, education, recreation and entertainment and essential public amenities.

8.1 Health

The city has a civil hospital, two nursing homes, approximately 30 to 35 dispensaries and one Ayurvedic hospital to look after the healthcare needs of the citizens. The present health infrastructure is adequate as per the UDPFI guidelines. However, attention is required to increase the number of doctors and other personnel in the Government Hospital as the hospital not only serves the city population but also looks after the peripheral regions, thus serving approximately 1.50 to 1.75 lakh population. At present, there are seven doctors and 14 personnel in the Government Hospital. Based on first interaction with the Doctors it was revealed that the hospital urgently requires the services of MDs, ENT specialists, gynecologists and facilities such as an ICU to provide better services to the citizens of the city.

Table 18: Health facility

Type of Hospital	No. of Units		No. of Beds		No. of Doctors		No. of Nurses		No. of Paramedical staff	
	Govt.	Private	Govt.	Private	Govt.	Private	Govt.	Private	Govt.	Private
Hospital/ Nursing Home	1	10	125	25	7	14	18	15	14	18
Ayurvedic	1	10	--	--	1	12	--	--	--	--
Homeopathy	--	3	--	--	--	3	--	--	--	5

Source: JMC

8.1.1 Emerging Issues in Healthcare

The city has a civil hospital, two nursing homes, approximately 30 to 35 dispensaries and one Ayurvedic hospital to look after the healthcare needs of the citizens. The present health infrastructure is adequate as per the UDPFI guidelines. However, attention is required to increase the number of doctors and other personnel in the Government Hospital.

8.2 Education

The town has a decent education infrastructure in place and provides education to approximately 9000 students, studying in primary, secondary, and higher secondary schools. The city is a home to a polytechnic college. It is being said that the status of the polytechnic college should be upgraded to an engineering college to provide ample opportunities to the students of the city and nearby locations. At present, there are three colleges in the city with approximately 850-900 students. In addition to this, there is a strong demand to increase the number of teachers so as to improve the teacher-student ratio in the town.

8.2.1 Emerging Issues in Education

The town has a decent education infrastructure in place and provides education to approximately 9000 students, studying in primary, secondary, and higher secondary schools. The city is a home to a polytechnic college. The citizens demanded for upgrading the status of the polytechnic college to an engineering college to provide ample opportunities to the students of the city and nearby locations. At present, there are three colleges in the city with approximately 850-900 students. In addition to this, there is a strong demand to increase the number of teachers so as to improve the teacher-student ratio in the town.

8.3 Others

The city of Jaora is known for “Hussain Tekri” and other historical monuments. The town has decent infrastructure in place but during the reconnaissance survey it was observed that the parks and other facilities are not evenly distributed across the town.

In terms of recreational facilities, the town has four parks, two cinema halls, four basket ball courts and a lawn tennis ground. Even though there are three to four parks, not one of them is properly maintained and also the parks are not distributed evenly. Hence, there is a strong demand to build gardens/parks, which should have tracks for jogging and walking. For instance, JMC can improve the condition of the Mela maidan in the Iqbalganj area, which at present is used for sanitation purposes by citizens living in the vicinity.

Table 19: Recreation and other facilities

S. No.	Indicators	Numbers
	Gardens & Playgrounds	
1	Gardens (Big)	2
2	Swimming Pool	Nil
3	Gardens (Small)	19
4	Mini Stadium	1
5	Play grounds	1
	Entertainment & Recreation	
5	Cinemas	2
	Public Utilities	
7	Public libraries	Nil
8	Fire Station	1
9	Hotels and Eating Places	225

Source: JMC

Maintenance of gardens is one of the issues in front of JMC. It can explore possibilities of giving the maintenance either to private sector or to neighbourhoods.

Figure 32: Open grounds and Parks

8.3.1 SWOT Analysis in Social Infrastructure

Strength	Weakness
➢ Presence of "Hussain Tekri" a religious place acts as catalyst to position the city as one of important places in tourism circuit. ➢ Presence of decent education infrastructure provides ample of opportunities for students. ➢ Presence of mini stadium signifies the importance of sports culture.	➢ Insufficient number of Doctors, personnel and machines with latest technology at Civil Hospital. ➢ Poor maintenance of gardens leading to unhealthy environment.
Opportunity	**Threats**
➢ An opportunity to upgrade the polytechnic college to engineering college. ➢ Opening of a multi utility stadium to enhance sports culture within the youth. ➢ Explore possibilities of giving maintenance of gardens to private party or NGOs that could also stimulate income for corporation.	➢ Improper healthcare, education and other entertainment facilities may lead to out migration. ➢

9 ENVIRONMENT

Environment is an integral part of any city. A city's environment is the most critical determinant of the quality of life of its inhabitants and consequently of urban productivity. Air, water, greenery and noise levels are the constituents of urban environment.

This chapter discusses the key environmental aspects of the Jaora city. Based on reconnaissance survey and discussion with stakeholders following two major issues are crucial for healthy environment of Mandsaur city. These are –

- Water pollution and
- Air and noise pollution

9.1 Water pollution

The key causes of water pollution in the city are the discharge of untreated sewerage and deposition of solid waste.

Due to absence of a dedicated sewerage system for the city, the waste water gets discharged into the river. The major cause of concern to the city is the pollution of River Maleni which is the sole source of water supply to the city. The other natural drains flowing to the city are also subjected to disposal of untreated waste water; most of these drains/ nallahs are open and presents a distressful site and are grounds for mosquitoes. No significant measures have been taken to curb this pollution levels.

The existing condition would get more dismal with the implementation of water supply project and increase in consumption of water and discharge of waste water.

Water pollution is also caused in the city due to deposition of solid waste in the nallahs/ drains or directly into the river. Although the ULB takes care of collecting all the waste generated in the city, however, still waste mainly of the nature of plastic carry bags create water pollution.

9.2 Air and noise pollution

The key causes of air pollution in the city are vehicles; this pollution is due to plying of heavy vehicles in the city.

As discussed elsewhere in this report, there are seven main roads passing through the city. These main roads carry heavy vehicle traffic. The width of the roads is not conducive with the size of vehicles that ply on it. As a result most of the time there is traffic jams on the city roads which results in air pollution due to release of smoke from the heavy vehicles. These vehicles are also responsible for noise levels in the city.

9.3 Action Points

To create a health environment overcome the causes of the pollution, following strategies are suggested -

1. **Awareness towards waste management:** Citizen's awareness is very crucial in this concern hence with the help of newspaper and local channels the handling of waste and key aspects of waste management should be disseminated. Awareness in this respect should start from the schools as this would further disseminate into the family and would ensure success in the long run.

2. **Sewerage system for the city** – This report has suggested a low cost sewerage system for the entire city which would collect and treat the waste, thereby avoiding pollution of river and other water bodies in the city. The public toilets facilities should also be ramped up in the city to avoid open defection and discharge of this waste in the water bodies.

3. **Air pollution due to vehicles –** To address the issue of vehicular pollution, this report has suggested for a ring road bypass to be constructed for the city. The by-pass would refrain the heavy traffic from entering the city thereby curbing the pollution levels.

10 INSTITUTIONAL FRAMEWORK

Jaora Municipal Council (JMC) manages the basic urban services within its jurisdiction. JMC functions under the provisions of the Madhya Pradesh Municipalities Act 1961.

10.1 Institutional structure

The municipality works on the basis of constitutional dichotomy of its two arms – Deliberative & Executive wings. The Deliberative wing is headed by the Chairman and overall functioning of the Municipality is governed by the Chairman-in-Council and the Departmental Advisory Committees constituted by the Speaker from amongst the Councillors other than the members of the Chairman-in-Council. The Executive Wing is headed by the Chief Municipal Officer (CMO) and is responsible for all the management & executive functions and assists the Deliberative Wing in the decision making process.

The member of the Chairman-in-Council have been made Member-in-Charge of each of the departments and he is expected to convene the meeting of the Advisory Committee of the department concerned at least once in every two months and preside over such meetings. It is expected that the departmental proposals regarding the expenditure and developmental works shall be first discussed in the Advisory Committee and if approved, subsequently put to Chairman-in-Council or to other sanctioning authorities for sanction. There is no mechanism for monitoring the progress of capital works or other expenditure.

10.1.1 JMC – Staffing and management of services

JMC is responsible for the provision of basic services like water supply, drainage, roads, streetlights, solid waste management, sanitation, town planning, fire fighting etc. It has different departments for managing these services which take care of operation and maintenance (O&M) of the service and creation of capital assets. The accounts and the tax department of municipality are responsible for managing financial affairs and tax collection respectively.

JMC currently has a staff of 311; there is a vacancy of about 52 persons in the municipality. The average annual expenditure of JMC on salaries is about 39 percent indicating that JMC does not have funds to recruit the vacant post.

10.2 Role of other agencies

10.2.1 Urban Administration and Development Department (UADD)

With the enactment of the 74th Constitution Amendment Act, major urban related tasks have been transferred to Local Bodies. The Government of Madhya Pradesh (GoMP) through its Urban Administration & Development Department (UADD) is responsible for overseeing urban sector reforms, in terms of capital investment in basic infrastructure for the Urban Local Bodies (ULB's). The UADD is also responsible for implementation of various public welfare schemes sponsored by the Central and State Governments.

10.2.2 Town and Country Planning Department (TCPD)

The activities of Town and Country Planning Department (TCPD) are guided by the provisions of the Madhya Pradesh Nagar Tatha Nivesh Niyam, 1973 (the Rules). The State Government, as per provisions of the Rules declares a region including major urban areas and its surrounding settlements as a planning area, and orders the preparation of a development plan for the region.

10.2.3 Madhya Pradesh Pollution Control Board (MPPCB)

Implementation, supervision and monitoring activities pertaining to Central Pollution Control Acts and Rules vests with the Central Pollution Control Board (CPCB), Government of India, and the respective State Pollution Control Boards formed/constituted under its rules. Madhya Pradesh State Pollution Control Board (MPPCB) headquartered in the state capital, Bhopal, carries out its operations through seven regional offices, each located at the divisional headquarters. The main function of the regional offices is to monitor the implementation of provisions of various Acts governing pollution control and prevention.

10.2.4 Madhya Pradesh Housing Board

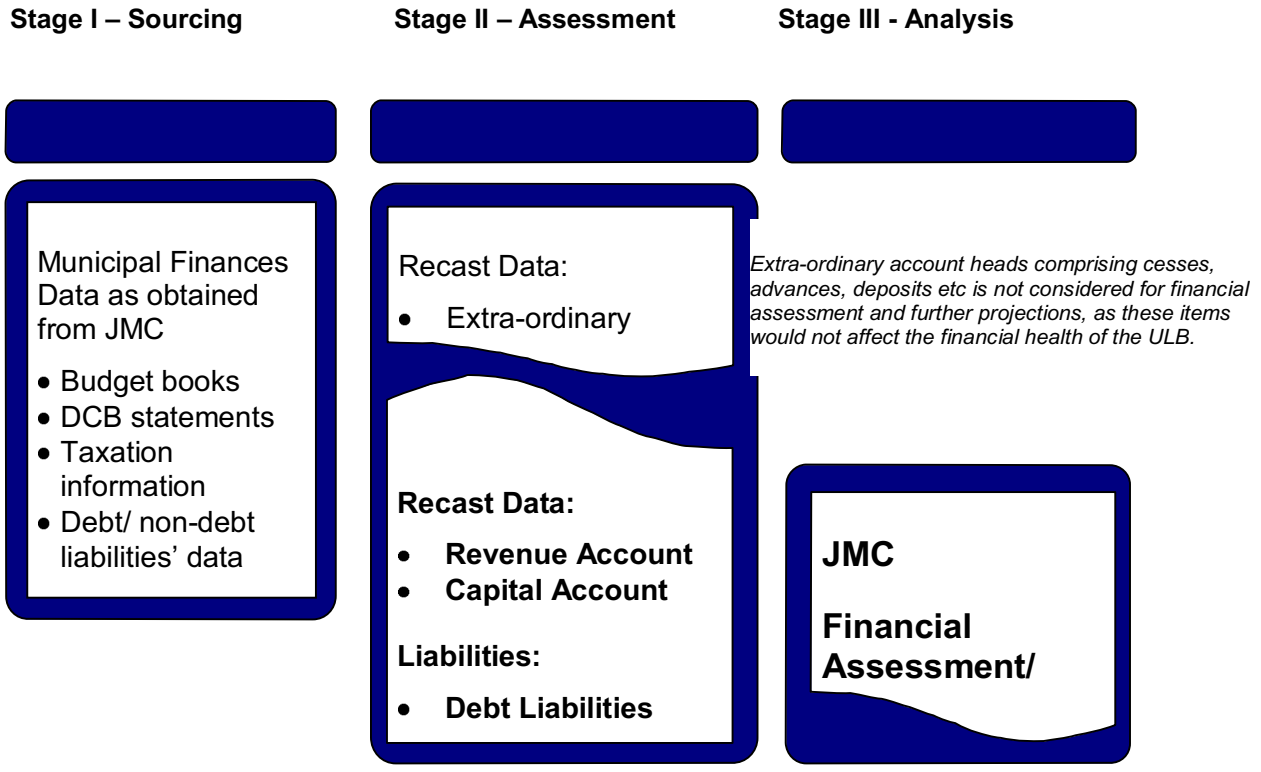
Madhya Pradesh Housing Board (MPHB) falls under the administrative and functional control of the Housing and Environment Department of GoMP. The operations of the Board are governed by the provisions of the Madhya Pradesh Housing Board Act, 1972. Although MPHB is a semi-governmental organization, GoMP rules and regulations pertaining to establishment and administrative matters are applicable to it.

11 MUNICIPAL FINANCIAL ASSESSMENT

In Jaora city, municipal services are provided by JMC. JMC is responsible for planning, implementation, operation and maintenance of all core municipal services.

The finances of JMC has been analysed and the first step towards this is to differentiate and categorise the account heads into revenue account and capital account through a budget recasting exercise. For the purpose of financial assessment, financial data pertaining to the last five years (2004-05 to 2008-09) have been recast into a standard format as presented in Annexure.

Figure 33: ULB Finance Assessment – Analytical Framework



JMC is in the process of migration to Accrual Based Double Entry Accounting System. Therefore, the past five years data available from JMC is in accrual accounting. Differentiation in terms of revenue/ capital income/ expenditure is not exercised in the budget. Hence, the actual account is recasted as per the nature of income/ expenditure.

The municipality accounts can be classified under two major heads, revenue account and capital account. Revenue sources again may be broadly classified as internal or operating income and external receipts.

Internal income includes receipts from the operations of the municipality, in the form of taxes, water and sewer charges and fees, rents, other charges, etc. General heads of internal sources are:

- General tax and other taxes[1] levied by the municipality such as property tax, education, special water tax, drainage tax, entertainment tax, etc as applicable.
- Income under rent such as city bus rent, community hall & theatre hall rent, etc.
- Income from various fees such as swimming pool fee, birth & death, hospital fee, building & license fee, coloniser fee, slaughter house and market etc.
- Income from municipal services such as receipts from water supply charges and fees from other services and
- Miscellaneous income heads such as income from investments, sale proceeds, etc.

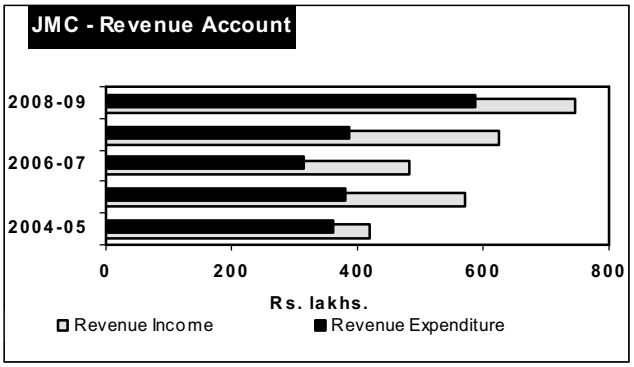
External fund sources include revenue grants from State and Central Governments, loans and contributions received for projects.

Expenditure incurred towards establishment cost, operation and maintenance expenditure for provision of services and repayment of loans are treated as revenue expenditure and expenditure towards asset creation, and investments towards new projects or purchase of equipment etc are treated as capital expenditure.

Advances and deposits and any items of income or expenditure that are temporary in nature are treated and accounted under extraordinary/ suspense account. This head of account is excluded from the analysis as they are temporary in nature and have no impact on overall financial position of JMC.

11.1 Financial Status at a Glance

The finances of the municipality (JMC) have been reviewed for the last five years, commencing from the financial year 2004-05 to 2008-09. The items of both receipts and expenditure are classified under



[1] In addition to compulsory taxes, city corporations and municipalities may levy, subject to the general or special order of the state government, a latrine tax or conservancy tax, a drainage tax, profession tax, a tax on owners of vehicles or animals, fees for registration of cattle, market dues on exposing goods for sale in any market, betterment tax on property, tax on advertisement other than published in newspapers, a tax on pilgrims, toll tax, a tax on theatre, theatrical performances and other public entertainments, a terminal tax on goods or animals exported from the limits of the local body and any other tax which the state government has the power to impose under the constitution of India with the prior approval of the state government. The imposition of all taxes shall be subject to the regulation of the state government in respect of minimum and maximum rates of taxes. The state government retains the power to make rules regarding taxes imposed by urban local bodies. Under section 162 of the Municipal Act, the state government may require the municipal council to impose any tax which it is empowered to impose under section 127 or enhance the existing tax, in case the state govt. finds that revenue is insufficient for the discharge of its duties or obligatory functions under section 324 of the Act.

revenue and capital accounts as per their sources and uses.

Revenue Income of JMC has grown to a level of Rs. 7.46 crores in the FY 2008-09 from Rs. 4.20 crores during FY 2004-05, registering a CAGR of 15 percent, while revenue expenditure increased at a CAGR of 13 percent.

This represents a good financial condition for the future. JMC consistently maintained a revenue surplus of an average 41 percent of its revenue income.

Table 20: Financial Status at a Glance

Items	2004-05	2005-06	2006-07	2007-08	2008-09	CAGR
	Actuals in Rs. Lakhs					%
Revenue Account						
Income	420	571	481	627	746	15
Expenditure	361	380	315	386	586	13
Surplus/ Deficit	**58**	**191**	**166**	**240**	**160**	
Capital Account						
Receipts	47.92	16.17	50.55	21.92	19.39	(20)
Payments	11.63	21.08	2.49	62.87	7.95	(9)
Surplus/ Deficit	**36**	**(5)**	**48**	**(41)**	**11**	
Capital Utilisation Ratio		**1.30**	**-**	**2.87**	**-**	

Source: JMC and Analysis

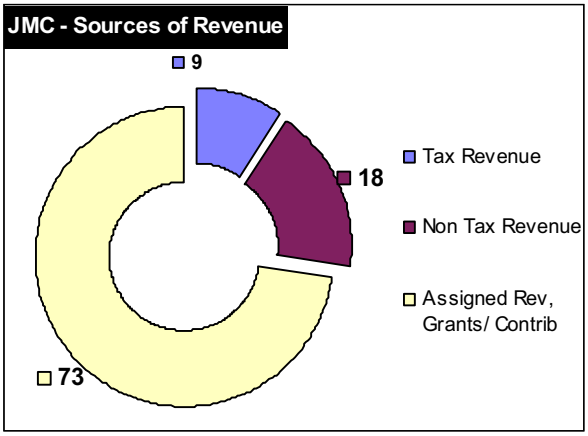
Capital income of JMC comprises of own sources, loans and internal transfers from revenue to capital account for utilization towards asset creation. JMC has also received capital grants during the review period towards water supply scheme, IHSDP, etc.

11.2 Revenue Account

The following section provides an in-depth review of the revenue account, in order to assess the municipal fiscal status and to provide a base for determining the potential of each of the sources and ability of JMC to sustain the extent of planned investments identified under this CDP. The revenue account comprises of two components- revenue income and revenue expenditure which is discussed in detail below.

11.2.1 Revenue Income

The revenue sources of JMC can be broadly categorized as own sources and assigned revenues/ grants. Tax revenues contributed 9 percent of the revenues and non-tax revenues contributed 18 percent of the revenues. A significant of 73 percent is the share of assigned revenues and grants from various agencies including state and central government) which comprise grants towards water scheme, octroi compensation grant received from GoM in lieu of



abolition of octroi) indicating high dependency on external support for managing the municipal services.

11.2.1.1 Tax revenue

JMC receives tax revenue from tax on property, advertisement and other taxes of which property tax is the major. In JMC, the road tax accounts for about 70 percent of the total tax revenue and has registered a CAGR of 30 percent.

The overall collection performance for the past five years is on an average 71 percent of total demand including arrears, indicating satisfactory collection efficiency. The collection efficiency has been improving since FY 2004-05, though there was a decline for the year 2008-09 from the year 2007-08. However, JMC should plan to reduce the outstanding arrears which accounts for 1/3rd of the total property tax demand raised during a year.

Table 21: House (Property) tax – DCB statement (Rs in Lakhs)

Category	2004-05	2005-06	2006-07	2007-08	2008-09
	Rs in lakhs				
Demand					
Arrears	10.5	11.0	10.6	11.3	10.4
Current	7.0	10.5	11.0	12.5	13.3
Total	17.5	21.5	21.6	23.8	23.7
Collections					
Arrears	5.20	8.32	7.94	7.71	7.27
Current	5.71	7.25	8.25	10.67	8.73
Total	**10.91**	**15.57**	**16.19**	**18.38**	**15.99**
Collection efficiency	**62%**	**72%**	**75%**	**77%**	**68%**

Source: JMC DCB statement

The total numbers of properties registered with JMC within its jurisdiction are 12,210 of which 10,525 are residential and remaining 1,685 commercial. Assuming a household size of 5.5 the total number of residential properties in the city translates into a population of about 58000 population indicating a fair coverage as about 70 to 80 percent of the city population lives under slum areas.

Table 22: Registered properties with JMC

Category	2004-05	2005-06	2006-07	2007-08	2008-09
	Numbers				
Residential	7629	8375	9932	9875	10525
Commercial	1250	1325	1475	1565	1685
Total	**8879**	**9700**	**11407**	**11440**	**12210**
Annual increase in residential		**746**	**1557**	**(57)**	**650**
Annual increase in commercial		**75**	**150**	**90**	**120**
Growth in PT Assessments		**9.25%**	**13.35%**	**8.81%**	**8.29%**
Persons per assessment	**7.60**	**7.06**	**6.08**	**6.15**	**5.84**

Source: JMC

The persons per assessment have declined from 7.60 to 5.84.

11.2.1.2 Non Tax Revenue

Non-Tax sources include all non-tax revenues such as fees and charges levied as per the Act and services provided by JMC. These sources include income from water charges income from rent from land and other rental income, license fee and birth and death fee among others. The non-tax income of JMC on an average accounts for only 18 percent of total revenue income.

11.2.1.3 External Sources

External sources mainly include grant for compensation against octroi abolition, State & Central finance commission grants and other general grants. All external sources together, account for a significant 72 percent of the revenues during the review period.

Table 23: Revenue Grants

S. No	Category	2004-05	2005-06	2006-07	2007-08	2008-09
		Rs in Lakhs				
1	Octroi grant	190.51	266.56	161.21	253.38	340.88
2	Mid day meal grant	14.65	6.63	2.21	3.75	5.02
3	Other development grants (road, sewerage etc)	119.42	178.11	235.50	177.68	197.09
4	State finance commission grant	5.00	18.87	19.93	27.36	38.39
5	12th Finance commission grant	-	29.98	27.42	38.25	57.41
6	11th Finance commission grant	-	12.41	-	-	-
7	Slum grant	-	6.00	6.00	5.00	5.00
8	Water grant	8.44	14.99	-	9.95	-
Total		**295.07**	**441.99**	**324.44**	**443.79**	**582.30**

Source: JMC

11.2.2 Revenue Expenditure

Revenue expenditure of JMC has been analyzed based on expenditure heads broadly classified under the following department/sections of JMC- general administration & tax collection, municipal properties & public safety, conservancy, public health & sanitation, municipal works, and others like education, health.

Revenue expenditure is further classified under establishment mainly comprising salaries and wages; contingencies i.e. operation and maintenance (O&M) and debt servicing of loans.

The application of funds is presented below which indicates that the overall revenue expenditure registered an average annual growth of 13 percent against a growth in revenue income by 15 percent, indicating a surplus situation over the years. However, JMC still needs to take measures to reduce expenditure or enhance its resources to avoid impending deficit situation.

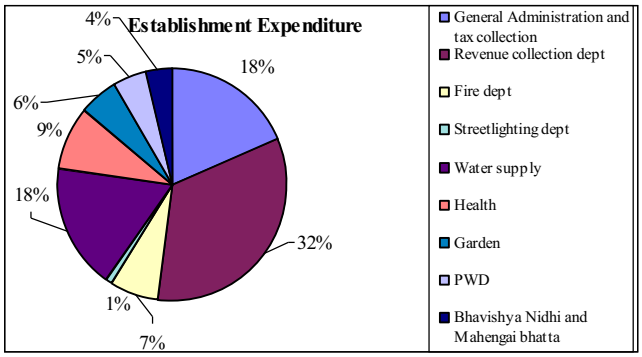
Table 24: Application of funds by head of Account

Items	2004-05	2005-06	2006-07	2007-08	2008-09	Share	CAGR
	Rs in Lakhs						
Salaries, Allowances & Pension	194.40	198.49	200.03	239.37	241.68	55	6
Operation & Maintenance	154.87	181.56	115.20	133.67	344.66	44	22
Debt Servicing	12.00	0	0	13.36	0	0	4
Total	**361.27**	**380.05**	**315.24**	**386.40**	**586.34**	**100**	**13**

Source: JMC Annual Accounts

The establishment expenditure alone accounts for over 55 percent of revenue expenditure. In terms of revenue income spent on salaries on an average it is 39 per cent which is equal to reasonable range of 40 percent. This helps in spending on operate and maintain the system.

O&M expenditure accounts for about 44 percent of the total revenue expenses; JMC should however have a preventive or periodic maintenance plans in place.

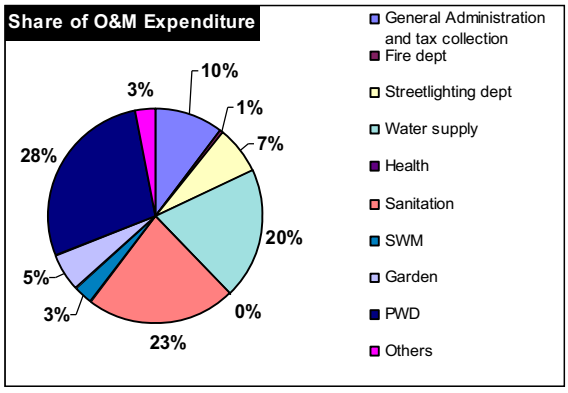


11.2.2.1 Establishment expenditure

As mentioned above expenditure towards salaries and pension accounts for about an average 55 percent of the total revenue expenditure and registered an annual growth rate of over 6 percent during the review period.

For the year 2008-09, solid waste management (SWM) accounted for a maximum share of about 26 percent of total establishment cost followed by revenue collection department (19%), water supply (14%), and general administration & tax collection (13%). On an average also SWM accounted for the maximum share.

11.2.2.2 Operation and maintenance expenditure

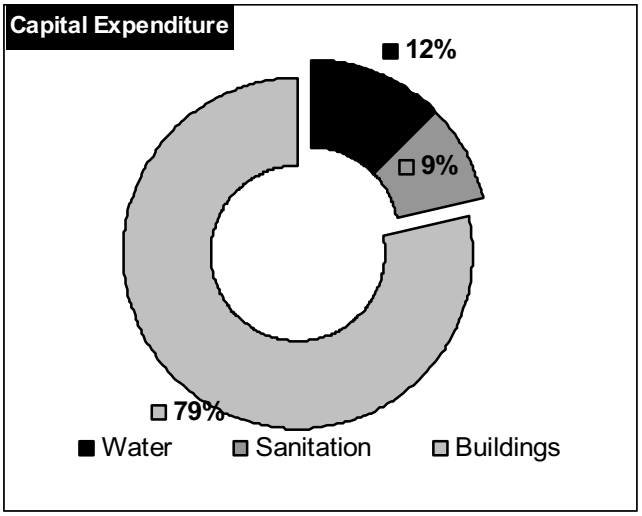


As earlier mentioned the O&M expenses of the municipality are more day-to-day in nature. The average O&M expenses per annum of the municipality is Rs. 178 lakhs. This is towards handling of important municipal services like water supply, roads, drains, solid waste management, street lighting etc.

Within the total O&M expenses, more than 27 percent is spent on maintenance of PWD, 23 percent sanitation, 20 percent water supply, and 10 percent general administration and tax.

11.3 Capital Account

In general, the capital income of JMC comprises of own sources, loans/ borrowings and grants from State and Central Government. In the review period, own sources income accounted for 30 percent of the total income. On an average 70 percent of capital income is from grants and contributions, suggesting high degree of dependence for the capital works.



The own sources of income is in the form of premium from different developments within its jurisdiction, which mainly constitutes premium obtained from new colonies forms the major portion of income. The other own sources of capital revenue is auction of municipal property, sale of compost and sewage water.

Further, majority of capital expenditure has been directed towards buildings and various adjustments. Over the years the capital utilisation ratio reflects that JMC has deployed revenue surplus for capital works.

11.3.1 Emerging Issues in Municipal Finance

The following are the key issues that emerge from the above analyses carried out on the municipal finances of JMC and its financial soundness is revealed from the financial indicators presented thereafter.

- Revenue income and expenditure are growing at a CAGR of 15 percent and 13 percent respectively. Though it indicates a surplus situation, however, JMC still needs to take measures to reduce expenditure or enhance its resources to avoid impending deficit situation.
- Income from revenue grants accounts for 73 percent of the revenue income, indicating higher dependability of JMC on external sources for its operations.
- Coverage of property tax net is satisfactory.
- The average collection efficiency of property taxes is about 71 percent and has been improving over the years. However, JMC should plan to reduce the outstanding arrears which accounts for 1/3rd of the total property tax demand raised during a year.
- Over 55 percent of the revenues of the municipality are accounted for establishment/ salary expenses itself. This is resulting in very low or minimal expenses towards maintenance of capital assets of the JMC, indicating the urgency for improving the revenues of JMC.

- Solid waste management (SWM) accounts for a maximum share of about 26 percent of total establishment cost followed by revenue collection department. JMC should undertake a study to reduce its SWM expenses.

- The capital utilisation ratio reflects that JMC has deployed revenue surplus for capital works which needs improvement.

12 CITY INVESTMENT AND PRIORITAZTION ACTION PLAN

12.1 Gap Analysis

To arrive at the infrastructure requirement for the short and long term, the following assumptions have been used. These assumptions are based on the CPHEEO, UDPFI and industry standards. Apart from this infrastructure works such as requirement of a bridge (ROB), underpass, foot-over bridge, project of heritage importance, development of water bodies, parking space etc. are based on discussion with stakeholders.

Wherever, the projects have already been proposed under any government scheme and the detail project report is in place, the same shall be used as a reference for arriving at investment requirement.

- Water Supply
  - Gross Supply @ 135 lpcd
  - Distribution losses in the system – 10-15%
  - Storage 33% of supply,
  - Distribution 85-90% coverage; balance to be covered in slum areas through public stand post if pipe network is not feasible
  - Treatment capacity 100% of water sourced
  - Rehabilitation of distribution network/ ESRs – as per discussion with ULB officials or stakeholders
  - 100% metering of consumer connections and metering at source, inlet and outlet of WTP, MBR, ESRs/ GSRs and on transmission and feeder mains

- Sewerage
  - Sewerage generation – 80% of water supplied
  - STP treatment capacity – 100% of sewerage generated
  - Population coverage by underground drainage network – 80%
  - 80% of roads covered with UGD network, balance 20% to be covered with low cost sanitation scheme in slum areas
  - Reuse of treated sewage water for non-potable purpose and sullage as manure.

- Roads
  - As per DP 12% of land to be under roads,
  - All roads to be surfaced with about 15% being concrete roads
  - All major roads to have utility corridors for laying of telecom, gas and electrical infrastructure in future
  - Parking – as per stakeholder discussion and availability of land; the parking space requirement will be as per UDPFI guidelines
  - Transportation – as per stakeholder discussion and consultation with relevant institutions

- Storm water Drains

  - On all roads and link to major channels
  - Storm water drains as percentage of road length is considered as 130 percent. Roads with dividers should have drains on either side of the road.
  - 90% of the storm water drains as pucca closed

- Solid Waste Management – Municipal Solid Water Rules 2000
  - 100% source segregation,
  - Atleast 80% door to door collection of waste
  - Scientific landfill sites to be developed for all inorganic matter

- Improvement of infrastructure in slums (IHSDP) and housing stock

- Fire station (as per UDPFI guidelines)
  - One fire station for 2 lakh population within 1 to 3 km distance (UDPFI guidelines)

- Health (as per UDPFI guidelines)
  - General hospital - 500 beds for 2.5 lakhs population
  - Intermediate hospital - 1 hospital for 1 lakh population with 100 beds
  - Poly clinic – 1 for 1 lakh population
  - Nursing home, child welfare and maternity center – 1 for 0.45 to 1 lakh population with 23 to 30 beds capacity
  - Dispensary – 1 for 0.15 lakh population

- Education (as per UDPFI guidelines)
  - Pre - primary school – 1 for 2500 population
  - Senior secondary school – 1 for 7500 population
  - Higher education – 1 for 1.25 lakh population

Based on the above assumptions and discussions with the stakeholders, the gap assessment of the existing infrastructure and requirement for the future for short and long term is presented in the table below.

12.2 Capital Investment Plan (CIP)

City Investment Plan (CIP) in line with the identified vision for the city has been prepared through a comprehensive process of assessment of gap and through stakeholder consultation. This assessment has also led to the identification of sector specific strategies, implementation actions and associated reforms with specific inputs from stakeholders too.

The strategies adopted primarily have three dimensions; improving the service delivery by efficiency measures, improving service delivery by creating infrastructure assets and improving the governance aspects. This section summarizes the capital investments required for creating infrastructure assets and various strategic interventions required in the implementation of such projects.

The need for the CIP is on account of:

- Assessment of city growth and infrastructure needs
- Scheduling of investments of ongoing projects
- Assigning of priorities within the constraints of available financial resources

The City Investment Plan is the multi-year scheduling of identified and prioritized investments. The scheduling or phasing of the plan is based on

- studies of fiscal resources availability (for new investments and O & M),
- technical capacity for construction and O & M, and
- the choice of specific improvements to be carried out for a period of four to five years.

The phasing of the identified projects and investments is based on the following principles

- Priority needs, with developed areas receiving priority over future development area
- Inter and intra-service linkages, viz. water supply investments shall be complemented by corresponding sewerage/ sanitation improvements
- Size and duration of the requirements, including preparation and implementation period
- Project-linked revenue implications, such as installing house connections where supply and distribution capacities have been increased

12.2.1 Institutionalizing the CIP process

The City Investment Plan is an important element and is significant in terms of the city's management process and sustainability with regard to the delivery of basic services. The CIP also provides a framework for the annual budget cycle for the future 6-10 year period. The CIP identifies the roles and responsibilities of various stakeholders in the implementation of identified projects. The City Investment Plan involved the identification of public capital facilities to cater to the demand of the city populace by the year medium and long term infrastructure needs.

The project identification has been done through a demand-gap analysis of the services and other projects identified during stakeholder consultation. Further project prioritisation and strategising of the investments/ phasing of investment is based on the strategies listed out under each service sector as identified through stakeholder consultations.

The projects derived are aimed at ensuring the optimal and efficient utilization of existing infrastructure systems and enhancing the capacity of the systems/ services to cater to the demands of future population additions. Certain other projects listed as part of the CIP include developmental projects other than those addressing the core service sectors has been drawn in consultation with the stakeholders.

The City Investment Plan and forecasted future needs for provision of capital facilities under each identified sector is presented below. These assets will help to universalize services for the current population as well as accommodate the expected increase in population.

In sectors where long-term planning is required (for example, source development for water supply, sewerage etc), a 25-year planning horizon is considered. Assets created in such sectors consider the projected population in this horizon. These infrastructure assets would not only guarantee services to its citizens, but also signal a proactive commitment to potential investors considering the region.

12.2.2 Summary of Investments

The total estimated capital investment required for providing efficient services to the present population and future population of the city by the year 2035 is Rs. 86.90 crores. A total of Rs. 59.49 crores is proposed for investment by 2015-16 to cater to infrastructure requirement. The table below presents the summary of sector-wise total investment need and investments.

			Rs in Crores
Investment Sector	**Phase I**	**Phase II**	**Total**
Water Supply	12.28	1.63	13.91
Sewerage & Sanitation	18.37	5.76	24.13
Roads & Urban Transport	9.89	10.77	20.66
Drains	9.00	7.24	16.24
Streetlights	0.99	0.73	1.65
Solid Waste Management	1.06	1.36	2.43
Urban Poor/ Slums	2.44		2.44
Other Projects	5.45		5.45
Total	**59.49**	**27.42**	**86.90**

12.2.3 Phasing of Investments

The table below presents the phasing of the investment plan and investment components based on priority level and on implementation basis.

	Sector/ Component	(Rs. Lakhs)	Year 1	Year 2	Year 3	Year 4
			(Rs. Lakhs)			
Water Supply		**1,228.00**	**588**	**640**	-	-
1	Water supply augmentation (as per UIDSSMT)	1,100.00	*550.00*	*550.00*		
2	Metering System	128.00	*38.40*	*89.60*	-	-
Sewerage & Sanitation		**1,837.37**	**278.95**	**589.64**	**968.78**	-
1	Conveyance network	47.11	-	*14.13*	*32.98*	-
2	STP	290.21	-	*87.06*	*203.15*	-
3	Intercepting & inception chamber, house sewers, cl	1,221.10	-	*488.44*	*732.66*	-
4	Public toilets	278.95	*278.95*	-	-	-
Roads & Urban Transport		**988.61**	**212.50**	**312.50**	**185.44**	**278.16**
1	Roads Upgrdation	183.30	-	-	*73.32*	*109.98*
2	Roads New Formation	280.30	-	-	*112.12*	*168.18*
3	Bridges/Flyovers	500.00	*200.00*	*300.00*	-	-
4	Traffic management system at Ratlami gate	25.00	*12.50*	*12.50*	-	-
Drains		**900.06**	**293.15**	**414.73**	**109.82**	**82.36**
1	Drains Upgradation	657.88	*263.15*	*394.73*	-	-
2	Drains New Formation	192.18	-	-	*109.82*	*82.36*
3	Desilting & Strengthening of Primary Drains	50.00	*30.00*	*20.00*	-	-
Streetlights		**98.83**	-	**39.53**	**59.30**	-
1	Replacement - Tube Lights with High Power Lamps	-	-	-	-	-
2	New Installation - Tube Lights	2.18	-	*0.87*	*1.31*	-
3	New Installation - High power Lamps	67.34	-	*26.94*	*40.40*	-
4	New Installation - High Mast Lamps	-	-	-	-	-
5	Underground Cabling (Replacement and new)	29.31	-	*11.72*	*17.59*	-
Solid Waste Management		**106.49**	**45.67**	**60.81**	-	-
1	New Vehicles (Primary Collection)	0.42	*0.42*	-	-	-
2	New Vehicles (Secondary and Disposal)	4.76	*2.38*	*2.38*	-	-
3	Acquiring New Disposal Site	-	-	-	-	-
4	Infrastructure at Landfill Site	89.06	*35.62*	*53.44*		
5	DLDPs & Container Bins	12.25	*7.25*	*5.00*	-	-
Urban Poor/ Slums		**243.75**	**121.88**	**121.88**	-	-
1	Slum housing	187.50	*93.75*	*93.75*	-	-
	Slum infrastruture	56.25	*28.13*	*28.13*	-	-
Other Projects		**545.48**	**15.00**	**165.00**	**158.64**	**206.83**
1	Indoor stadium	150		-	*45.00*	*105.00*
2	Development of Ghanta Ghar	100	*10.00*	*90.00*	-	-
3	Vegetable market cum parking complex	50	*5.00*	*45.00*		
4	Development of Regional Bus stands	145			*43.64*	*101.83*
5	Development of Aranya Pitha - Grain Market	100		*30.00*	*70.00*	
Total		**5,948.58**	**1,555.55**	**2,343.68**	**1,481.99**	**567.36**

12.2.4 Sector wise – Implementation & Reform Action Plan and PPP interventions

The section below further details sector wise -

- investment requirement
- capital facilities to be created
- phasing of investment
- system support & sustenance measures
- actions/ measures to be undertaken
- sector notes
- performance monitoring indicators
- reform compliance
- possibility of PPP intervention (broad project structure) and case examples

12.2.5 Water supply

Sector Goals	• Alternate to daily supply • Metering system and volumetric system; subsidy for urban poor • Water conservation - Rain water harvesting system					
Desired outcomes		**Existing**	**2012**	**2014**	**2015**	**Remarks**
	Coverage	60%	90%	100%	100%	Undertake expansion of distribution network in un-covered areas and removing the worn out network Incremental increase in coverage with rise in population
	Per capita supply (lpcd)	75-80	75-80	135	135	Reduce technical losses in the system
	NRW	40%-50%	30%	20%	15-20%	Undertake water audit study to determine the exact water losses in the system
	Metering	0%	25%	75%	100%	Outsource meter maintenance and collection of water charges
	Collection efficiency	72%	85%	85%-90%	85%-90%	Undertake bi-monthly billing
	Cost recovery	85%	90%	100%	100%	Improve NRW levels
Reforms in water sector	• 100% O&M cost recovery – Undertake tariff revision and reduction in NRW level • 20% non-revenue water (NRW) – undertake leak detection study • 100% metering of all water connections • minimum 85% collection efficiency • separate accounting system for water supply					

Support & System Sustenance Measures	▪ Regularise unauthorised connections, Check distribution leaks and reduce non-revenue water (NRW) to 20% by undertaking leak detection study ▪ Improve collections to reach 85% collection efficiency by undertaking bi-monthly billing post metering; this shall also ensure maintenance of meters ▪ Introduce volumetric tariff after completion of the project ▪ Revision of tariff on a regular basis Rain water harvesting system • Introduce bye-laws and incentives for rain water harvesting system • To initiate with, MMC should consider setting up of the system in all government buildings and premises in Jaora • All possible water bodies should have recharging wells • All gardens in the city should have rain-water harvesting system • Leverage diversion of water into water bodies				
Design parameters for achieving the goal	• Daily per-capita water supply (min of 135 lpcd) • Quality of water – as per CPHEEO standards • Elevated storage capacity w.r.t supply (33%) • Distribution network reach as % of road length (85% of road length) • Cost recovery through user charges (100% O&M Expenses)				
Total investment requirement	Rs. 13.91 crores				
Investment till 2015-16 (Phase I)	Rs. 12.28 crores	5.88	6.40		
Approved cost under UIDSSMT	Rs. 11.00 crores				
Capital facilities and phasing	Construction of barrage	✓	✓		
	Source augmentation – head works	✓	✓		
	Treatment capacity augmentation	✓	✓		
	Distribution network augmentation	✓	✓		
	Augmentation of storage capacity	✓	✓		
	Metering of water connections and bulk points		✓	✓	
Possible PPP intervention	• JMC can invite proposals after implementation of water supply project under UIDSSMT for efficient operation & maintenance and metering, billing and collection of water charges on **Public Private Partnership** (PPP) basis. • Under the PPP model the developer would: o Install water meters at consumer points and at head works, WTPs, ESR/ GSRs o Undertake operation & maintenance of the system o The entire project can be awarded for a period of 5 to 10 years o Developers can bid on fee required to operate and maintain the				

project.

- JMC need to set performance parameters for the private developer to be obliged during the contract period. The fee to be paid to the operator should be a factor of performance parameters achieved by the developer.
- The performance parameters would in the area of
  - Maintaining daily specified hours of supply
  - Maintaining supply levels in terms of per capita supply as stipulated by JMC
  - Maintaining quality of water as per CPHEEO norms
  - Reduction in non-revenue water
  - Improvement in collection efficiency
  - Frequency of billing of water bills
  - No. of complaints received

The above model is indicative. JMC would require to appoint a transaction advisor to under take detailed feasibility and preparation of bid documents (request for qualification – RFQ, request for proposal – RFP) and bid process management leading to award of contract to private developer

- **Examples in PPP in water sector are**
  - Latur water supply – O&M contract
  - Chandrapur – O&M contract
  - Khandwa – BOT

12.2.6 Sewerage

Sector goals	▪ Preserve the natural environment of the city ▪ Protected water bodies by developing sewerage system ▪ Low cost system in slum areas ▪ Re-use of treated sewerage for non-potable system					
Desired outcomes		**Existing**	**2012**	**2014**	**2015**	**Remarks**
	Coverage	0%	40%	80%	100%	
	Sewerage treatment	0%	50%	100%	100%	De-centralised system
	Collection efficiency	-	-	85%	85%	Bi-monthly billing with water bill
	Cost recovery	-	-	85%	100%	Levy 50% of water bill as sewerage charge
Reforms	• 100% O&M cost recovery – Levy 50% of water bill as sewerage charge • 100% treatment of waste water • introduce bye-laws for re-use of waste water for new constructions • minimum 85% collection efficiency • create separate accounting system for sewerage system					
Support & System Sustenance Measures	▪ Ensure every property & water connection is also connected to the sewerage system ▪ MMC can levy 50% of the water bill (volumetric charges) as sewerage bill					
Design parameters	• Collection network reach as % of road length (min 90%) • System coverage – HSCs as % of water supply connections (min 90%)					
Total investment requirement (Ph I & II)	Rs. 24.13 crores					
Investment upto 2015-16 (Phase I)	Rs. 18.37 crores		2.78	5.89	9.68	
Capital facilities and phasing	Network			✓	✓	
	Sewerage treatment plant (STPs)			✓	✓	
	Intercepting & inception chamber, house sewers, cleanouts, collection wells, control room, centrifugal pumps			✓	✓	
	Construction of public toilets		✓			
Low-cost Technology **SDGS**	Providing conventional sewerage system will be expensive for the city of Jaora. The city and state can also explore alternatively decentralized waste water management system by having Small Diameter Gravity Sewer (SDGS). SDGS are also known by variety of other names such as small diameter effluent drains, effluent sewers, small bore sewers and Australian Sewers. SDGS system gravity as the main force to collect and transport waste water to a					

	facility for treatment. In order to make the system more effective, primary treatment of the waste water before discharging into the SDGS system is necessary. The system uses septic tanks to provide pre-treatment to the household waste water and allow the bulk solid materials to settle out. Since the sewers would be collecting and transporting only fewer colloidal solids, they can be smaller in diameter compared to the conventional sewers. The septic tanks of the individual properties shall be utilised. Interceptor cum septic tanks one for two or more houses shall be located on the road near the properties. As the solids are removed in the interceptor/ septic tanks, the solid free effluent would be collected and conveyed through small diameter sewers which should be designed as full flowing system. Further, the sewers are to be laid at variable grades throughout the system. The point where the sewer system begins must always be higher than where it ends and no part of the sewer can be higher in elevation than the starting point. SDGS system uses plastic pipes, which cost less and are easier and less expensive to install. A minimum of 90mm to 110mm in OD pipes are required. Cleanouts at heads of the sewerage and inspection chambers at the junctions are required. For the city of Jaora, it is estimated that about a network of 300kms shall be required. This network shall be laid of PVC pipes of varying diameters. The cost of laying network is estimated to be about **Rs 0.47 crores (a)**. The cost of excavation, constructing intercepting chambers, inception chamber, house sewers, cleanouts, collection wells, control room, centrifugal pumps etc for about 40,000 properties in the city is estimated to be about **Rs. 12.21 crores (b).** Further, for the treatment of the effluent, an investment of about **Rs 6.7 crores (c)** is required towards construction of treatment facility. **The total cost of the system is thus arrived at Rs 15 crores (a+b+c).** However, the ULB would be required to prepare a detail project report on this system and check the viability of laying the PVC pipes at shallow depths considering the RCC road network in the city. If the project is technically feasible then MMC would be able to implement the sewerage system with half the cost as compared to conventional system.
Implementation actions	• Earmark land for setting up de-centralised STPs • Identify areas for laying low cost sanitation scheme • Explore opportunity for construction of STP on BoT basis • Undertake road works after sewerage pipelines are laid
Possible PPP intervention	Construction, O&M of STPs can be provided by MMC on Public Private Partnership (PPP) mode. Under the PPP model the developer would o invest MMC's financial contribution and would take care of any additional cost under the project o undertake implementation of capital works and O&M of system o the project can be awarded for a period of 10 years

	○ MMC can ask private developer to consider selling of treated water as part of contract ○ developers can bid on annuity support from MMC ○ MMC need to set performance parameters for the private developer to be obliged during the contract period. The annuity payment should be a factor of performance parameters achieved by the developer ○ The performance parameters would in the area of ▪ Quality of treated water ▪ Number of closure days of STP The above model is indicative. MMC would require to appoint a transaction advisor to under take detailed feasibility and preparation of bid documents (request for qualification – RFQ, request for proposal – RFP) and bid process management leading to award of contract to private developer • Examples of PPP in sewerage – ○ Kolhapur STP project – Construction and O&M of STP on BOT basis. Presently at bid process stage

12.2.7 Storm Water Drainage

Sector goals	• Undertaking de-silting of primary drains (Piliya Khal nallah and nallah at Tal naka) on a priority basis • All new roads to be designed shall have adequate provision for storm water drains. • Constructing new drains shall be integrated with the new roads development • Construct perforated tiles footpaths to allow penetration of rain water into ground					
Desired outcomes		**Existing**	**2012**	**2014**	**2015**	
	Coverage	108%	100%	130%	130%	
	Rehabilitation of existing drains – kuccha to pucca closed drains		80%	100%	100%	
	De-silting of primary drains	-	70%	100%	100%	
Design parameters	• Prepare a contour map for the city and mark areas which could be sensitive to different levels of rainfall • Drainage network reach as % of road length (min 130%); Ensure that every divided road to have closed drains on either side and undivided roads have drains on atleast one side • Size of drains to be designed according to the rainfall data					
Total investment requirement	Rs.16.24 crores					
Investment till 2015-16 (Phase I)	Rs.9 crores	2.93	4.14	1.09	0.82	
Capital Facilities and phasing	Drains up-gradation – 80 kms		✓	✓		
	Drains new formation – 25 kms			✓	✓	
	De-silting & strengthening of primary drains (Piliya Khal nallah, nallah at Tal naka– 5 kms	✓	✓			

12.2.8 Solid Waste Management

Sector goals	▪ Entire city to be covered under door to door collection ▪ 100% segregation of waste ▪ Separate collection system from bulk producers					
Desired outcomes		**Existing**	**2012**	**2014**	**2015**	**Remarks**
	Collection efficiency	90%	100%	100%	100%	
	Door to door collection of waste	0%	25%	50%	100%	Increase awareness, opt for outsourcing through NGOs
	Segregation	0%	25%	50%	100%	
Reforms	• 100% O&M cost recovery – Levy Rs 10 per month per household towards door to door collection of waste • 100% door to door collection of waste – Increase awareness campaign					
Support & System Sustenance Measures	• Awareness campaign on waste management in collaboration with Children's NGO Jaora, school and competitions held across the city. • Institutionalise a clean and green committee comprising of health department, lodges, vegetable market associations • Create separate fleet and work plan for waste collection from bulk producers. The bio-degradable waste collected shall thereby be utilised for producing manure • Exercise control on ban of plastic below the prescribed norms and promote use of recyclable bags • Introduce min. charges towards door to door collection of waste • Explore collection and transportation of waste on PPP basis					
Design parameters	• Source segregation – reduction of waste to be collected (min 70 % of waste generated) • Door-to-door collection as % of households covered (min 80%) • Optimum fleet utilisation (No. of trips/ vehicle/ day - average minimum of 2.5) • Vehicle capacity as % of rated capacity to waste generated (minimum 100%)					
Total investment requirement	Rs.2.43 crores					
Investment till 2015-16 (Phase I)	Rs1.06 crores	0.49	0.60			
Capital facilities and phasing	New vehicles (primary collection)	✓	✓			
	New vehicles (secondary collection and disposal)	✓	✓			
	Infrastructure at landfill site	✓	✓			
	Dual loaded dumper placers & container bins	✓	✓			
Possible PPP intervention	• Public Private Partnership (PPP) in SWM is in accordance to nature of work					

viz.,

- Collection and transportation of waste
- Land filling
- Composting

- JMC can explore PPP in collection and transportation of waste under which
  - JMC would procure the vehicles or can ask private developer to deploy vehicles and manpower.
  - Undertake door to door collection of waste from all residential and commercial premises.
  - Such contracts can be awarded for 1 or 2 years and can be renewed based on performance.
  - The private can bid on the tipping fee per tonne of waste collected.
  - JMC need to set performance parameters for the private developer to be obliged during the contract period. The tipping fee should be a factor of performance parameters achieved by the developer.
  - The performance parameters would in the area of
    - Coverage of door to door collection of waste
    - Amount of waste collected
    - Complaints received
- Land filling – This can be developed on BOT basis. JMC would provide the land to developer and the developer shall be responsible for construction and O&M of the facility. The private developer can bid on annuity support required to construct and operate and maintain the project.
- Composting – Although sale of compost generates revenue, however, generally the market for such is not wide. Hence, in such cases JMC need to test the market by floating tenders wherein the developer can be asked to set up composting facility and the maximum contribution from the revenues bid by the developer shall be the winning bid.

The above models are indicative. JMC would require appointing a transaction advisor to under take detailed feasibility and preparation of bid documents (request for qualification – RFQ, request for proposal – RFP) and bid process management leading to award of contract to private developer.

12.2.9 Roads, Traffic & Transportation and Street-Lighting

Sector goals	▪ Smooth traffic flow – Diversion of heavy traffic from the city and construction of ROBs on railway crossings				
Key requirements of stakeholders	• ROB at Chaupati Railway crossing • ROB at Rapat area which would connect Jaora to Malipura • Redevelopment of Ghanta Ghar – Parking cum Commercial complex • Redevelopment of vegetable market – Parking cum vegetable market • Traffic management at Ratlami Gate				
Actions/ Measures	• Discussions with Railways to obtain NOC to construct road and connect the existing under bridge • JMC to appoint construction of new under/over bridge. consultant for DPR to assess the feasibility either for existing under bridge or new bridge. • Quick survey for any land acquisition. • Earmark parking lots in the newly developing areas. • Hawker zones to be created as part of land use policy and continuous efforts to be made to avoid encroachments • Coordinated efforts between ULB and Traffic Police departments need to be put in place for effective traffic management and ensuring disciplined travel and behaviour.				
Design parameters	• Road network – Degree of connectivity in terms of per-capita road length (min 1.3 mt) • Road condition - % municipal roads surfaced (100% - CC/ BT surfacing) • It must be ensured that at least 60 per cent of the roads must have footpaths (i.e. roads of 20 feet and above) • Design of new roads shall necessarily have provision for shoulder, foot paths, utility ducts and storm water drains under the foot paths, landscaped median and concealed cabling for lighting system • Streetlight spacing – 30 meters • Street lighting systems shall comprise automation of switching, dimming mechanism etc. and should be explored on PPP route.				
Total investment requirement	Rs. 22.30 crores				
Investment till 2015-16 (Phase I)	Rs. 10.87 crores	2.00	3.34	2.45	2.78
Capital Facilities	Up-gradation of about 9 kms of roads	✓	✓		
	New Formation of about 12 km of BT roads			✓	✓
	ROBs at single Railway Crossing and Rapat area	✓	✓		
	Traffic signaling at Ratlmai Gate intersection and Chaupati intersection	✓			
	Parking complex at Ghantaghar– PPP basis	✓	✓		
	Street lighting - ▪ Tube lights – 60 nos ▪ High power lamps – 960 nos. ▪ Under ground cabling – 59 kms	✓	✓	✓	✓

Possible PPP intervention	**Parking cum commercial complex at Ghantaghar on PPP basis:** • The existing owner of the land is PWD department. • The building is presently housed by shops and offices • The building is more than 70 years old and needs re-development • PHE can invite private developers on BOT basis to undertake re-development of Ghantaghar Building • Land can be leased either for 25 – 30 years or for 70 years not more than that considering life of civil structure. • Role of private developer – construct, sub-lease commercial space, collecting parking revenue, operate & maintain the complex. • Bidding parameter – highest upfront premium to PWD (premium can be distributed over a period of two years) • Qualification criteria – experience in construction of commercial complex of area ___ sq. mts. **Vegetable market cum parking complex on PPP basis –** • Generally only parking towers on standalone basis are commercially not feasible; the feasibility can be improved by introducing a mixed commercial land use – shops & offices. JMC intends to build this parking complex at the vegetable market land. Hence, shops can be created for vendors and agri-based merchants. • Land to be provided on lease basis either for 25 – 30 years or for 70 years • Role of private developer – construct, sub-lease commercial space, collecting parking revenue, operate & maintain the complex. • Bidding parameter – highest upfront premium to JMC (premium can be distributed over a period of two years) • Qualification criteria – experience in construction of commercial complex of area ___ sq. mts. **Street- Lighting on PPP basis–** ▪ Role of private operator – install and maintain street-lighting ▪ Revenue to private operator – from advertising ▪ Incentive to private operator dependent on – o savings in energy bills o No. of hours of operation of streetlights to be specified by JMC o No. of complaints received The above models are indicative. JMC would require appointing a transaction

	advisor to under take detailed feasibility and preparation of bid documents (request for qualification – RFQ, request for proposal – RFP) and bid process management leading to award of contract to private developer.

12.2.10 Slums

Sector goals	▪ Slum housing and infrastructure – implementation of IHSDP scheme				
Support & System Sustenance Measures	▪ The project cost under IHSDP has escalated and ULB is not in a position to fund the same. Hence ULB should approach GoMP to provide support for implementing the scheme. In the state of Maharashtra, the state government has provided additional grants on the escalated cost. ▪ The ULB need to implement the project on timely basis to avoid cost overruns. Other measures ▪ Inventory and geographical mapping of all slum pockets in the city with details of plot ownership, infrastructure status, no. of households, household size, economic and social profile. ▪ Identify slum pockets which are settled in low-lying areas or near rivers flood prone areas, near railway treks etc. and relocate the same on priority basis ▪ Training for women in slums towards self-employment. NGOs & CBOs to play the lead role and MMC as supportive role • Providing for reservation of lands for EWS in the development plan • Facilitating access to credit for urban poor. NMC can explore the option of acting as a guarantor. • Frequent meetings with slum dwellers towards encouraging participation in slum development programmes, awareness creation on beneficiary contribution to project development and also assuming the responsibility of implementing the projects. ▪ Facilitate and encourage the neighbourhood concept in slums to carry out towards recreational activities such as reading, sports and drama. • Infrastructure and basic services' provision in slums shall not be in isolation but in conjunction and in line with overall infrastructure development in the city. ▪ Awareness on health and hygiene shall be created among slum dwellers in line with the long term goal of moving towards individual toilets and doing away with public convenience systems.				
Reforms	• Creating byelaws to earmark land for urban poor • Security of tenure • Achievement of basic services levels under seven point charter reform • Earmarking of funds under budget • Separate budgeting for urban poor				
Design parameters	• Water Supply –Individual house service connections to all • Sewerage - Individual house service connections to all • Sanitation – Community toilets in short run and individual toilets in long run • Solid Waste Management- Coverage of all slum households under door-to-door collection and awareness campaigns on source segregation				
Approved cost under IHSDP	Rs. 2.43 crores	-	0.49	0.97	0.97
Capital Facilities	Construction of housing units	✓	✓		

	Slum Infrastructure	✓	✓		
Performance Monitoring Indicators	• Water Supply –Individual house service connections to all • Sewerage - Individual house service connections to all • Sanitation – Community toilets in short run and individual toilets in long run • Solid Waste Management- Coverage of all slum households under door-to-door collection and awareness campaigns on source segregation				

12.2.11 Other Projects – Ring Road, Regional Bus stand, Development of land at Aranya Pitha, Indoor Sports Stadium

<table>
<tr><th colspan="2">Other amenities</th><th>Year 1</th><th>Year 2</th><th>Year 3</th><th>Year 4</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="2">Capital Facilities</td><td>Development of regional bus stands in co-ordination with ring road</td><td>✓</td><td>✓</td><td>✓</td><td></td></tr>
<tr><td>Development of Indoor stadium</td><td></td><td>✓</td><td>✓</td><td></td></tr>
<tr><td></td><td colspan="5"></td></tr>
<tr><td>Ring road development and regional bus stands

Indoor stadium

Development of Aranya Pitha Grain Market</td><td colspan="5">

Construction of Ring Road on PPP (toll) basis

To develop a ring road to improve the connectivity and to avoid any out station traffic within the city that leads to congestion and increased pollution and disturbs city traffic.
The construction of ring road shall fall under the purview of PWD department as it is outside JMCs jurisdiction.
The department can move the proposal ahead to the state department & such roads are possible on toll basis. Since a good amount of heavy traffic passes through the city hence, the project can be viable depending on the volume of traffic. In case there is shortfall in feasibility, the same can be bridged in through viability gap funding (VGF)
The toll rates can be prescribed by PWD and the developer can bid on the contract period i.e. number of years required to recover the cost of his investment or could be vice versa wherein the contract period is fixed by PWD and the developer quotes on the toll tariff. The lowest tariff would win the bid in that case.

The above model is indicative. JMC would require appointing a transaction advisor to under take detailed feasibility and preparation of bid documents (request for qualification – RFQ, request for proposal – RFP) and bid process management leading to award of contract to private developer.

Development of Regional Bus Stands

Development of regional bus stands would be in conjunction with ring road development and would be developed near the intersection of ring road and the roads leading from other cities to Jaora. The implementation of the same would be required in a phased manner.
The development of regional bus stands would be under the purview of District authority or PWD since it lies outside the jurisdiction of JMC.

</td></tr>
</table>

Other amenities	Year 1	Year 2	Year 3	Year 4

- The estimated cost for construction of five regional bus stands would be Rs 1.5 crores.
- The same could be constructed either from district funds or if the projects are feasible on PPP the same route can be adopted.

- **Development of Aranya Pitha land**
  - The funds for development of Aranya Pitha grain market has been earmarked
  - It is suggested to identify suitable land near by the grain market for small scale agro-based industries.
  - A possibility of dedicated railway corridor for the grain market i.e. a diversion from the existing railway track to the grain market could be explored to improve the logistics and promote easy transportation of goods.
  - District, Town Planning Department, Jaora Nagar Parishad and grain market association should jointly form a committee and explore the avenues for promoting agri based activity as these could multiply the jobs in the city.
- **Development of indoor sports stadium**
  - Stakholders have opined for requirement of an indoor stadium at Jaora
  - Two places for development of this facility were suggested; one at the sugar mill land and the other at the highway (about 200 bigha land is available)
  - The possibility of development of indoor stadium on PPP route is feeble as there are no buoyant revenue streams for the developer except from fee for usage of indoor stadium. The indoor stadium should also be thought to be utilised for multipurpose usage.
  - The indoor stadium could include sports activity like badminton, table tennis, volleyball and carom. Swimming pool is not proposed as part of this activity currently as the city is already starved with water.

12.3 Priority Projects

12.3.1 Priority Projects

Sector	Projects
Water Supply	• Execution of water supply project in a phased and organized manner
Sewerage	• Underground sewerage system and low cost sanitation units
Traffic and Transportation	• Development of ring road around the city • Development of ROBs
Parking	• Redevelopment of Ghantaghar for commercial and parking facility on PPP basis • Redevelopment of vegetable market cum parking complex on PPP basis
Solid waste management	• Door to door collection system • Development of landfill site
(Economic opportunities) Krishi Mandi	• Completion of construction and new facilities at new mandi and shifting of existing mandi

13 INVESTMENT CAPACITY AND SUSTENANCE – FINANCIAL OPERATING PLAN

The investment capacity of JMC is assessed through a Financial Operating Plan (FOP) which gives a multi-year forecast of finances for a medium term. In line with the phasing of identified investment the FOP has been generated for the same period for JMC. A salient feature of the FOP is that all outstanding dues, including debt and non-debt liabilities if any, are taken into account.

The accounts data of JMC between the years 2004-05 and 2008-09 are used as the basis for determining past trends in revenue and expenditure and arriving at appropriate growth assumptions for each of the income and expense items. After forecasting the revenue account, the capital investments proposed under the CIP are added to the forecast. The FOP is generated to assess the investment-sustaining capacity of JMC.

The project funding structure comprises grants under the UIDSSMT framework (accounting for 90 per cent of the funding); internal resources and loans accounting for the rest. The level of investment that JMC can sustain is determined by studying the overall surpluses/ year-to-year opening balance and debt service coverage ratio. If the debt service coverage ratio - DSCR (amount of surplus available to pay interest and to repay principal that is due) falls below 1.25 (i.e. less than 25 percent cushion), then the investments are reduced gradually till the DSCR exceeds 1.25 in all the years in the forecast period. The main items of income and expenditure, classified into the revenue account and the capital account, are projected in the FOP under the following categories.

- Categories of FOP Projections
    - Revenue Account Receipts:
        - Taxes, Non Tax Sources, and
        - Grants, Contribution and Subsidies
    - Revenue Account Expenditure:
        - Establishment
        - Operation and Maintenance
        - Debt Servicing- Existing and New Loans
        - Phasing of non debt liabilities, and
        - Additional O&M
    - Capital Income and
    -
    - Capital Expenditure

13.1 Financing strategies for the CIP

In determining a long-term financial strategy, JMC plans to raise resources and fund the CIP through:

- Grants available under the UIDSSMT Framework (as percent of investment proposed for funding by 2011-12 in Urban governance and infrastructure sectors - 80 percent Central Govt. Grants and 10 percent State Govt. Grants)
- Available internal resources and improving upon the same through
  - Revision of the Area based Property taxation at certain levels by JMC
  - Revision of water and sewerage charges at specific intervals
  - Maintenance of the collection performance of taxes and charges at certain minimum levels for current and for arrears
  - Borrowings

Financial projections

Current revenue sources are projected under built-in growth assumptions for income and expenditure items, to assess the impact of each such revenue enhancement measure being suggested. The projections also aim at estimating the surplus that will be available for servicing new debt. Part of the surplus, after meeting the additional O&M expenses on newly created assets and infrastructure, is translated into debt size and project size (grant component plus debt component) based on certain assumptions regarding interest rate, repayment method and loan-grant mix.

A spreadsheet FOP model has been customised to depict the financial position of JMC, the investment sustaining capacity of JMC is assessed based on the FOP assumptions. The model was used to calculate future surpluses under various scenarios involving combinations of internal revenue improvement, state support, financing terms, etc.

The standard assumptions under which the projections are carried out and certain expenditure control and revenue augmentation measures proposed in line with the mandatory and optional reforms under the UIDSSMT framework are presented below.

Key Assumptions

Head	Assumptions
Guiding Factor for Assessing the Sustaining Capacity	
Surplus	Positive surplus - year on year basis
DSCR	Greater than 1.25
Project Financing – for admissible Components under UIDSSMT	
Project Costing	Unit Cost, with 7% price contingency and 10% Physical contingency
New/Additional O&M	Water supply : 3% of Capital cost Sewerage : 3% of Capital cost Roads : 4% of Capital cost Drains : 2% of Capital cost Street lighting : 8% of Capital cost

Head	Assumptions
	Urban poor/ Slums : 2% of Capital cost Solid waste management : 12% of Capital cost Others : 1% of Capital cost
For projects approved under UIDSSMT/ IHSDP	
Grant from GoI	80% of Sanctioned cost
Grant from GoMP	10% of Sanctioned cost
If Loan for Balance funding	Repayment in12 years, with 2 year principal moratorium @ 10 % interest rate
Old Outstanding loans if any	As per existing terms and conditions
Revenue Expenditure	
Growth in Expenditure	Actual average growth with a minimum 5% and maximum of 12% (based on last five years trend)
Pay Commission Revision	6th Pay Commission revision
Assumption for assessment of JMC's sustainability	
Income Items	
Growth in revenue income	Actual average growth with a minimum 5% and maximum of 10% (based on last five years trend)
Property Tax	
Annual growth in Assessment	2.50% per annum
Revision of Tax	25% every 4 years
Collection Performance	85% or current average whichever is higher by 2014-15
Income Items- Water Supply	
Individual Water Connections	3.0% per annum
Water Tariff revision	As per current tarrif
Next Revisions	By 25% every three years
Collection Performance	85% by 2014-15

13.2 Investment sustenance capacity

Given the existing financial position of JMC, the revenue and capital accounts of JMC are projected against the growth scenario and assumptions presented above. The FOP is generated from the sustainable investment point of view in line with current growth trends against the identified investment. The spreadsheets of the FOP are presented in Annexure.

Following are the results drawn with respect to investment capacity of JMC

Investment sustainability scenario

Scenario	Investment
Investment requirement phase I	Rs 60 crores
Investment capacity - without any grant support	JMC would be able to take up projects amounting to Rs 1.2 crores only without any grant support.
Funding from UIDSSMT/ IHSDP UIDDSMT/ IHSDP grant support 80% - GoI, 10% - GoMP, Total - 90% grants 10% - ULB	JMC would be able to take up projects amounting to Rs 10-12 crores wherein its contribution would be 10% i.e. 1-2 crores in next 3 years
PPP projects with annuity support If grants are not available for other projects, then ULB would be able to undertake following projects with annual annuity support (considering contribution to existing approved projects) – SWM – 5 years BOT contract	Annuity of Rs 20 lakhs per annum for five years

Project wise funding

Project	Project cost	Project development details	Sources of funding
Water supply	Rs 12.28 crores	Source augmentation and works related to distribution network, storage and treatment capacity augmentation are sanctioned	UIDSSMT funding Grant from GoI - Rs 9.8 crores

Project	Project cost	Project development details	Sources of funding
		under UIDSSMT. Metering of water connections not a part of UIDSSMT DPR. This can be implemented on PPP basis	Grant from GoMP – Rs 1.2 crores ULB's contribution - Rs 1.2 crores and escalated cost
Slum	Rs 2.4 crores	Housing and infrastructure for urban poor as per DPR approved under IHSDP scheme	IHSDP funding Grant from GoI - Rs 1.9 crores Grant from GoMP – Rs 0.24 crores Beneficiaries/ ULB's contribution - Rs 0.24 crores and escalated cost
SWM	Rs 89 lakhs	Development and O&M of landfill site and composting facility on PPP basis for 5 years	On PPP basis – annuity model Annuity contribution – Rs 20 lakhs per annum
Sewerage	Rs 37 crores	Laying of underground sewerage network, construction of STPs and pumping stations	On UIDSSMT funding
Desilting of primary drains	Rs 50 lakhs	Undertaking de-silting of primary drains (Piliya Khal nallah and nallah at Tal naka) on a priority basis	On UIDSSMT funding
Other projects		Development of Ghanta Ghar Vegetable market cum parking complex Development of regional bus stands Development of Aranya Pitha Grain Market	On PPP

Based on the availability of grants and own resources, JMC can take up priority projects in the area of roads, storm water drainage and streetlighting.

13.3 Revenue mobilization measures

Sectors for harnessing revenues

Area	Existing revenues	Task	Estimated Revenue potential
Water charges	Rs 40 lakhs	Water billing potential (with existing tariff structure) **NRW reduction – Commercial losses** Residential properties – 10525 no.s Total water connections – 4197 no.s Gap – 6328 no.s Revenue from regularization of un-authorised connections 6328 x (80x12) Rs/ yr = Rs 60 lakhs	Rs 50 – 60 lakhs per annum
Property tax	Rs 15 lakhs	There is marginal potential of improving the coverage of properties by adding un-authorised properties in the tax net. This would lead JMC an additional revenue of about Rs 2-3 lakhs annually Further, it could focus on improving the area under taxation by undertaking updation of area under taxation. General increase in revenues in other cities are about 8-10% i.e. about Rs 3-5 lakhs per annum	Rs 8-10 lakhs
Land development		JMC does not much land to dispose off for commercial usage and incur revenues. However, it can there are a couple of commercial complex it can re-develop on PPP basis to harness revenues. Further, it can develop the vegetable market on PPP basis with parking facility to mobilize revenues.	

13.4 Sustainability of services

Particular/ Services	Water	Solid waste management/ sanitation
Existing O&M (salaries + O&M)	Rs 54 lakhs per annum (2008-09)	Rs 75 lakhs (2008-09)
Existing User charges	Rs 80-100 per month per connection for residential connections Rs 100-150 per month per connection for non-residential connections Existing revenues are sufficient to take care of existing O&M	
Existing revenues	Rs 45 lakhs per annum (current demand) Rs 63 lakhs (total collection)	
Gap	Rs 4-5 lakhs	
O&M in future with new project	Rs 20-25 lakhs per annum of new assets created	
Proposed tariff (post implementation of water project)	20% regular revision of tariff in future	Rs 25 per household/ commercial establishment per month
Revenues post tariff revision		Rs 35-40 lakhs per annum

14PROJECT IMPLEMENTATION MEASURES

The section below further highlights issues in project implementation and suggest remedial measures.

Key factos	Issues arising during implementation of project	Suggested measures and due diligence
Project appraisal	Alternations in project midway	The appraisal agency should device a format (MIS) listing all the necessary criteria's for evaluation and smooth implementation of the project
Alteration in project mid way during implementation	This general happens because of following issues - - On site issues in implementation - lack of know-how of terrain, already laid infrastructure beneath, displacement of existing infrastructure - Land acquisition or local protestation - Inadequate provisioning in DPR	• Anticipating alternations in project and keeping contingency plan in place. • Carrying out adequate surveys before embarking on projects • Preparing an exhaustive list of works (tenders) that will be undertaken for a particular project
Land acquisition	Land related issues especially in case of water, sewerage and SWM projects for setting up WTP, STP and landfill site	• The project map should highlight the infrastructure and the ownership of the land where it is to be established. • In case of land acquisition, the local body should produce the consent of the project displacement in advance to the appraisal agency. • In case of land to be transferred from one government authority to another the consent of the same should be taken in advance.
NOCs	For instances a water pipeline crossing a rail corridor, NOC's from railway, forest, environment authority and any other authority	All NOCs required should be obtained before sanctioning of the project
Bid Process management	Lack of professional approach towards bid process management (only financial criteria taken into account while selecting the bidder, the quality of work is suffered in such a	It should be made mandatory in the act of municipality that all/ particular projects should be awarded as per both technical and financial criteria. The act or govt. circular should also carry and highlight the process of the selection of bidder

Key factos	Issues arising during implementation of project	Suggested measures and due diligence
	case)	
Packaging of project	Project is split into multiple sub-projects thereby awarding the project to various contractors. These results in increased paper work, complexity of managing different contractors with fewer staff, approvals by Executive committee for every package. For instance a water supply branch network in the city is awarded to various contractors.	The project split should be in accordance with the capacity of the ULB staff to monitor and manage.
Project implementation schedule	Un-realistic project implementation timelines	This generally happens if the following factors are not taken into account in advance - - Availability of raw material - Discounting for rainy season - Familiarity with ground realities - Lack of stringent time schedules in the contract with the private entity Factors to be taken into account while planning implementation schedule - tendering date, anticipating re-tendering and approvals thereafter, rains, availability of materials, elections (general and local body elections)
Re-tendering of project/ sub-project	Cost difference due to difference in market rates and government schedule of rates – results in re-tendering several times and the project is delayed	This generally happens due to gap in approval of DPRs. The schedule of rates which are relevant at the time of DPR preparation becomes obsolete if the project is delayed either due to final sanction/ approval or delay in initiation of project after approval
Monitoring project implementation	Lack of monitoring mechanism	• Monthly and quarterly progress report • Fund utilisation status • Onsite visits by higher level monitoring agency

Key factos	Issues arising during implementation of project	Suggested measures and due diligence
		• Regular meetings to address the issues on time
	Lack of staff for monitoring implementation of projects	• Appointment of Project Management Consultants • Appointment of retired officers for managing the project for the project duration • Nominating a person from the department responsible for overall coordination for the project and his support team
	Change of project managers	• Knowledge transfer becomes crucial while any change in project manager. Change of managers is likely to happen as implementation period of projects is beyond a year and more. • If the project manager is on contract, then the contract document should mention a leave notice period of atleast 2 months. Documentation of all the aspects of the project are very crucial in case of change of project manager.
Auditing of the project	Quality issues in work	Appointment of a technical independent authority for quality checks and project progress
Factors beyond the control of implementing agency	Pubic agitation	• Identifying such issues in advance and developing a communication strategy • Appointment of a committee to resolve this issues
	Dissolving of assembly (Executive committee/ general body)	

Key factos	Issues arising during implementation of project	Suggested measures and due diligence
	Scheduled Elections	While planning the project implementation schedule such activities should taken into account and the time period for this should be accounted in the schedule
	Rains/ floods	• While planning the project implementation schedule such activities should take into account and the time period for rainy season should be accounted in the schedule. • Past any history of flood related issues should be planned in advance
Dispute resolution mechanism	Between contractor and municipality	• The contract agreement should clearly highlight the dispute resolution mechanism. • It is crucial to frame contracts carefully to avoid any disputes in the projects.
Project financing	Lack of own contribution in infrastructure projects	• Investment capacity of ULBs is crucial before sanctioning of any project • Making budgetary provision in advance for the capital expenditure to be incurred • Separate bank account for the project (all receipts and payments should be managed separately; any transfer of funds from other sources should be highlighted and re-concilled accordingly)
Data base management	One of the most common issues in most of the projects is lack of collation of database. Database are important from two perspectives - • firstly it forms an evidence for addressing any related dispute; • secondly such database are useful for deriving lessons which could be used for similar projects	• Any deviation from DPR • Planned and actual schedules • Disbursement and utilisation of funds/ loans • Details of escalation payments made classified into quantity escalations and rate escalations. • Pre and post inventory of assets with age and other relevant details • Record of design, drawings and materials used for construction • Details of quality control tests, press articles, disputes, photographs during construction phase etc. • Minutes of meetings

15 MUNICIPAL REFORMS

15.1 Double Entry Accrual Based Accounting System (DEAS)

JMC has also migrated to the Double Entry Accrual Based Accounting System.

However, mere completion of accounting reforms does not automatically result into financial management reforms. Financial management that is efficient procurement, allocation and utilization of resources is central to improving the functioning of JMC; hence it is crucial for JMC to interpret & familiarize itself with the new system and further utilizing it effectively for decision making. The interpretation of these statements/ ratios drawn from the new accounting system will assist JMC in taking decisions on various fronts such as expenditure control, revenue mobilization, undertaking capital works, cost recovery of services, improving financial performance etc. Through better financial management by using DEAS, JMC would be able to plan its resources effectively.

Hence it is essential that the trainings are imparted to all the key decision makers' viz., Chairman, CMO, Accounts department and other department heads. The training should also be imparted to officials of the accounts department who are maintaining the financial records of the ULB.

15.2 Property Tax

MMC under e-governance should plan introducing GIS based property tax management. In this regard, preparation of maps with property attributes like property use, ownership status, number of floors, tax assessment, demand and collection of tax should be implemented. The maps should incorporate other infrastructure details of the MMC like road width, type of road, and utility details like water supply lines, storm water drains, MMC properties and other town planning data.

MMC should also initiate the survey work for identification of new properties and reassessment of the old properties. The survey would result in increase in tax net thereby increase in tax coverage and improve the collection efficiency of property tax.

MMC should also focus on following aspects to improve the administrative efficiency leading to buoyancy in property tax.

- Prioritize billing – Priority billing to those properties in the city which forms major part of property tax for eg. Commercial properties, hotels, malls etc.
- Rationalisation of staff – Usually most of the property tax department officials in ULBs in the country are overload with the task of handling the property taxation. It is required to rationalise properties per staff.
- Outsourcing non-critical functions - MMC may outsource the work of distribution of demand notices; this may be by hiring an agency and paying the agency per demand notice. This would

reduce considerable time of employees and they can focus on recovery and improving the coverage in the city.

- Payment modes - MMC can introduce pay points at various locations in the city to facilitate citizens in paying property tax
- Tax calendar activity - MMC should also focus on rationalising its activity with respect to property taxation throughout the year. The focus should be to release the demand notices within a month's time from the start of the financial year. This would give substantial time to staff to recover the bills.
- Incentives - MMC may introduce policy of providing incentives to tax payers who pay either pay their property tax in advance or within an early stipulated time from receipt of bill. This shall improve the cash flow of MMC. The incentive may be based on amount of interest MMC may earn on the amount deposited by the tax payer
- Vigilance wing - MMC should also introduce a separate vigilance wing which would directly report to the CMO.
- Appellate wing - MMC should also facilitate an appellate wing to resolve accumulated arrears and avoid creation of arrears.

15.3 User charges

As discussed in the report, MMC needs to take measures to ensure 100% cost recovery of water supply, solid waste and sewerage (proposed) services provided by it.

15.4 Rain water harvesting

Make rainwater harvesting mandatory in all new buildings and adoption of water conservation measures. Provide incentives to citizens who implement this measure. Keep vigilance on this reform such that the rebates in taxes for rain water harvesting are applicable only till the extent such mechanisms are in place.

15.5 Reuse of waste water

- MMC should also introduce bye laws with respect to reuse of waste water the city does not has a sewerage system.
- MMC should incentives large commercial establishments i.e. hotels and institutions to set up on-site treatment facility of waste water.

15.6 Streamlining building plan approval process

- MMC should introduce single window clearance system wherein it should accept applications only when the applicant submits the same with all details.

- MMC should organise meetings with local architects and engineers to discuss on building byelaws and approval process and introduce necessary changes so as to facilitate quick approvals
- MMC may also explore use of software which shall read the drawings submitted by architects in required format and generate reports stating the adherence to bye laws.
- MMC should also set up a work flow management system to track the status of applications submitted by applicant and take necessary actions for any delay caused internally.

15.7 Earmarking of funds for Urban Poor

MMC should create a separate budget for urban poor. Based on the infrastructure and other upliftment programme earmarked for the urban poor, MMC should allocate funds and monitor the implementation of the same. MMC may also choose to set up a separate committee for this such that the desired outcomes are achieved.

15.8 Administrative reforms

- As part of the administrative reforms MMC should conduct a separate study to identify training needs of various departments and employees.
- Trainings should be identified department specific and there are certain trainings which are crucial for all employees of MMC.
- MMC should henceforth identify institutions imparting training in such areas and earmark funds for training in the budget and monitor its implementation. The administration department of MMC should take up such responsibility.
- MMC should also ensure feedback on trainings received by employees and take necessary corrective measures thereafter.
- This study should also focus identifying interrelations between various departments of MMC and identify the existing lacunas and creating a system wherein the flow of information and ideas between the departments helps in better administration and implementation of the project.
- MMC may also focus on creating a committee for facilitating implementation of projects on PPP basis. The committee comprising of Chairman and members of ruling and opposition party and administrative wing of MMC

16 CITY VISION

16.1 SWOT Analysis

The views sounded by the stakeholders at the initiation level of CDP and at various stages did not deviate much when we did our sectoral analysis. We found almost similar concerns and outlooks that were mentioned during the several meetings. Stakeholders gave equal weighted to infrastructure and economic development of the city.

With respect to infrastructure development the prime priority was to improve roads, traffic and transportation within the town, improve the sewerage and storm water drainage system for the city. Further, the citizens desired parking space, and improving the services for the slum regions and slum rehabilitation.

Altogether, none of the basic services were of satisfying level.

With respect to economic development stakeholders suggested that there is an urgent need to improve the industrialisation in the city that would revamp the economy. At present approximately 55 to 70 percent of the population are dependent on agriculture related activities and there are no companies operating within the city. The citizens highlighted the importance of Tourism and expressed their views to strengthen the tourism industry within the town.

It was revealed that the health and the education sector needs a major focus. Further, they said that lack of infrastructure development especially storm water and roads have also affected the economic growth.

Stakeholders urged for improved governance system, with fast implementation of the project and equity in planning. Based on the first stakeholders workshop, various discussions with local counterparts, discussions with municipal officials, we present the SWOT analysis of the city in the below table.

Strength	Weakness
• Hussein Tekri as an important religious and attracts good number of tourist through out the year • The city houses the largest Krishi Mandi in the district - Good agriculture in the hinterland • Ensured water supply for the city • Good connectivity • Satisfactory literacy rate	• Deteriorating slum condition – 80% person of the populace living in un-hygenic condition. • Lack of funds with JMC to implement the slum project under IHSDP due to escalated cost. • Traffic Congestion – need for a bye-pass road • Weakness in implementation of proposals in the master plan • Out-migration from city – due to lack of job opportunities in city and quality basic and social infrastructure. • High dependency of ULB on external grants to maintain and create new infrastructure • Un-authorised colonies – lack of adherence to regulations
Opportunities	**Threats**
• Land is available for development as proposed under master plan – Need an action plan and stakeholder consultation to realise the aspects visualise in the masterplan. • The defunct sugar mill within the city can be put to public use. • Development of Hussein Tekri Land	• The trend of out-migration would continue if the weaknesses are not addressed. • Increasing traffic congestion and deteriorating environmental condition

16.2 Sector Strategies and Goals

Sector	Goals
Traffic and Transportation	• Development of ring road system for long term • Development of parking space on PPP basis
Water supply	• Water for all daily • Introducing metering system • Introducing rain water harvesting system
Sewerage	• Protected water bodies by developing sewerage

Sector	Goals
	system • Re-use of treated sewerage for non-potable system
Solid waste management	• Dust-bin free city • Entire city to be covered under door to door collection • Segregation of waste • Separate collection system from bulk producers
Storm water drainage system	• Protection of natural drains from pollution on a priority basis
Slum development	• Implementing the schemes for urban poor housing effectively
Economic Opportunities (Krishi Mandi)	• Integrated development of krishi mandi and agro – based industries
Tourism	• Setting up MP Tourism Hotel in Jaora to facilitate and enhance the image of religious place Hussain Tekri
Power	• Hydro power project at the juncture of Chambal, Maleni and Pingla River
Social & Recreational	• Redevelopment of Sugar Mill and Mela Ground

16.3 Vision

Based on the town's strengths, futuristic desires and perspectives the VISION that emanates is –

"Jaora shall be a city with clean and green environment with economy sustained by agriculture and agriculture related industries"

17 ANNEXURES

Re-cast financial statements – Revenue Income

		Income and Expenditure Statement				
S. No.	Head of Account	2004-05	2005-06	2006-07	2007-08	2008-09
				Rupees Lakh		
Jaora Municipal Council						
	Opening Balance	**26.80**	**22.58**	**24.69**	**51.13**	**41.72**
Part I - REVENUE						
I	**Revenue Income**					
	A Own Sources					
	Tax Revenue					
1	Property tax	6.82	9.83	7.71	8.87	9.04
2	Water tax	1.45	1.94	1.68	1.94	0.67
3	Education tax	4.00	5.89	4.75	6.66	6.29
4	Road tax	17.02	19.14	29.91	50.83	48.94
5	Other taxes	4.52	4.98	4.25	5.68	5.42
	Sub-Total (Tax Revenue)	33.81	41.77	48.29	73.99	70.35
	Non Tax Revenue					
1	Rent from Municipal properties	11.45	1.29	9.23	20.23	9.61
2	Development charges	17.83	15.84	3.57	13.78	9.84
3	Building permission & coloniser fee	0.97	1.97	2.03	2.62	2.69
4	License and other fees	10.95	13.53	28.51	18.00	15.09
5	Fee from municipal schools/ hospitals	0.39	0.39	0.40	0.42	0.36
6	Water charges	44.76	46.49	47.48	45.12	46.76
7	Other income & fees	3.84	6.05	13.72	5.31	4.96
8	Interest on investments	0.58	1.54	3.52	3.52	4.42
	Sub-Total (Non Tax Revenue)	90.77	87.09	108.46	108.99	93.72
	Total Own Sources	*124.57*	*128.87*	*156.74*	*182.98*	*164.08*
	B Assigned Rev, Grants & Contributions					
1	Octroi grant	190.51	266.56	161.21	253.38	340.88
2	Mid day meal grant	14.65	6.63	2.21	3.75	5.02
3	Basic services grant	57.72	66.77	90.83	80.18	112.27
4	Road grant	18.75	19.79	16.84	25.92	23.34
5	SFC	5.00	18.87	19.93	27.36	38.39
6	12th FC	-	29.98	27.42	38.25	57.41
7	11th FC	-	12.41	-	-	-
8	Slum grant	-	6.00	6.00	5.00	5.00
9	Water grant	8.44	14.99	-	9.95	-
	Total Grants & Contributions	*295.07*	*441.99*	*324.44*	*443.79*	*582.30*
Total Revenue Income		**419.64**	**570.85**	**481.18**	**626.76**	**746.37**

Re-cast financial statements – Revenue Expenditure

		Income and Expenditure Statement				
S. No.	**Head of Account**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**
		Rupees Lakh				
II	**Revenue Expenditure**					
A	**Salaries/ Wages & Allowances**					
1	General Administration and tax collection	21.36	20.94	23.36	25.10	32.13
2	Revenue collection dept	38.36	43.40	41.98	45.15	47.97
3	Fire dept	9.21	8.39	8.81	9.52	10.42
4	Streetlighting dept	0.72	0.64	1.01	0.93	1.19
5	Water supply	18.00	18.06	15.45	33.48	34.48
6	Health	11.35	11.34	11.42	10.39	13.57
7	Sanitation	2.05	4.45	4.74	5.33	6.65
8	SWM	76.84	68.93	76.23	85.02	64.60
9	Garden	7.13	6.89	6.22	7.07	9.45
10	PWD	4.11	4.84	5.51	7.77	9.75
11	Municipal school	2.96	3.27	3.28	3.73	4.75
12	Bhavishya Nidhi and Mahengai bhatta	2.31	7.34	2.03	5.88	6.71
	Total Salary Expenses	*194.40*	*198.49*	*200.03*	*239.37*	*241.68*
B	**Operation & Maintenance**					
1	General Administration and tax collection	15.52	11.21	15.00	28.21	22.89
2	Tax collection dept	0.11	2.57	2.82	5.09	5.74
3	Fire dept	0.29	-	-	2.19	2.64
4	Streetlighting dept	13.19	9.74	11.28	9.71	19.32
5	Water supply	56.83	52.86	35.32	11.56	19.37
6	Health	0.05	-	-	-	0.09
7	Sanitation	31.23	37.22	30.49	45.95	57.47
8	SWM	10.07	0.86	3.01	4.82	9.48
8	Garden	5.16	6.89	6.28	13.96	16.30
10	PWD	13.29	49.82	5.83	7.70	173.49
11	Municipal school	0.97	1.71	0.67	0.83	14.47
11	Others	8.17	8.67	4.51	3.66	3.40
	Total O&M Expenses	*154.87*	*181.56*	*115.20*	*133.67*	*344.86*
C	**Debt Servicing**					
1	Debt servicing	12.00	-	-	13.36	-
	Total Debt Servicing Expenses	*12.00*	-	-	*13.36*	-
Total Revenue Expenditure		**361.27**	**380.05**	**315.24**	**386.40**	**586.34**
Operating Status - Revenue Account		*58.37*	*190.80*	*165.95*	*240.36*	*160.03*

Re-cast financial statements – Capital account and extraordinary account

		Income and Expenditure Statement				
S. No.	Head of Account	2004-05	2005-06	2006-07	2007-08	2008-09
		Rupees Lakh				
Part II - CAPITAL						
I	**Capital Income**					
	A Own Sources					
1	Sale of Land	-	15.16	7.71	0.02	6.02
2	Sale of scrap	2.88	0.11	0.04	0.55	0.04
	Total Own Sources	*2.88*	*15.27*	*7.75*	*0.57*	*6.05*
	B Loans	-	-	-	-	-
	C Grants & Contributions					
1	Firebrigade grant	0.11	-	-	-	-
2	Tribal development grant	0.25	0.15	-	-	-
3	MP/ MLA grant	2.21	0.75	-	-	0.85
4	Sanitation	5.96	-	-	-	-
5	UIDSSMT	-	-	-	0.10	-
6	Other grants	15.66	-	2.15	21.25	12.49
	Total Grants & Contributions	*45.05*	*0.90*	*42.80*	*21.35*	*13.34*
Total Capital Income		**48**	**16**	**51**	**22**	**19**
II	**Capital Expenditure**					
1	Water	2.59	0.15	0.27	-	0.54
2	Sanitation	1.38	0.44	0.40	-	-
3	Buildings	7.66	2.26	1.81	8.69	7.40
Total Capital Expenditure		**11.63**	**21.08**	**2.49**	**62.87**	**7.95**
	Utilisation Status - Capital Account	*36.30*	*(4.91)*	*48.06*	*(40.95)*	*11.44*
Part III - Extraordinary						
I	Income	79.67	60.06	54.85	45.54	43.06
II	Expenditure	178.56	243.84	242.42	254.36	211.45
	Status (surplus/ deficit)	**(98.89)**	**(183.78)**	**(187.57)**	**(208.82)**	**(168.39)**

Summary of financial projections

							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Financial Year ------>		**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Figures in Rs. Lakhs				*Actuals*						*Projection*											
ra Municipal Council																					
SUMMARY																					
i	**Opening balance**	**27**	**23**	**25**	**51**	**42**	**45**	**55**	**65**	**50**	**49**	**64**	**43**	**19**	**7**	**14**	**29**	**73**	**146**	**230**	**322**
ii	**Revenue Receipts**	**420**	**571**	**481**	**627**	**746**	**700**	**745**	**810**	**886**	**959**	**1047**	**1130**	**1228**	**1343**	**1456**	**1579**	**1735**	**1886**	**2049**	**2246**
	Tax receipts	*34*	*42*	*48*	*74*	*70*	*85*	*92*	*101*	*115*	*126*	*138*	*150*	*169*	*186*	*204*	*224*	*253*	*279*	*307*	*339*
	Non-tax receipts	*91*	*87*	*108*	*109*	*94*	*110*	*106*	*117*	*129*	*137*	*153*	*160*	*167*	*188*	*198*	*208*	*233*	*247*	*259*	*291*
	Revenue grants	*295*	*442*	*324*	*444*	*582*	*505*	*547*	*592*	*642*	*696*	*756*	*821*	*891*	*969*	*1054*	*1147*	*1248*	*1360*	*1482*	*1617*
iii	**Revenue Expenditure**	**361**	**380**	**315**	**386**	**586**	**517**	**566**	**611**	**670**	**797**	**928**	**1014**	**1108**	**1212**	**1327**	**1432**	**1571**	**1725**	**1895**	**2082**
	Salaries	*194*	*198*	*200*	*239*	*242*	*259*	*277*	*296*	*317*	*402*	*430*	*461*	*493*	*527*	*564*	*604*	*646*	*691*	*740*	*791*
	O&M	*155*	*182*	*115*	*134*	*345*	*258*	*289*	*315*	*353*	*395*	*443*	*496*	*555*	*622*	*696*	*780*	*873*	*978*	*1096*	*1227*
	O&M of new assets						*0*	*0*	*0*	*0*	*0*	*35*	*37*	*40*	*42*	*45*	*49*	*52*	*56*	*59*	*64*
	Debt servicing	*12*	*0*	*0*	*13*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
iv	**Capital receipts**	**48**	**16**	**51**	**22**	**19**	**4**	**4**	**516**	**592**	**6**	**7**	**7**	**8**	**9**	**10**	**12**	**13**	**14**	**16**	**18**
v	**Capital expenditure**	**12**	**21**	**2**	**63**	**8**	**7**	**7**	**568**	**652**	**0**	**0**	**7**	**8**	**9**	**10**	**12**	**13**	**14**	**16**	**18**
	Extraordinary receipts	**80**	**60**	**55**	**46**	**43**	**57**	**62**	**69**	**75**	**83**	**91**	**100**	**110**	**121**	**134**	**147**	**162**	**178**	**196**	**215**
	Extraordinary expenditure	**179**	**244**	**242**	**254**	**211**	**226**	**228**	**231**	**233**	**235**	**238**	**240**	**242**	**245**	**247**	**250**	**252**	**255**	**257**	**260**
vi	**Total receipts**	**547**	**647**	**587**	**694**	**809**	**760**	**812**	**1395**	**1554**	**1048**	**1144**	**1238**	**1346**	**1473**	**1600**	**1737**	**1910**	**2078**	**2260**	**2479**
v	**Total expenditure**	**551**	**645**	**560**	**704**	**806**	**750**	**802**	**1410**	**1555**	**1033**	**1166**	**1261**	**1359**	**1466**	**1584**	**1693**	**1837**	**1994**	**2168**	**2360**
	New Debt Servicing Exp.						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ULB contribution/ Rev. Surplus Transfer for Asset creation						-	**57**	**65**	-	-	-	-	-	-	-	-	-			
vi	Operating Surplus/ Deficit for the year	58	191	166	240	160	183	179	199	217	162	118	116	119	130	129	147	164	161	154	164
vii	Municipal Surplus/ Deficit for the year	-4	2	26	-9	3	10	10	-15	-1	-5	-22	-23	-13	7	16	44	73	84	92	119
viii	Closing balance	**23**	**25**	**51**	**42**	**45**	**55**	**65**	**50**	**49**	**64**	**43**	**19**	**7**	**14**	**29**	**73**	**146**	**230**	**322**	**441**

Financial projections – Revenue Receipts

							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Financial Year ------>		**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Figures in Rs. Lakhs				*Actuals*						*Projection*											
REVENUE ACCOUNT																					
RECEIPTS																					
I	**Own Sources**																				
1	Property tax	7	10	8	9	9	16	15	16	20	21	22	21	26	27	27	28	34	35	36	36
2	Water tax	1	2	2	2	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3
3	Education tax	4	6	5	7	6	6	6	6	7	7	7	7	7	7	7	7	7	7	8	8
4	Road tax	17	19	30	51	49	56	63	70	78	88	98	110	124	138	155	174	194	218	244	273
5	Other taxes	5	5.0	4.2	5.7	5.4	6	7	7	8	8	9	10	11	11	12	13	15	16	17	19
	Total	**34**	**42**	**48**	**74**	**70**	**85**	**92**	**101**	**115**	**126**	**138**	**150**	**169**	**186**	**204**	**224**	**253**	**279**	**307**	**339**
I	**Non-Tax Revenue**																				
1	Rent from Municipal properties	11	1	9	20	10	16	16	17	18	19	20	21	22	23	24	26	27	28	30	31
2	Development charges	18	16	4	14	10	12	13	14	14	15	16	17	17	18	19	20	21	22	23	25
3	Building permission & coloniser fee	1	2	2	3	3	3	3	4	4	5	5	6	7	7	8	9	10	12	13	15
4	License and other fees	11	14	29	18	15	18	19	21	23	25	27	29	31	34	37	40	43	47	51	55
5	Fee from municipal schools/ hospitals	0.4	0.4	0.4	0.4	0.4	0	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8
6	Other income & fees	4	6	14	5	5	5	6	6	7	7	7	8	8	9	10	10	11	12	12	13
7	Interest on investments	1	2	4	4	4	4	5	5	6	7	7	8	9	10	12	13	15	16	18	21
8	Water charges	45	46	47	45	47	51	43	49	57	59	70	70	71	85	87	89	105	109	110	131
	Total	**91**	**87**	**108**	**109**	**94**	**110**	**106**	**117**	**129**	**137**	**153**	**160**	**167**	**188**	**198**	**208**	**233**	**247**	**259**	**291**
II	**Transfers & Revenue Grants**																				
1	Octroi grant	191	267	161	253	341	314	336	359	384	411	440	471	504	539	577	617	661	707	756	809
2	Mid day meal grant	15	7	2	4	5	7	8	8	8	9	9	10	10	11	11	12	12	13	14	14
3	Basic services grant	58	67	91	80	112	91	102	115	128	144	161	180	202	226	253	284	318	356	399	446
4	Road grant	19	20	17	26	23	22	23	25	26	27	29	30	32	34	36	38	40	42	45	47
5	SFC	5	19	20	27	38	23	26	29	32	36	41	45	51	57	64	71	80	90	100	112
6	12th FC	0	30	27	38	57	32	36	40	45	51	57	63	71	80	89	100	112	125	140	157
7	11th FC	0	12	0	0	0	3	3	3	3	3	4	4	4	4	4	5	5	5	5	6
8	Slum grant	0	6	6	5	5	5	5	5	6	6	6	7	7	7	8	8	8	9	9	10
9	Water grant	8	15	0	10	0	7	8	8	9	9	10	10	11	11	12	12	13	13	14	15
	Total	**295**	**442**	**324**	**444**	**582**	**505**	**547**	**592**	**642**	**696**	**756**	**821**	**891**	**969**	**1054**	**1147**	**1248**	**1360**	**1482**	**1617**
Total Revenue Receipts		**420**	**571**	**481**	**627**	**746**	**700**	**745**	**810**	**886**	**959**	**1047**	**1130**	**1228**	**1343**	**1456**	**1579**	**1735**	**1886**	**2049**	**2246**

Financial projections – Revenue Expenditure

							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Financial Year ------>		**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
	Figures in Rs. Lakhs			*Actuals*						*Projection*											
REVENUE ACCOUNT																					
EXPENDITURE																					
III	**Establishment - GAD**	194	198	200	239	242	259	277	296	317	402	430	461	493	527	564	604	646	691	740	791
	Salaray- water supply	18	18	15	33	34	37	39	42	45	57	61	66	70	75	81	86	92	99	106	113
	Salary - Sewerage									0	0	0	0	0	0	0	0	0	0	0	0
IV	**O&M Expenses**																				
	O&M on Current Assets	155	182	115	134	345	258	289	315	353	395	443	496	555	622	696	780	873	978	1096	1227
	1 General Administration and tax collection	16	11	15	28	23	29	32	27	30	34	38	42	47	53	60	67	75	84	94	105
	2 Tax collection dept	0	3	3	5	6	6	7	8	9	10	11	12	13	15	17	19	21	24	26	30
	3 Fire dept	0	0	0	2	3	3	3	3	4	4	5	5	6	7	8	8	9	11	12	13
	4 Streetlighting dept	13	10	11	10	19	22	24	27	30	34	38	43	48	54	60	67	75	84	94	106
	5 Water supply	57	53	35	12	19	39	44	49	55	62	69	78	87	98	109	122	137	154	172	193
	6 Sanitation	31	37	30	46	57	64	72	81	90	101	113	127	142	159	178	200	224	251	281	315
	7 SWM	10	1	3	5	9	11	12	13	15	17	19	21	23	26	29	33	37	41	46	52
	8 Garden	5	7	6	14	16	18	20	23	26	29	32	36	40	45	51	57	63	71	80	89
	9 PWD	13	50	6	8	173	56	63	70	79	88	99	111	124	139	155	174	195	218	244	274
	10 Municipal school	1	2	1	1	14	4	5	5	6	7	7	8	9	10	12	13	15	16	18	20
	11 Others	8	9	5	4	3	6	7	8	9	10	11	13	14	16	18	20	22	25	28	31
	O&M on New Assets											33	37	40	42	45	49	52	56	59	64
	Phasing of Non-Debt Liabilities						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
V	**Debt Servicing**																				
	Outstanding Debt Liabilities - Old	12	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Outstanding Debt Liabilities - New						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VI	**Annuity contribution**						0	0	0	0	0	21	21	21	21	21	0	0	0	0	0
	Sewerage project on PPP											0	0	0	0	0	0	0	0	0	0
	SWM project on PPP											21	21	21	21	21					
	Total Revenue Expenses	**361**	**380**	**315**	**386**	**586**	**517**	**566**	**611**	**670**	**797**	**923**	**1014**	**1108**	**1212**	**1327**	**1432**	**1571**	**1725**	**1895**	**2082**

Financial projections – Capital Account

							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Financial Year ------>		**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Figures in Rs. Lakhs		*Actuals*					*Projection*														
CAPITAL ACCOUNT																					
RECIPTS																					
I	**Own Sources/ Sale of lands**	3	15	8	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
II	**Capital grants & Contributions**																				
	1 Grants under schmes	45	1	43	21	13	4	4	5	5	6	7	7	8	9	10	12	13	14	16	18
	3 UIDSSMT Grants from GoI						0	0	455	522	0	0	0	0	0	0	0	0	0	0	0
	4 UIDSSMT Grants from GoG						0	0	57	65	0	0	0	0	0	0	0	0	0	0	0
	Total	**45**	**1**	**43**	**21**	**13**	**4**	**4**	**516**	**592**	**6**	**7**	**7**	**8**	**9**	**10**	**12**	**13**	**14**	**16**	**18**
III	**Loans**	**0**	**0**	**0**	**0**	**0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Total Capital Receipts	**48**	**16**	**51**	**22**	**19**	**4**	**4**	**516**	**592**	**6**	**7**	**7**	**8**	**9**	**10**	**12**	**13**	**14**	**16**	**18**
EXPENDITURE																					
IV	**CAPEX**	12	21	2	63	8	7	7	568	652	0	0	7	8	9	10	12	13	14	16	18

Property tax - projection

Pr	Tax			20	2005-06	-07	7-08	2008-09	9-10	010-11	2011-	20	2013-14	2		2016-17	2017-18	2018-1	2019
1	h Assu																		
	isting n	operties (2009)			10525														
	obable	es @ HH 6			11889														
	crease i	ssments due to Survey	'orms		1364	ts													
	crease i	ssments due to Survey	'orms		13%														
	nnual g	assessments			1.39%														
	aximum	Assessments (2031)			25,043														
	crease i	ssments due to Survey	'orms		13%	Existing	ties during												
	riodic r	in ARV per assessmer			25%	/ 4 Year	g 2012-13												
	llectio	nance - %			90%	ovemen													
2	rties Re																		
	mber o	ssessments		879	8,879	9,700	11,407	11,440	12,210	12,991			38 14,906		95	86 15,480	15,6	15	1
	w asse	s in current year			821	1,707	33	770	781	181			58 189		91	94 197	1		
	crease	ssments due to Survey	'orms										64 1,364		64	64 1,364	1,3	1	
	gular g			879	9,700	11,407	11,440	12,210	12,991	13,172			42 13,731		22	.16 14,313	14,5	14	1
	tal num	Assessments		879	9,700	11,407	11,440	12,210	12,991	13,172			06 15,095		86	80 15,677	15,8	16	1
	emand																		
	verage	Assessment (Rs./ Ass	/ Annu					109	109	109			86 136		36	.36 170	1		
	rrent d	Rs. Lakh						**13.30**	**14.15**	**14.35**			**27 20.53**		**79**	**05 26.65**	**26.**	**2**	
3	Stateme	Lakhs)																	
	ening	(Arrears Demand)		.50	11.00	10.59	11.26	10.39	7.69	6.28			34 4.31		.41	.42 2.35	2.		
	mand F	During the Year (current		.00	10.50	11.00	12.51	13.30	14.15	14.35			27 20.53		.79	.05 26.65	26.	2	
	tal Dem			**.50**	**21.50**	**21.59**	**23.77**	**23.69**	**21.84**	**20.62**			**51 24.84**		**20**	**.47 29.00**	**29.**	**3**	
	rrears C	n		.20	8.32	7.94	7.71	7.27	5.48	4.71			58 3.71		.07	.18 2.11	2.		
	rrent C	n		.71	7.25	8.25	10.67	8.73	10.08	10.76			73 17.71		.71	.95 23.99	24.	2	
	tal Coll			**.90**	**15.57**	**16.19**	**18.38**	**15.99**	**15.57**	**15.47**			**31 21.42**		**78**	**13 26.10**	**26.**	**2**	
	tal Coll	Performance - %		**29**	**72.41**	**75.00**	**77.33**	**67.52**	**71.27**	**75.01**			**61 86.25**		**00**	**00 90.00**	**90.**	**9**	

Water charges - projection

Water Charges

FLAT BASIS PROJECTION

1	**Growth Assumptions**			
	i	No. of Water Connections (Current)	4,197	Nos
		Probable no. of connections in the city @ 6 HH size	12,055	
	ii	Current Collection Performance - %	74%	
	iii	Growth in Water Connections	1.39%	p.a
	iv	Regularisation of Unaccounted for Connections	5,500	inclusion over a period of 2 years
	v	Initial increase in monthly charge/ new connection fee - %	15%	during
	vi	Increase in monthly charge/ new connection fee - %	20%	every 3 Years after
	vii	Average Monthly Charge for Revision in future	92	Rs/ Month/ Connection in
	viii	New Connection Deposit Fee for Revision in future	1,080	Rs. (One-time Deposit) in
	ix	Collection Performance - %	85%	

			1.00	1.00	1.00	1.00	1.00	Inflation									
2	**Water Tariff**		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	i	Water Connections as % of PT Assessments	46%	42%	36%	36%	34%	33%	33%	51%	67%	66%	66%	65%	63%	65%	64%	64%
	ii	Number of new connections		(10)	27	(27)	123	58	59	2,810	2,811	62	63	64	64	65	66	67
		Regularisation of Unaccounted for Connections								2,750	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500
		Growth in Water Connections	4,084	4,074	4,101	4,074	4,197	4,255	4,314	4,374	4,435	4,497	4,560	4,624	4,688	4,753	4,819	4,886
	iii	Total No. of Water Connections	4,084	4,074	4,101	4,074	4,197	4,255	4,314	7,124	9,935	9,997	10,060	10,124	10,188	10,253	10,319	10,386
	iv	Average Monthly Charge (Rs/ Connection/ Month)					80.00	80.00	80.00	80.00	80.00	80.00	96.00	96.00	96.00	116.00	116.00	116.00
3	**DCB Statement (Rs. Lakhs)**																	
	i	Opening Balance (Arrears Demand)	23.00	21.64	15.95	13.74	18.58	17.66	15.11	13.37	17.57	21.83	20.22	20.42	20.56	20.69	24.51	25.22
	ii	Demand Raised During the Year (current)	43.00	44.48	43.98	46.70	44.54	40.85	41.41	68.39	95.38	95.98	115.90	116.63	117.37	142.73	143.65	144.58
		Total Demand	**65.99**	**66.12**	**59.93**	**60.44**	**63.12**	**58.51**	**56.52**	**81.76**	**112.95**	**117.81**	**136.12**	**137.05**	**137.93**	**163.42**	**168.16**	**169.80**
	iii	Arrears Collection	11.03	10.41	12.76	9.18	10.85	13.10	11.53	10.50	14.18	18.08	17.19	17.35	17.47	17.59	20.84	21.44
	iv	Current Collection	33.31	35.69	34.08	35.37	34.61	30.30	31.62	53.69	76.95	79.50	98.51	99.14	99.77	121.32	122.10	122.89
		Total Collection	**44.34**	**46.10**	**46.84**	**44.55**	**45.46**	**43.40**	**43.15**	**64.19**	**91.12**	**97.59**	**115.70**	**116.49**	**117.24**	**138.91**	**142.94**	**144.33**
		Arrears Collection Performance						**74%**	**76%**	**79%**	**81%**	**83%**	**85%**	**85%**	**85%**	**85%**	**85%**	**85%**
		Current Collection Performance						**74%**	**76%**	**79%**	**81%**	**83%**	**85%**	**85%**	**85%**	**85%**	**85%**	**85%**
	v	**Total Collection Performance - %**	**67.19**	**69.72**	**78.16**	**73.71**	**72.02**	**74.18**	**76.34**	**78.51**	**80.67**	**82.84**	**85.00**	**85.00**	**85.00**	**85.00**	**85.00**	**85.00**
4	Income from New Connection Fee																	
	i	Average New Connection Fee (Rs./ Connection)		1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,300	1,300	1,300	1,300	1,600	1,600
	ii	Income from New Connection Fee- Rs. Lakh		(0.11)	0.29	(0.29)	1.33	0.63	0.64	30.35	30.36	0.67	0.82	0.83	0.83	0.85	1.06	1.07
		Total Revenue	**44.34**	**45.99**	**47.13**	**44.26**	**46.79**	**44.03**	**43.79**	**94.54**	**121.48**	**98.26**	**116.52**	**117.33**	**118.07**	**139.75**	**143.99**	**145.41**