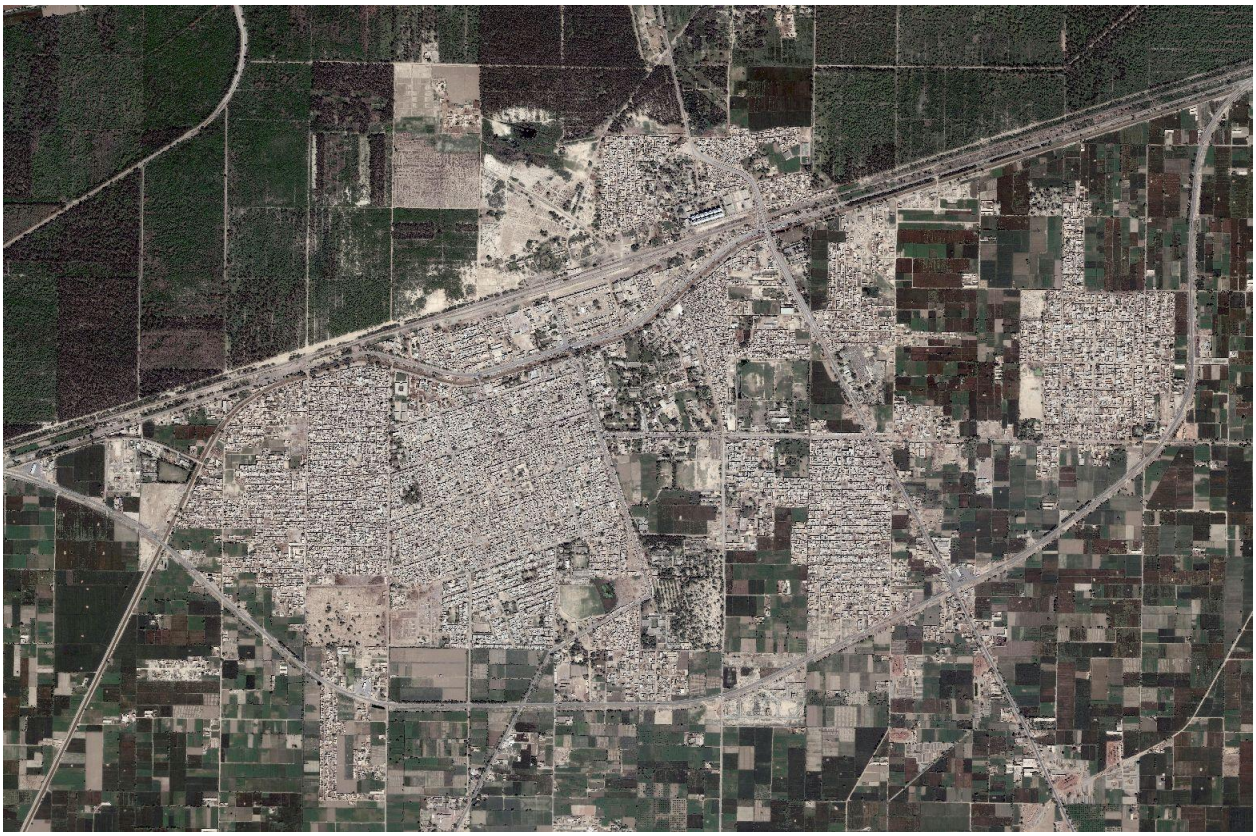
PUNJAB MUNICIPAL DEVELOPMENT FUND COMPANY

PUNJAB MUNICIPAL SERVICES IMPROVEMENT PROJECT (PMSIP)



PLANNING REPORT
CHEECHAWATNI
2008

LIST OF CONTENTS

CHAPTER 1: INTRODUCTION

1.1 Background

Planning is a part of Punjab's local government system with the planning responsibilities of TMAs, set out in PLGO. Under the devolved system, the newly created office of TO(P) has the following functions ; (i) develop plans; (ii) develop and apply building controls; (iii) manage CCBs; (iv) implement commercialization rules; (v) operate Punjab Housing Development Schemes; (vi) develop site development schemes. In addition, The PLGO identifies the preparation of spatial plans (Article 54 a), development plans (Article 54 c) and budget plans, long term and annual municipal development programs (Article 54 j) as key functions of the TMAs. Unfortunately, in majority of TMAs TO (P) office has not been able to perform as envisioned in the PLGO. Some of the reasons are inadequate staff and lack of up-to-date maps, equipment, management/ regulation/ and enforcement mechanisms. As a result, development works are taking place in a piecemeal manner and lack integrated and coordinated approach.

1.1.1 Punjab Municipal Service Improvement Project (PIMSIP)

Under these circumstances the Government of Punjab launched Punjab Municipal Service Improvement Project (PIMSIP) through Punjab Municipal Development Fund Company (PMDFC) .The project aims at the institutional development of TMAs through improving systems directly related to their functions and through investments in service delivery.

1.2 Key Features of PMSIP

The project has two distinct components; Municipal Infrastructure Development and Institutional Development (ID):

Municipal Infrastructure development: The project funds the infrastructure schemes after the identification of most pressing development issues of the respective town.
Institutional Development: To improve the service delivery , a number of interventions are suggested in the projects like providing maps prepared with GIS, Performance Management System, Financial Management System, Action Planning and various trainings to TMA staff.

1.3 PMSIP Planning

Under PMSIP planning rapid appraisal of municipal services is undertaken to identify service delivery gaps, analyzed needs and guide the means to overcome such gaps. In addition, stakeholder consultation provides the much needed guidance to the planning exercise.
Outcome of this exercise is a municipal service data base, improved mapping and a list of development projects that may be funded by PMSIP.

1.3 Limitations of PMSIP Planning

As every project addresses specific issues, PMSIP has been launched with some limitations as follows:

- The PMSIP development grants fund for municipal services only.
- PMSIP planning exercise is undertaken at CO Units starting from CO Unit HQ, i.e urban area.
- The prioritized list that is developed is restricted to the UCs falling in CO Units.

Nonetheless it is assumed that experience gained in the urban areas would be replicated in the entire TMA.

1.4 The Planning Process

The Planning process adopted incorporates an overall Strategy for high lighting the development options and the community's agreed outputs. These out put form the basis of spatial plan. It is a more inclusive approach aiming to ensure best use of land by weighing up competing demands.

The plan devised is an ongoing process for the sustainable development. To achieve such development a Spatial plan has been developed. It addresses municipal development issues and infrastructure needs in a systematic way. The plan therefore emphasizes on engagement with the stakeholders and other organizations, the management and ongoing funding programs. This led to identify the community's preferences for development process.

After the identification of the preferred options, a detailed Action plan for each priority sector was developed. Action plans complement the strategy and Spatial plan by setting out short to medium term actions to achieve the desired objectives. The Planning process thus culminates in producing a concise development plan for the town.

Following steps were adopted for the planning process:

1.4.1 Secondary Data Collection

First, the sources were identified for the previous attempts that were made in Renala Khurd for planning. It includes , DCR, on line data and PHED services maps.
The study of such documents helped to gather background information about the town, infrastructure coverage and growth. It helped to have an understanding about the development patterns evolved over a period of years.

The maps from Public health reflected the water supply and sewerage laid out previously. It was also gathered that the whether the projects have completed their designed life. These plans were again used at the analysis stage and compared with the existing data collected later on.

1.4.2 Mapping

The first requirement before going to the field was to prepare a base map for the town. For this purpose, the mapping exercise was started in parallel to the secondary data collection. The image was procured for the TMA. It was then processed and a vectorized layer was made. The land marks were put on the base map using the secondary sources i.e maps

obtained from PHED. The land marks included the important roads, water features, big buildings, factories, graveyards etc.

1.4.3 Orientation Workshop

A one day, *"Orientation workshop on Punjab Municipal Service Improvement Project"* was organized on 14th June 2008 for Tehsil Nazims, TMOs ,TOs (I&S) and TOs (P&C) of year 2 partner Tehsil Municipal Administrations. The workshop aimed at briefing the partner TMAs about PMDFC, PMSIP, Action Planning, Institutional development initiatives of PMSIP, Operation and maintenance of urban services and various other issues related to the project.

A presentation was given on infrastructure sub-projects, and the Institutional Development approach of Punjab Municipal Services Improvement Project (PMSIP). The Planning Consultant gave a detailed account of Action Planning in PMSIP. To develop some familiarity before the start of the data collection exercise with TMA staff, data collection forms were handed over to TO (I&S).

The workshop achieved the following outcomes:

1. Give the audience a foretaste of PMDFC and PMSIP.
2. Give the top leadership of TMAs an opportunity to develop their mind about the whole planning process.
3. Data collection forms were handed over to TOs for familiarization of the same.

Data Filling Forms Workshop at PMDFC

A few days of handing over the data collection forms to the TMA officials, another workshop was scheduled at PMDFC. This time second line officials were called upon. This meeting led to develop a common understanding between PMDFC and TMA staff about the data collection forms. ATOs and Sub engineers attended the workshop.

The TMAs were called in groups of 3-4 each day so that a close liaison could be developed for knowledge sharing.

A rigorous brain storming session was conducted in which many apprehensions about the forms were removed. The data collection forms were reviewed and planning team made clarifications to TMA officials about these forms. At this stage the data collection forms were finalized.

1.4.4 Field Data Collection

Preliminary meetings

Once the data collection forms were finalized the planning team was to initiate the data collection process in the field. First, a meeting was held with the TMA leader ship (Nazim) to discuss the field data collection work plan. At this stage a planning steering committee

comprising of TOs, and a working group constituting ATOs and other lower order officials was notified. The duties were assigned and a briefing was given to these officials about their role in data collection.
The planning team discussed the general development issues of the town with the Nazim and notes were recorded.

Infrastructure Data Collection

For infrastructure data collection, the planning team worked very closely with the working group. First the existing service maps available with the TMA were used as a starting point. To update the map the secondary source like information from Public health maps was added. This information was verified by the working group to prepare an updated map for the services.

This missing or additional information was provided by second line officials. For instance, for water supply, plumbers and sub engineers provided first hand information about the system. Where necessary, field visits were made to validate the information.

Urban Planning

A Landuse survey was conducted to update the TMA map. The residential areas, commercial, institutional and open spaces and industrial areas were marked on the base map. The team comprised for the survey was TO (P), urban planner from PMDFC and draftsman from TMA.

The Planning office guided about the growth directions of the town and a rudimentary survey was made in this regard. It was observed where the new residences were built and institutions were being developed. These factors determine the future expansion of the town.

In addition to it, the land ownership and land values information was recorded.

1.4.5 Data Analysis

Once the planning team collected the data, all of the forms were arranged in the office. The data was cleaned and integrated. The PMDFC officials contacted the TMA office again if any gaps were found in the collected data. Such additional information was gathered for each sector.
Based on the information collected in the field, descriptive maps for all the municipal sectors like water supply, sewerage, solid waste and land use were developed. The analysis report was produced by the planning team by using these maps. This report was again sent to the engineers for futher updation and review and hence a final draft was made.

1.4.6 The Visioning/Prioritization Workshop

The planning process stems from the Nazim and other stakeholders vision of the town which is further translated into the tangible and concrete targets. The salient feature of this step is the visioning and prioritization workshop. Participants of the workshop were the Nazim and Naib Nazim, senior TMA officials, including the TMO, all the TOs and staff members,

councilors, local representatives of provincial departments, representatives of NGOs operating in the town, representatives of civic groups such as the trade bodies. A comprehensive presentation was given to all of the stakeholders about the fabric of the municipal infrastructure in the town. They all shared their views about the future development options and investment decisions of their town. Once the vision was agreed upon and the objectives were established, a rigorous session was organized for the selection of the priority sectors.

At the end of the workshop the statement of agreed vision, objectives and priorities was summarized in written draft and circulated among all the stake holders.

1.4.7 Meeting for the Assessment of options

After the vision and overall objectives were agreed upon and priorities identified the next step in the planning process was to achieve them efficiently and effectively. At this stage the TMA staff and PMDFC synergized their efforts to suggest the viable options for the achievement of the objectives. In this regard, additional field visits were done by PMDFC engineers in the town.

Hence, the outline spatial plan was produced. This plan takes account of options for future physical growth of the town in the light of strategic requirements and existing trends.

After the identification of the preferred options outline proposals for priority sectors were developed. These proposals were appended to the strategy and Action plan.

The final draft of the plan, after wide acceptance of all stakeholders was prepared. In the final draft plan detailed financial issues were discussed in addition to vision, Spatial and Action plan.

Secondary

Stakeholders

- DCR, ODP , PHED, Budget Books

MAPPIN

- Procurement of Images

Orientation Workshop

- PMSIP Orientation
- Data Collection Forms

o

- Familiarization with PMDFC

Data Filling Workshop

- Brain Storming Session
- ATO, Sub- Eng ,PMDFC Planners and

o

Finalizing the data collection forms

Field Data

- All Infrastructure Sectors
- Landuse, Growth

- Descripti

Data Analysis

Visioning Workshop

o

Prioritized infrastructure

OUT LINE SPATIAL PLAN

CHAPTER 2 PROFILE OF TMA

2.1 District Profile

2.1.1 General

The district was originally known Gugera after the name of small village on the left bank of Ravi river. It became a regularly administered area in1849. With the advent of railways, the headquarters was shifted in 1865 to the present site known then as Sahiwal, which was a small settlement of local 'Sahu' tribesmen, and was named Montgomery after the name of Sir Robert Montgomery who was the Lieutenant Governor of the Punjab. Honoring the wishes of the people of the district on 14th November,1966, the Government revived its old name, Sahiwal.

2.1.2 Area/Demography

The district Sahiwal has two Tehsils/TMAs, Sahiwal and Chichawatni. The total area of the district Sahiwal is 3,201 square kilometers. Population of the district as per 1998 census is 1, 843, 194 persons with a growth rate of 2.16.
Details of district population are follows:

Tehsil	Area (sq.km.)	Population 1998							Population 1981	1981-98 Avg annual growth rate (%)
		Both sexes	Male	Female	Sex ratio	Population density/sq. km.	Urban proportion	Avg. HH size		
Sahiwal District	3,201	1,843,194	953,561	889,633	107.2	575.8	16.4	6.9	1,281,526	2.16
Chichawatni	1,591	785,357	403,247	382,110	105.5	493.6	9.3	7.0	553,381	2.08
Sahiwal	1,610	1,057,837	550,314	507,523	108.4	657.0	21.7	6.8	728,145	2.22

Source: DCR Sahiwal

2.2 TMA/TOWN PROFILE

2.2.1 Location

Chichawatni is situated in the west of Sahiwal. The approximate distance from Sahiwal is 45 kilometers. The main railway track passes through this town. It is a busy grain and cotton market. When colonization started, the site of present mandi was selected to the south west of the old railway station and the first auction took place in 1916. The mandi stand between the Tumanwala Minor and the railway line. The town is built to the south of the distributory. The old railway station was abandoned and a new railway station built near the mandi.

2.2.2 Area/Demography

Urban Population Forecasts		
Sr. No.	**Year**	**Population**
1	2008	88,454
2	2013	98,622
3	2018	109,958
4	2023	122,597
5	2028	136,690

Tehsil Cheechawatni comprises of 1,591 square kilometers with a population of 785,357. The annual average growth rater of Tehsil is 2.08 whereas urban population is 55, 433 as per 1998 census. The projected population for year 2008 is 301,990 persons, which is expected to grow to 153, 734 persons for the year 2028.

Population of Okara has been projected over the next 20 years using the following formula:

$$P_n = P_o (1+r/100)^{n-1}$$

Where P_n = Population of the desired year, P_o = Population of the base year, r = Population Growth Rate, n = Number of years.

Incremental Population (2008-2028)					
Population 1998	**Incremental Population**				
	1998-2008	**2008-2013**	**2013-2018**	**2018-2023**	**2023-2028**
72, 721	15,733	10,168	11,336	12,639	14,093

Details of CO unit are as follows:

CO Units	**Population 1998**			**Population 1981**	**1981-98 Avg. annual growth rate (%)**	**Avg. HH size**
	Both sexes	**Male**	**Female**			
Chichawatni	72,721	37,542	35,179	50,241	2.20	7.2

CHAPTER 3: URBAN PLANNING

3.1 Mapping

A comprehensive mapping exercise under *Geographic Information System* has been undertaken in Jheum by PMDFC. Previously, the maps available with the TMA were obsolete and out dated. But now the TMA is equipped with latest up to date maps.

The maps developed through GIS are base map for roads, land use map, UC boundary map, Map with Mohallah Names and maps for all service like water supply, sewerage, solid waste management and street lights.

3.2 Land use Characteristics

Chichawatani is located along Grand Trunk road, near the intersection of GT road and Faisalabad-Burewala road. In the east side there is Sahiwal district along GT road which finally leads to Lahore and in west of Chichawatani there is Multan. In the north of chichawatani there is Faisalabad and the road leading to Faisalabad is Kamalia road also on the northern side there is a forest which is a natural barrier to the growth of city. On western side there is canal and across it Commerce College is situated. The growth of city is towards southern side along the burewala road and bypass road.

The city has grown on southern side as there are some natural barriers on the northern direction. A provincial high way i.e. Grand Trunk road pass on the northern side of the city along with it there is a railway track. On the other side of the railway track there is a forest. This forest, railway line and the canal are working as natural barriers to the growth of the city.

Most densely populated area is in central part of the city. It is one of the oldest parts of the city. In this part there are nineteen residential blocks. In these blocks there are mostly one, two and three storey buildings the roads along these blocks are at right angle to each other. Building condition in these residential blocks is normal. On the western side of nineteen residential blocks there is a katchi abadi which is one of the largest katchi abadies of chichi watani and the name of this katchi is Gwoshallah. Overall there are nine registered katchi abadies in chicha watani. Housing condition in these katchi abadies is mostly normal but there are some houses which are in dangerous condition.

Commercial area of chichi watani is mostly concentrated in nineteen residential blocks the name of the some major bazaars which have major commercial activity are Shaheed millet road, Okanwala road, Sadar bazaar, Ghanta Ghar, Daras road, Nia bazaar, Rahmani road, main bazaar Jamia Masjid road, college road.
There was encroachment in some bazaars but most of the bazaars have negligible encroachment. The bazaars having encroachments are mainly Shaheed millet road and

Okanwala road. But these encroachments were not permanent as there were hand driven carts and animal driven cart. In Ghanta Ghar there were lot of animal driven carts which were waiting for work but at the same time they were causing problems for vehicles.

On the eastern side of chicha watani near Grand Trunk road there are courts and on the eastern side of the residential blocks there are tehsil Nazim office, veterinary hospital, government girls high school, government boys high school and on the south eastern corner of residential blocks there is a tehsil head quarter hospital. On the southern side of residential block number fifteen there is a government girl's degree college.

Across the railway line, on the northern side of chicha watani there is a forest park and the land of this park is under the forest department on the southern side there is Mustafa Shaheed Park its land is under the control of provincial government. Rahat Park is situated on the eastern side of residential block number eight which is in the control of tehsil municipal administration there are two other parks namely ladies park and housing colony park.
There is a graveyard on the south eastern side of the blocks. And on the south western side of the blocks there is a Mall mandi and north of this mandi there is Christian colony on the eastern side of the mall mandi and Christian colony there is main disposal station of the city. On the eastern side there is a road which connects Chicha Watani to burewala in south and in north to Faisalabad and on the southern side of this road there is Wapda Grid Station.
On the north of block 1 there is Pasco god owns and on the north of the block 4 across the canal there is grain market.

3.3 Growth Directions

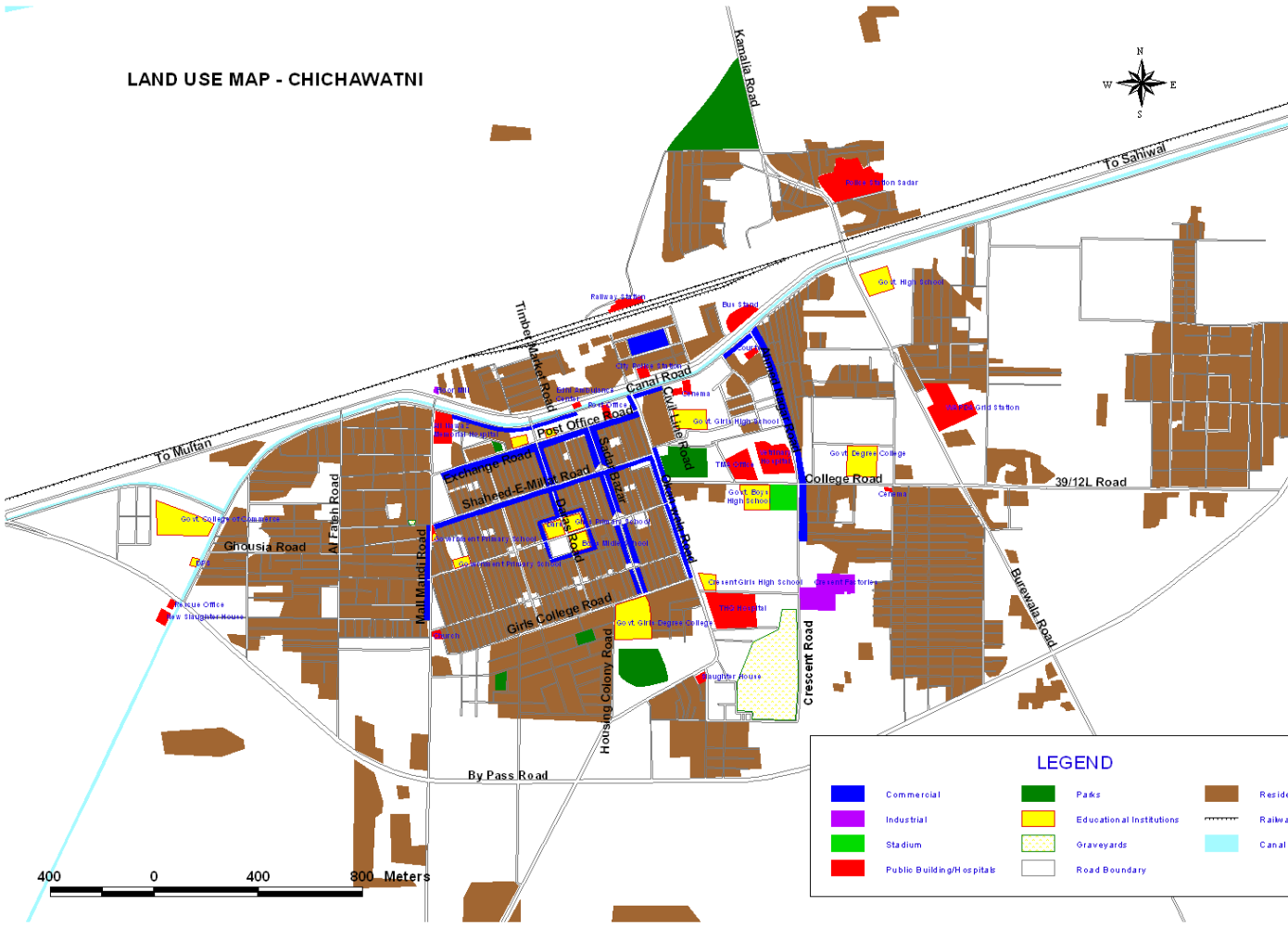
On the northern side of Chicha Watani there are some natural barriers to the growth of city i.e. railway line, canal and forest due to these hindrances the development of the city is not possible on that side. But on the eastern side there is a village between eastern side of the by pass and Mehr Abad and WAPDA Grid station there is not any notice able growth on this side same is the case for western side of the city for development as on the western side across the canal there is government college of commerce and Gulshan Hurmat and next to it the GT road and by pass road are intersecting.
Mainly development has been taken place on the north of the city across the by pass and along the burewala road the name of the few towns and colonies which have been developed along the by pass road and burewala road are:

1. Zam zam garden
2. Sidra town
3. Ghafore town
4. Failsal colony
5. Cheema town
6. Housing colony
7. Three marla scheme
8. Gulistan colony

3.4 Katchi Abadis

Chicha Watani is a planned town but there are almost nine katchi abadise due to several reasons
The names of the katchi abadise are as follows
Gaoshalla it is on the west of the central blocks it has been divided into different wards from 16- 21 it biggest katchi abadi in Chicha Watani

1. Ghareeb mahallah (Ahmad Nagar)
2. Shamas pura
3. Faisal colony
4. Islam pura
5. Christian colony
6. Darvash pura
7. Bilal ganj
8. Odan colony



CHAPTER 4: STATUS OF MUNICIPAL INFRASTRUCTURE

4.1. ROAD NETWORK

S. No.	Name of Road	Controlling Department
1.	GT road	Provincial road
2.	By Pass road	NHA
3.	Burewala Road	Provincial
4.	Okan Wala Road	District
5.	39/12 L road	District

Chichawatni was developed as a planned town with 19 residential blocks and wide roads and streets in a grid iron pattern. Chichawatni town lies on the main N-5 Lahore – Multan National Highway. It is connected with major towns by provincial highways such as Chichawatni – Kamalia road and Chichawatni – Burewala road. In the road hierarchy map major provincial and district roads are marked. In the town GT road is a provincial highway that runs along the railway track. It enters the town from east, crosses Burewala Chowk and

Palace Chowk and finally meets N-5 National Highway to Mulatan. Another provincial highway Brewala road runs south of the town from Burewal Chowk, Madina Chowk and finally crosses Lashkar Chowk at By-Pass road. Faisalabad road runs north of Burewala chowk. Okanwala road is district road runs south of Palace chowk and crosses By-Pass road. Another district road 39/12L goes east of Madina Chowk. Details of major roads and their controlling departments are give in the table.

Before the construction of By-Pass road, all the traffic emerging from the provincial highways had to cross the town. Therefore, the By-Pass road shown in the map takes major traffic load and saves the town from traffic jams.

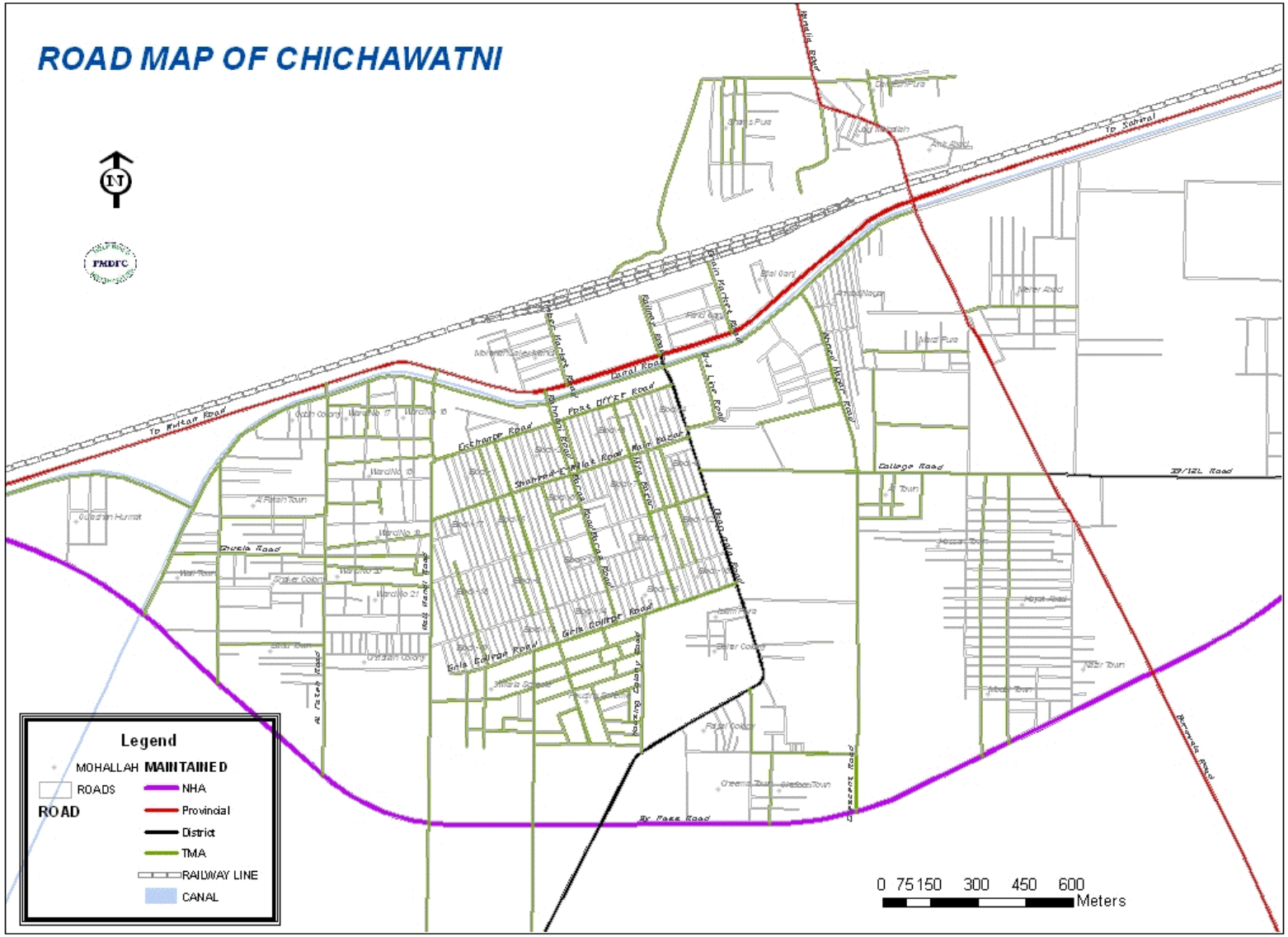
4.1.1 Condition of TMA Roads

As Chichawatni is a planned town therefore, roads are laid by taking care of planning requirements. Subsequently, temporary and permanent encroachments have narrowed down several roads. There are fifteen (15) crossings (chowks) in the town that regulate the flow of traffic. These chowks don't have signal lights.

Detail of road data and crossings of Chichawatni are placed in *Annex – A*.

4.1.2 Traffic Congestion

Since it is a planned town and construction of the By-Pass has led to lessen the intensity of traffic congestion in Chichawatni. However, Shahed-e-Millat road and Okanwala road do have temporary encroachment problems due to haphazard parking and street hawkers resulting in traffic obstruction and underutilizing right-of-way.


ROAD MAP OF CHICHAWATNI
N
PMDFC
Legend
MOHALLAH ROADS
MAINTAINED ROAD
NHA
Provincial
District
TMA
RAILWAY LINE
CANAL
0 75 150 300 450 600
Meters

4.1.3 Parking

There are no proper off-street parking lots in the town. This forces vehicle owners to park on the roads, streets and bazaars. As a result, disorganized and chaotic pattern of parking occurs and reduces road capacity.

4.1.4 O & M Expenses

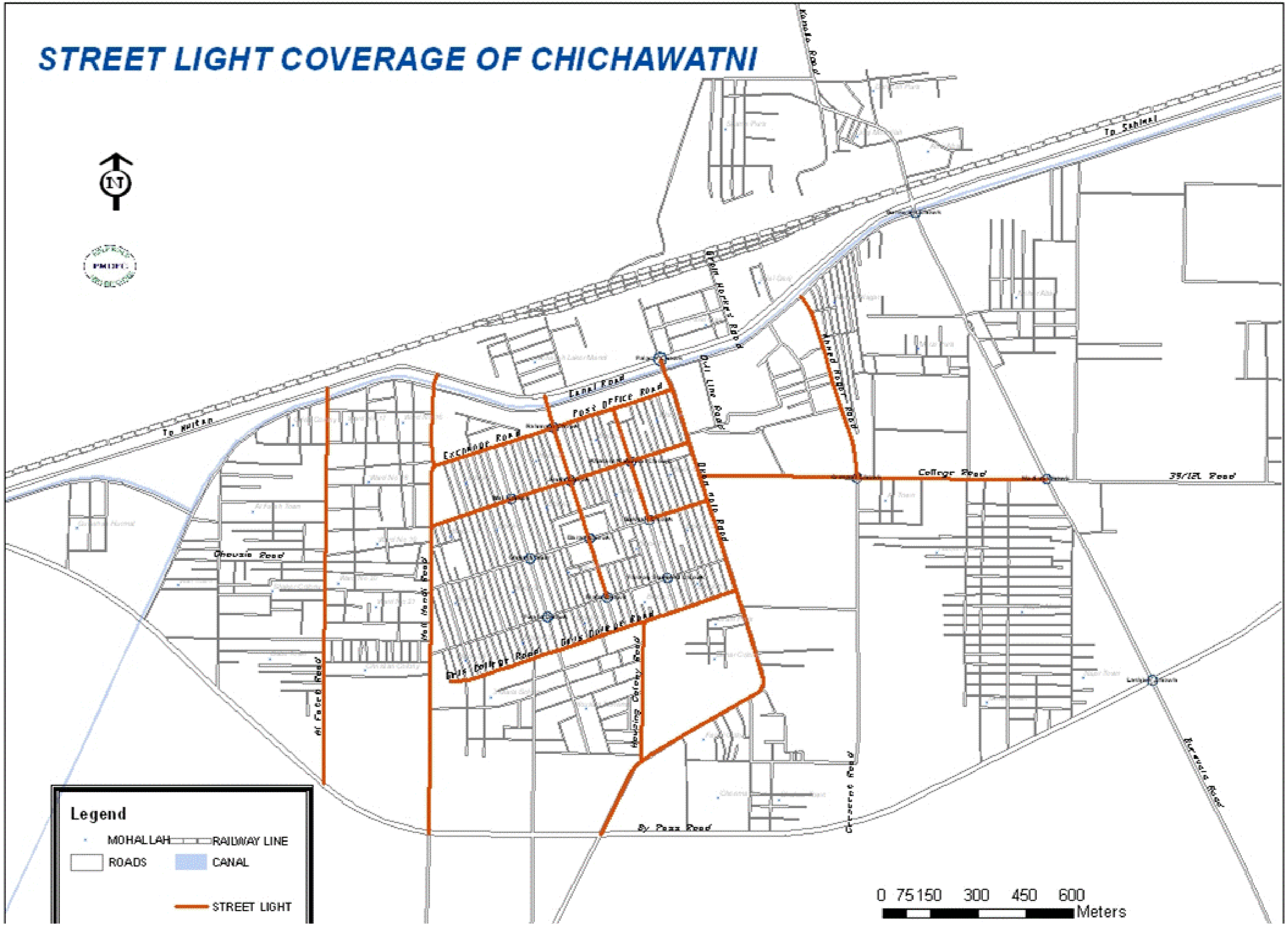
TMA does have two road rollers and a tar coal tankey for O& M. According to TMA sources, 5 km of patch work and 1 km of road work through contractors worth Rs 0.6 million was done in the last year. Repair on Road Roller in 2006-07 amounted to Rs 20,500. In addition Tar Coal Tankey was purchased in 2006-07 for Rs 1,38,000. Rs 100,000 has been put for 2007-08 for Road Roller repair.

4.1.5 Needs

- Ahmad Nagar Road needs raising and widening.
- Housing Colony road need raising and adequate drainage facility.
- 25 % patch work is needed in Main Bazar.
- Girls College road has 30 % depressions and need repair.
- Crescent road has 35 % bad sector with potholes and depressions and need repair.
- Daras road from Daras Chowk to Payala Chowk need repair.

4.2 STREET LIGHTS

There are two electricians and two helpers to take care of street light system. They are working without the requisite tools and machinery. Establishment expenditure last year amounted to Rs 300,000, whereas, electricity bills were 1,68,288 for year 2006-7 and Rs 200,000 have been budgeted for 2007-08. Purchase of tube lights and other electric goods was Rs 943,323 in 2006-07 and Rs 2,500,000 has been budgeted for 2007-08.


STREET LIGHT COVERAGE OF CHICHAWATNI
N
To Sahiwal
To Multan
Canal Road
Post Office Road
Exchange Road
College Road
39/12L Road
Ghausia Road
Wall Handi Road
Al Fateh Road
Bus Dalhar Road
Housing Colony Road
Crescent Road
By Pass Road
Legend
MOHALLAH
RAILWAY LINE
ROADS
CANAL
STREET LIGHT
0 75150 300 450 600
Meters

21

4.3 WATER SUPPLY

4.3.1 Service Area

Approximately 75 % of the entire town is served with water supply system whereas rest of the area is without it and people have their own sources of water mostly hand pumps / power pumps. Areas where water suplly is not provided include Model Town and Gulshan –e- Hurmat.

4.3.2 Water Sources

The shallow sub soil water of Chichawatni town is brackish and unfit for human consumption. However the water at deeper depth is of good quality. Present source of water supply system in the town is with deep T/wells installed (at depth of 400ft to 425ft) in the town. Water table is at 40-45 feet. Most of the town is dependent on TMA water supply. Therefore, situation necessitates expansion of distribution network to those areas which are without piped water supply. Water born diseases have been indicated in the town.

4.3.3 Consumer Connections

The total number of house holds in the town is approximately 13,000 and the total number of consumer connection is 4,822. Installation of house service connections is usually performed by plumbers of TMA. No proper billing and collection system of consumers charges is available.No bills are issued and people either pay at TMA office each year or TMA staff collects from households. As per TMA staff consumers usually pay their dues. Present domestic tariff is Rs 30 per month and was revised in year 2002. Very few commercial connections exist.

4.3.4 Distribution System

A net work of pipe lines with sizes ranging from 3” to 12” in diameter exists in the town. Low pressure and contaminated areas are shown in water supply system map.

4.3.5 Tube wells

To feed the present water supply system, there are 20 tube wells out of which 19 tube wells are operational and working 8 hours/day. Details of of tube wells including design discharge ith installing depth along with Production Capacity is summarized at Annex-B

Housing Colony OHR

4.3.6 Water Storage

There are five Overhead Water Reservoirs. Out of the five reservoirs only two are operational. Storage of these vary from 10, 000 to 50, 000 gallons, details of these are given below:

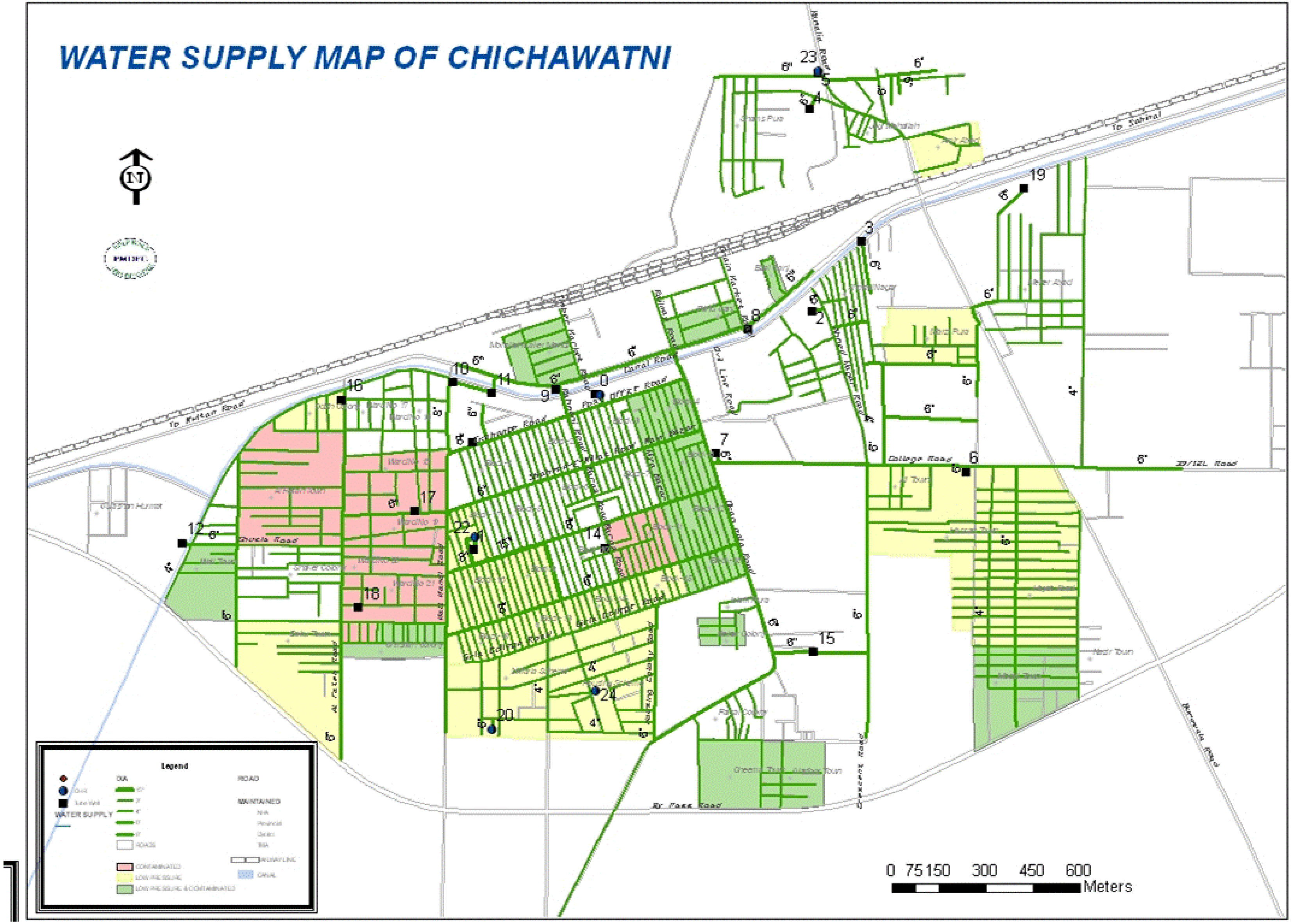
Sr. No.	Location / Water Works	Type RCC/ Brick Masonry	Capacity (gallons)	Year of construction	Status	Remarks
1	Tanki No-1 Block No.3	Brick masonry	30,000	1958	Operational	
2	Tanki No-2 Block No.17	Brick masonry	50,000	1969	Non-operational	Due to Leakage, Breaking Pipes non operational
3	Shamaspura	RCC	20,000	1990	Non-operational	Due to Breaking Pipes non operational
4	Housing Scheme	R.C.C	20,000	1983	Operational	Due to Breaking Pipes non operational
5	3-Marlal Scheme	R.C.C	10,000	1990	Non Operational	Due to Breaking Pipes non operational

4.3.7 Chlorination

No chlorination is done by TMA staff. During the summer / rainy days bleaching powder solution is added in over Head Reservoir which does not serve the entire system as most of the area is served by direct pumping from tube wells.

4.3.8 Needs

- Net work needs to be provided in the un-served areas.
- House connections need to be observed closely and if responsible for contamination, should be replaced.
- AC or uPVC pipes need to be repaired / replaced to stop leaking.
- OHRs need to be put in operation.


WATER SUPPLY MAP OF CHICHAWATNI
To Sahiwal
To Multan Road
College Road
Legend
0 75 150 300 450 600
Meters

4.4 SEWERAGE

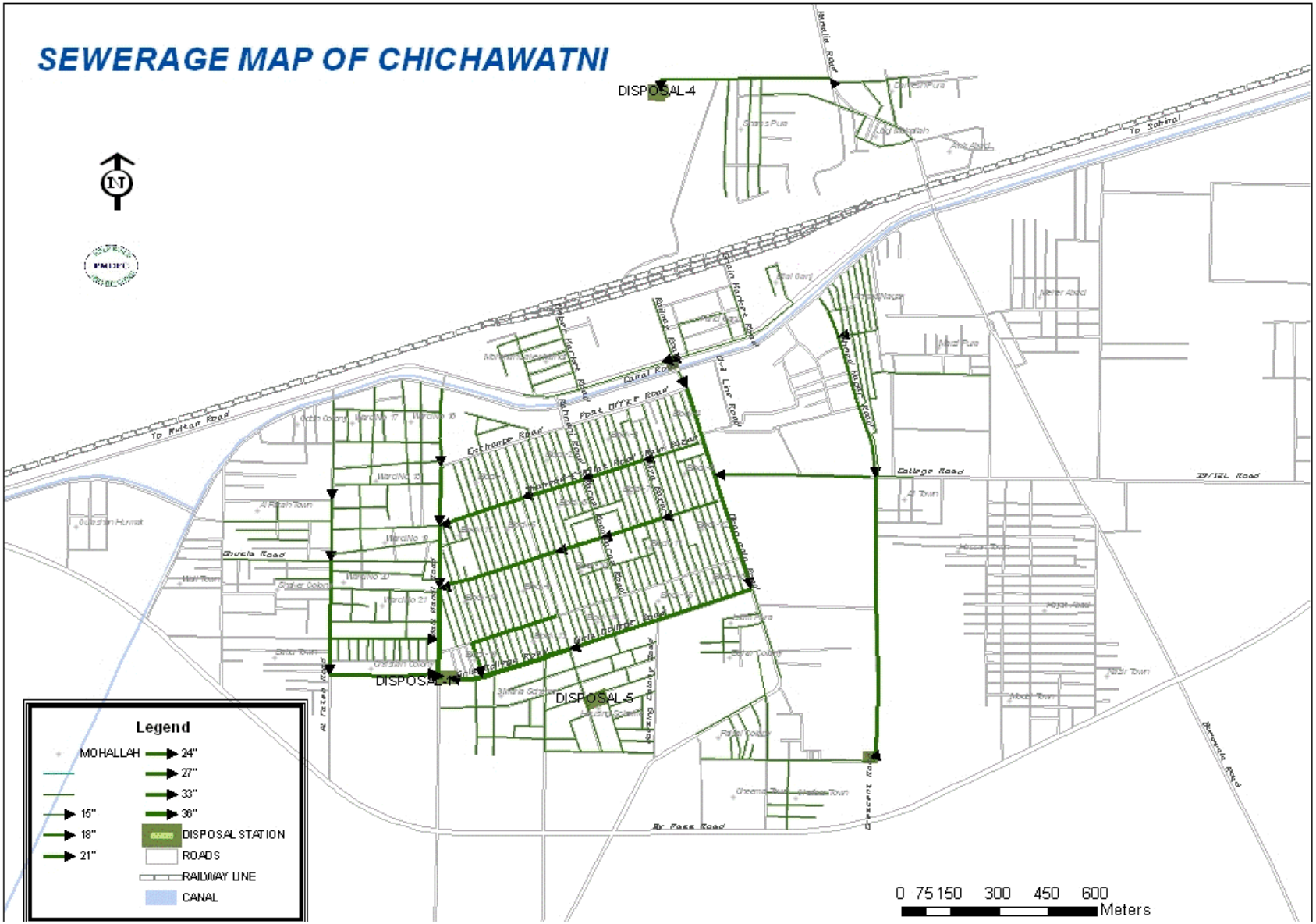
4.4.1 Coverage Areas

Sewerage coverage is 65 % of the town while 20% town is served with open drains and remaining 15 % town is un-served. The widespread network of open drains contributes to poor hygienec conditions in the town Un-served Areas include Meherabad and Amirabad. Ares served with open drains are Hayatabad and Oddh colony. Areas served with Sewerage& open drain are as follows:

- Ali Town
- Hassan Town
- Shakir Town
- Babu Town
- Ghafoor Town
- Cheema Town
- Faisal Colony

Areas where flooding occurs are as below:

- Block No. 13
- Block No.14
- Block No.15
- Block No.16


SEWERAGE MAP OF CHICHAWATNI
DISPOSAL-4
DISPOSAL-1
DISPOSAL-5
Legend
MOHALLAH
24"
27"
33"
15"
36"
18"
DISPOSAL STATION
21"
ROADS
RAILWAY LINE
CANAL
0 75 150 300 450 600
Meters

4.4.2 Disposal Work

Topography of Chichawatni town is flat. Slope of the town is towards south of the town. There are five disposal stations in the town, untreated waste water is being sold to the farmers. The disposal stations are working maximum hours so that water should not over flow in sewer lines, but during rainy season it is difficult to control and flooding occurs in different areas. This situation shows that disposal stations capacity should be improved. The system comprises of five disposal works those are summarized as under:

Sr.	Location	Collecting Tanks		Screening Chambers		Present Condition
		Nos	Size	Nos	Size	
1	Main Disposal near Mall Mandi	2	15'	1		Fair
2	Near Graveyard	2	15	1	'	Bad
3	Near City Pull	1	12	-	-	Bad
4	Shamaspura	2	12	1		Fair
5	Housing Colony	1	12	1	-	Bad

Disposal Station

4.4.3 Needs

There are five disposal stations in the town and it needs improvements. Town has grown from when it was developed many years back. There is lot of stress on its trunk sewer; especially in monsoon season and flooding. The collecting tanks are in bad shape.

Sewage is being disposed of in open fields without treatment. Improvement and extension of Sewerage system is a real need of the town, provided that TMA agreed to acquire required land for waste water treatment.

4.5 SOLID WASTE MANAGEMENT

4.5.1 Existing Collection System

Final disposal site at Mal Mandi

After sweeping the streets and roads the sanitary workers carry the solid waste in wheel barrows driven manually and collect at certain collection points. Solid waste generation in Chichawatni is 36 tons per day. The amount of solid waste collected is 28 tons, collection efficiency is approximately 78% of the town. . Presently Chichawatni has nine (9) major collection points out of which seven (7) are in UC-87, one in UC-88 and one in UC-89. Sweeping is done manually and no mechanical sweepers are available. From secondary collection points solid waste is transported to dumping sites by tractor trolleys. TMA has presently five (5) nos. tractor trolleys. The existing secondary solid waste collection system is good in the town except some area like Mill Road, Collage Road and Okan wala, where the solid waste is collected occasionally. Most of the areas have good service level.

4.5.2 Existing Land Fill/Dumping Sites

No proper landfill site is available in or out side of the town. Solid waste is dumped in open spaces near Mall Mandi, near Sabzi Mandi, near Shakir colony and near By-pass. The solid waste is dumped in open spaces creating total in-sanitary & unhygienic conditions.

4.5.3 Existing Service Level

Although the existing secondary collection service delivery level good in the town but due to shortage of equipment and manpower TMA Chichawatni is not capable to serve the entire area of the town. As such some areas have good service delivery level whereas other having lesser attention gets poor service.

4.5.4 Area Required for Landfill

Area of 4.24 kanals is required for landfill site in the year 2008, whereas the requirement for landfill site will be raised to 17 acres in the year 2028. Details of solid waste generation, collection and required area for disposal of the waste is presented in the following table.

Volume of Solid Waste Generated and Land Requirement for Sanitary Landfill

Year	Population	Daily Collection					Yearly Vol.	Vol. for Landfill	Total Area Required
		Per Capita	Total Waste	Collection Efficiency	Total Wt.	Total Vol.			
		kg	Tons	%	Tons	m^3	m^3	m^3	Acre
2008	89,828	0.400	35.93	80.0	28.75	24	8,743	8,743	0.53
2013	100,154	0.425	42.52	81.6	34.70	29	10,553	57,383	3.47
2018	111,666	0.457	51.07	83.6	42.70	36	12,987	117,251	7.08
2023	124,502	0.493	61.34	85.6	52.51	44	15,972	190,895	11.53
2028	138,813	0.531	73.68	87.6	64.54	54	19,632	281,435	17.00

4.5.4 Labor and Equipment Maintenance

There 182 sanitary workers are deployed at various points in the town. The staff work in two shifts. From 5 am – 10 am and from 3 pm – 6 pm.

The details of available equipment and machinery are presented in the Table, it is evident from the table there is only one tractor and trolley to lift the waste of town, and there are one hundred and fifty wheel barrows but out of these one hundered are in working condition.

4.6 FIRE FIGHTING

4.6.1 Existing Fire Fighting Arrangements

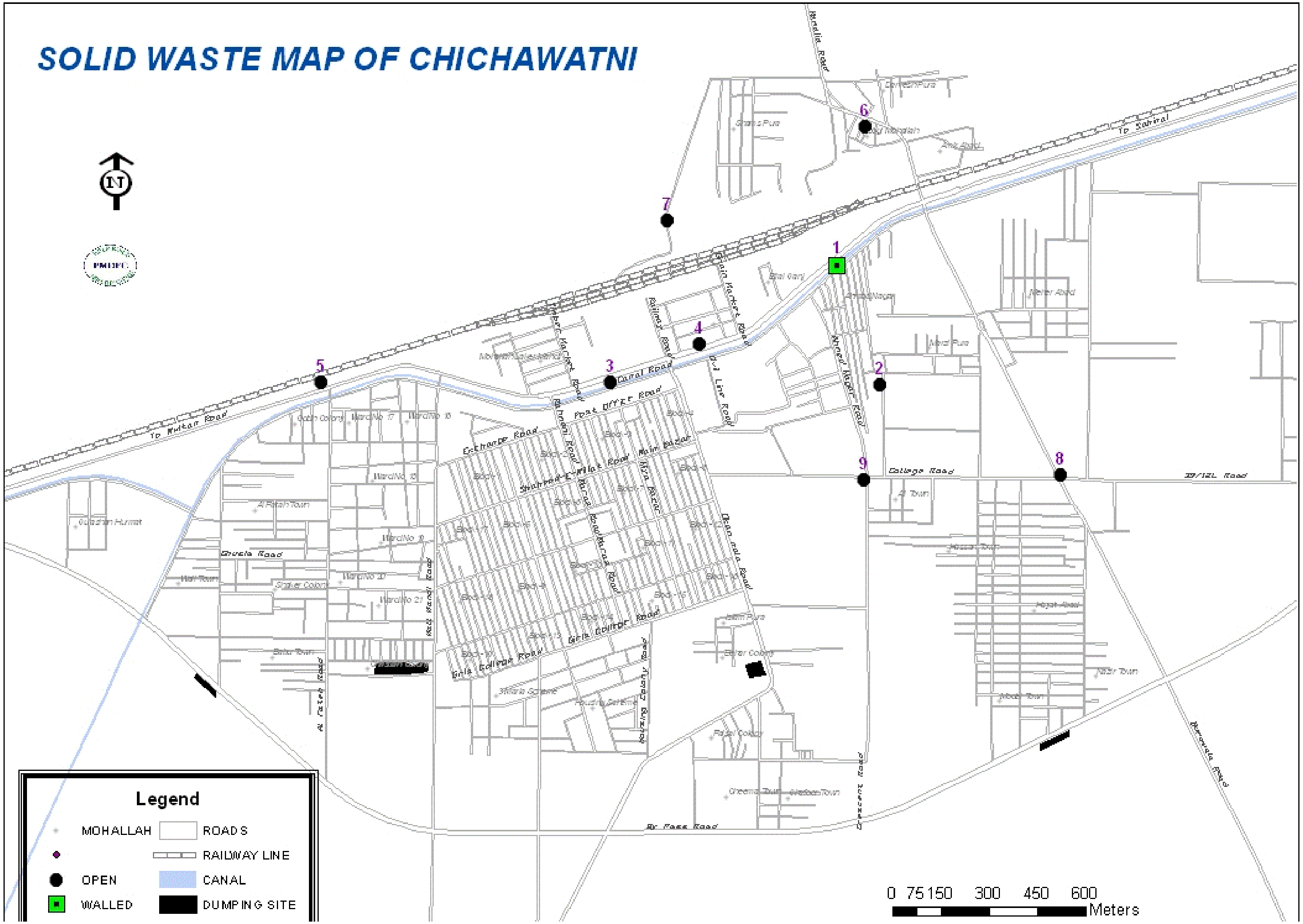
There is fire brigade office but the condition of this office is very poor. There is only one shed for vehicles. There is one room for staff and one room for office work. The size of courtyard is 90'x30' with out roof and one store having size of 8'x10' which is not sufficient.

The vehicle and equipment available with TMA include one fire engine and one water tanker. Fire engine is in bad position which fails to perform its functions most of the time. It needs complete maintenance. Capacity of water tanker is is 6000 liters. There is acute shortage of vital equipments. Detail of Available Fire Equipment is given in the table below:

Sr.	Description	Qty
1	Helmet Plastic	2
2	Fireman axe	1
3	Delivery hose pipe 2.5" dia with coupling	900 ft
4	Suction hose pipe 4" dia	1 no.
5	Fire extinguisher	2 nos.
6	Coupling set 2.5 dia brass complete	3 sets
7	Jet nozzles, Brass 2.5" dia	1 No.

8	Gum boots size	4
9	Triple purpose nozel fog	1

Source: TMA record


SOLID WASTE MAP OF CHICHAWATNI
N
1
2
3
4
5
6
7
8
9
To Multan Road
To Sahiwal
Canal Road
College Road
By Pass Road
Legend
MOHALLAH
ROADS
RAILWAY LINE
OPEN
CANAL
WALLED
DUMPING SITE
0 75 150 300 450 600
Meters

4.6.2 Fire Refill Points

Re-Fill Point

Existing fire refill points are located at Grand Trunk road and other one is on college road. These are connected with the tube wells. Both of these points are operational.

4.6.3 Manpower

There are 16 staff members in the fire fighting system of the town. This strength seems to be adequate for the small town like chichawatni. However this staff is not properly equipped for the delivery of their services. In the presence of one faulty truck the emolument to the firemen, drivers and in charge seems to be the wastage of resources.

S.No	Designation	posts
1.	Fire Station In charge/Suptd.	1
2.	Fireman	9
3.	Driver, Fire brigade	3
4.	Head fire man	2
5.	Others	1

Source: TMA record

4.6.4 Operations & Maintenance Expenses

P.O.L expenditure was Rs 131,718 in 2006-07 and Rs 250,000 have been budgeted in 2008-09. For purchase of fire fighting equipment and repair & maintenance Rs 200,000 have been budgeted for year 2008-09. As per establishment head Rs 1,697,011 were spent in 2007-08 Rs 2,000,000 have been budgeted for year 2008-09.

4.6.3 Needs & Requirements of Fire Fighting Arrangements

Most of the fire incidents occurred in cotton factories and godowns. This manifests the need of efficient fire fighting system for small factories doing their business with in the town. It is interesting to note that almost all incidents occurred in the radius of 20-25 Km of the fire station.

A new Fire Fighting station with a new Fire Engine with requisite equipment is required in Chichawatmi to serve the citizens.

7 PARKS

Presently there are five parks in the town, these are Rahat park, Tanki No. park, Housing colony, ladies park, forest park and Murtaza Shaheed park. Three of these are under the control of TMA. Detail of these parks is given in the following parks.

1 Rahat Park

This is the largest TMA park and is centrally located on the eastern side of residential block number eight. The area of the Rahat Park is five acres. Its turfing and plantation condition needs improvement. It is not maintained well, however, it contains outdoor children games and canteen. The layout shows that it is well planned with four separate sections and shady trees were planted. The park can facilitate the citizens with the improvements in: jogging tracks, water areas, fountains, electric lights. In addition, boundary wall is needed as it is missing in most of the places.Establishment cost on this park amounted to Rs 185,110 in 2006-07 and 350,000 have been budgeted for year 2007-09.

4.7.2 Tanki No.1 Park

Its area is 3 kanals and it is located in housing scheme. Few trees are present in the park as shown in the plan but Its turfing and plantation are needed to improve its condition. The park though contains out door children game like swings, sliding etc, and walkways but these are not being maintained properly.

4.7.3 Housing Colony/Ladies Park

The area of housing colony park is one acre. It is in bad condition due to lack of maintenance and management .

4.7.4 Forest Park

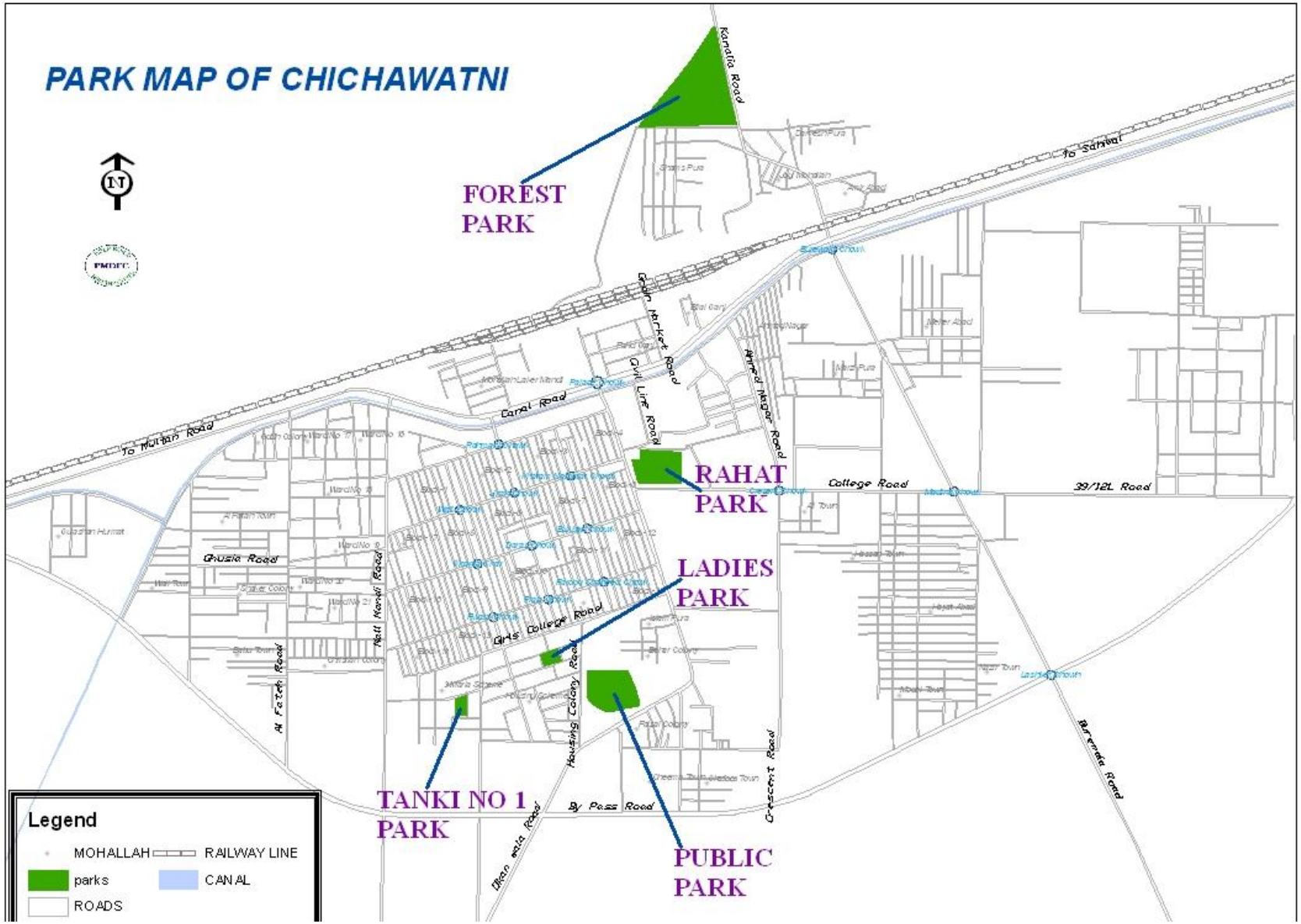
It is on the northern side of the city across railway line. It is on the land owned by forest department. There are only walk ways in this park. There is boundry wall of hight 2.5 feet around this park. It is presently in use.

4.7.5 Public Park / Murtza Shaheed Park

It is on the southern side of government girls Degree College. The land of public park is owned by provincial government. In this park also there are only walkways and not any other structure is yet erected.

4.7.6 O&M Expenses

Rs 1,150,884 were spent on Garden establishment in 2006-07 and 1,350,000 have been budgeted for 2008-09. Purchase of equipment for the park wasRs 791,743 in 2006-07 and Rs 600,000 have been budgeted for this head in 2008-09.


PARK MAP OF CHICHAWATNI
FOREST PARK
RAHAT PARK
LADIES PARK
TANKI NO 1 PARK
PUBLIC PARK
Kamalia Road
To Sahiwal
To Multan Road
Canal Road
Civil Line Road
Grain Market Road
Ahmad Nagar Road
College Road
39/12L Road
Ghuzia Road
Girls College Road
Housing Colony Road
By Pass Road
Crescent Road
Legend
MOHALLAH
RAILWAY LINE
parks
CANAL
ROADS

CHAPTER 5: WORKSHOP ON PRIORITIZATION OF DEVELOPMENTSECTORS

Once the data was analyzed for all the sectors it provided with an understanding of the existing situation. The next step was to develop a vision for the development of the town. This establishes immediate priorities in order to achieve the desired objectives. For this purpose all the stake holders were formally gathered under one umbrella to agree a shared vision about the town.

The following methodology was adopted for the prioritization process

5.1 Pre-Workshop Consultations

PMDFC held meeting with Tehsil Nazim to discuss and finalize the workshop methodology. The purpose was to develop a common understanding and build consensus about the workshop methodology and the proposed projects. The Tehsil Nazim was requested to invite the participants for workshop and make available suitable venue for it.

PMDFC briefed how the workshop would proceed, including details about formation of groups, inter-sector prioritization (i.e. roads vs water supply vs sewerage etc.)

5.2 Workshop Proceedings

5.2.1 General

The work shop was held on 19th August, 08. It commenced at 11:00 am and was concluded at around 2:00 p.m.

5.2.2 Workshop Participants

The number of participants was 40. The stake holders were mainly the representatives of the Tehsil Council, members of trade bodies, Union Naib Nazims and councilors.
List of participants is appended at the end of this report.

5.2.3 The Session

A presentation was given by PMDFC on the existing situation of the town and proposed list of projects. During the presentation, the participants took a keen interest, and asked a number of questions about the working of, and already projects under taken by PMDFC. They further updated the information about the existing situation, e.g. they added projects for street lights, as it was their priority in this particular sector.

5.2.4 Group Formation

The participants were divided into 5 groups at random, but it was ensured that people form same UC may not be included in the same group. Each group comprised of 8 persons.

Each group was given a list of sectors i.e. roads, water supply, sewerage etc. They were to label their priority before each sector e.g. if they thought drains was the most important problem of the town they were to assign 1 before drains, etc.

The results of the Inter sector prioritization were entered into a 'priority matrix'. In this matrix, the group-wise sector priorities were entered as assigned by the group members. Based on the frequency of responses, the inter-sector prioritization was finalized.

5.3 Prioritized List of Projects

The prioritization process calls for the road map for the allocation of resources for the TMA. It is important to mention here that in Cheechawatni, sewerage was one of the most important problems of the town.

Sector	Priority	Sub-Project
SWM	1	Improvement of SWM System
Roads	2	Rehabilitation of Roads
Fire fighting	3	Improvement of Fire Fighting System
Parks	4	Improvement of Parks
Sewerage	5	Improvement/Extension of Sewerage Network
Water Supply	6	Improvement/Extension of Water supply Network

The Planning process adopted rules out the selection of projects at random or biasness, rather it reflects the ground realities and is demand driven. If the projects are not need based, they are not sustainable for long period of time and become redundant without any benefit to the community or the user. Even if such projects survive, they benefit only a specific group of people. It is therefore important for Infrastructure projects to be need based and both beneficial to and acceptable to the community. To make it mandatory, the involvement of stakeholders was ensured at all stages of planning, including the process of prioritization of the development projects.

After the identification of sectors in the visioning workshop and assessing the options, the next step was to finalize the strategy and Action plans.

CHAPTER 6: INSTITUTIONAL ANALYSIS OF TMA CHICHAWATNI

6.1 Capacity Building at TMA

Field visit of TMA Chichawatni reveals that there is a dearth of I.T skills in the TMA. The staff in Engineering, Finance, Planning and Regulation offices can perform better through effective I.T. training. PMDFC is of the view that I.T training for TMA staff will be an important step towards the computerization of office records and will result in efficient office automation systems. Analysis of data will become easy and errors in record keeping would decrease to a considerable extent. Moreover, I.T skills are also essential for PMSIP interventions like Financial Management System, Complaint Tracking System etc.

PMDFC aims to develop the human resource base of its partner TMAs and considers improvement in service delivery inconceivable without a strong human resource base. TMA staff with right skills set can be expected to provide timely, cost-effective and reliable services to citizens.

In view of the above and on the request of TMA Chichawatni for basic computer training for its staff, PMDFC will fund computer training for the following TMA staff, at a local Computer Training Institute:

Sr. No.	Name of Trainee	Designation
1	Ch. Fayyaz Ahmad Zafar	TMO
2	Mr. Rashid Hussain	Tehsil Officer (Regulation)
3	Rana Abdul Razaaq	Office Superintendent
4	Muhammad Saeed	Computer Operator (TMO Branch)
5	Mr. Mueen-ud-Din Chishti	Computer Operator (Tehsil Nazim Branch)
6	Mr. Wajid Mehmood Ahmad	Computer Operator (Finance Branch)
7	Babar Hussain	Incharge Water Rate (Finance Branch)
8	Mr. Kahlid Mehmood	Head Clerk General (I&S Branch)
9	Mr. Abdul Basit	Building Inspector (P&C)
10	Mr. Tauseef Khan	English Typist

6.2 Performance Management System

PMDFC is introducing Performance Management System in Year – II TMAs. Field assessment of the TMA reveals that data exists in rudimentary form regarding performance indicators on municipal services like water supply, solid waste, street lights and sewerage. However, there is lack of data tracking, updation and reporting culture.

6.3 Financial Management Analysis

Law requires that no Local Government can pass a deficit budget. The intention is to provide built-in mechanism for fiscal efficiency. This constraint forces a Local Government to either raise revenue or to economize in expenditure or to do both. In general a local government has to maintain within its fiscal limits.

TMA staff is conversant with the budget formulation process but relies predominantly on the historical data for future projections. Monitoring committees are operative and audit is being conducted regularly.

A trend of (OSR) to total revenue is captured in the following table:

Source	2004-05	2005-06	2006-07	Cumulative	
Own Source Revenue	63,799,600	66,600,964	69,707,700	200,108,264	44%
Govt. Grants	71,122,000	43,679,000	142,304,000	257,105,000	56%
Total	134,921,600	110,279,964	212,011,700	457,213,264	100%

Source	2004-05	2005-06	2006-07
Own Source Revenue	47%	60%	33%
Govt. Grants	53%	40%	67%

Following ratio of own source revenue to total revenue can be calculated from the above data.

Source	2004-05	2005-06	2006-07	Cumulative for 3 years

Ratio I = OSR/TOTAL REV	**47%**	**60%**	**33%**	**44%**

Ratio of Own Source Revenue (OSR) to total revenue is fluctuating over the years. From the data we can see that TMA Chichawatni is consistent in generating its OSR and has a positive trend of increase in it over the years. In 2006-07 there was a sharp decrease in the ratio of OSR to total revenue due to an increase in Government Grants for establishment and other development purposes. In 2004-05 OSR was 47% in 2005-06 it was 60%, and in 2006-07 it was 33%.

From the data it is clear that TMA is making all the efforts in generating OSR and its consistent increase in it shows fiscal responsibility from the TMA perspective. In absolute terms OSR was Rs. 63m, 66m and 69m in FY 2004-05, 2005-06 and 2006-07 respectively. Rent of shops and Building, Cattle Mandi, Adda and Parking Fee, and Tax on Transfer of Immovable Property (TTIP) are the strong areas in which TMA is showing an increase in its revenue over the years.

Following table shows comparative analysis in the development and non-development expenditures over the years.

BUDGET ESTIMATES	**2004-05**	**2005-06**	**2006-07**	**Cumulative**	
Current Expenditures	105,000,000	62,000,000	151,000,000	318,000,000	61%

Development Expenditures	55,811,000	66,327,000	77,450,000	199,588,000	39%
Total Expenditures	160,811,000	128,327,000	228,450,000	517,588,000	100%

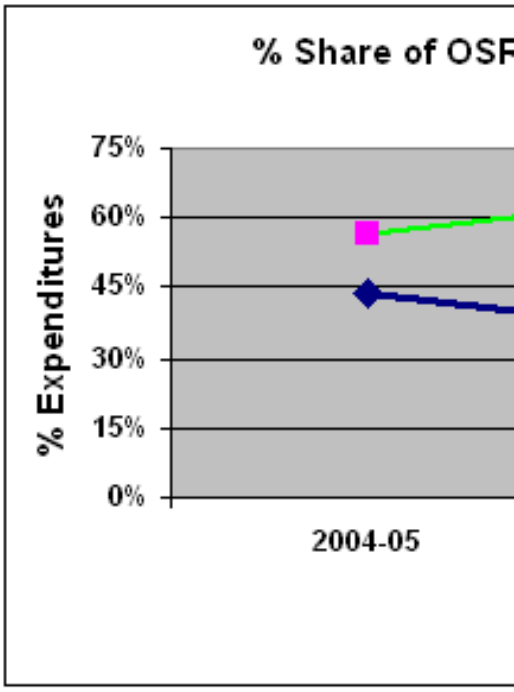
ACTUAL EXPENDITURES	2004-05	2005-06	2006-07	Cumulative	
Current Expenditures	48,927,179	58,105,423	67,081,933	174,114,535	41%
Development Expenditures	85,796,492	42,344,432	117,327,832	245,468,756	59%
Total Expenditures	134,723,671	100,449,855	184,409,765	419,583,291	100%

Ratio II = D.EXP/D.BUDGET

Source	2004-05	2005-06	2006-07
DEV	154%	64%	151%

TMA Chichawatni is within its budget estimates for current expenditures for the Years 2004-05, 2005-06, and 2006-07. Keeping non-development expenditures within budget estimates show a great strength on TMA's part. These funds can be used for other purposes such as O&M and other development schemes. As far as development expenditures are concerned, TMA showed good expenditure management in 2004-05 and 2006-07 when not only TMA utilised the entire budgeted amount but also the additional funds provided to it during the year. Hence the Development Expenditure to total budget allocation ratio those years were over 100 % which is commendable.

From the above data performance of TMA regarding development expenditure can be studied against budgeted allocation for the same.



Source	2004-05	2005-06	2006-07	Cumulative for 3 years
Ratio II = DEV. EXP/DEV. BUDG	154%	64%	151%	123%

Annex – A
Detail of TMA Roads

Serial no.	Type of Road (M or S)	Name	Location		Length (feet)	Right of way (feet)	Paved width (feet)	Surface type	Surface condition (Good, Fair, Bad)	Street Light (Yes/No)	Drainage (Yes/No)	Importance
			Starting Point	Ending Point								
1	M	Crescent Road	By pass	G.H.School For boys	3470	80	25	TST	Bad 35	No	No	Originates from Crescent Chowk , aligned north south, provides link to the residential areas like Ali and Hassan Town, main approach to Crescent Factories. 35 % of the road is in bad shape with potholes.
2	M	Ahmed Nagar Road	G.H.S Boys	Canal	1951	65	25	TST	Bad	No	No	Stems out from Crescent Chowk towards north direction and feeds the residential areas of Ahmad Nagar and Marzi Pura, touches district courts on the northern end and finally culminates at Canal Road. This road needs widening

												and raising as rain water floods the road during rains.
3	S	College road	Okan road	Madiana chowk	3553	65	30	TST	Fair	Yes	No	It is commercial road that connects Crescent Chowk and Madina Chowk together. It also connects Crescent Chowk and Block-8. It serves residential area of Ali town and Govt Degree College as well as Stadium and Govt. Boys High School. Rahat It is Adjacent to Rahat Park and TMA office
4	M	Post office road	Okan road	Rahman chowk	1280	44	20	TST	Fair	No	No	Post office is located on this commercial road and provides direct approach to the Block 3& 4 residential areas.
5	M	Exchange road	Rehmani chowk	Mall mandi	1305	40	20	TST	Fair	No	No	This commercial road provides access to the residents of block 1&2, Dastgir park and PASSCO godowns are on this road.
6		Main bazaar	Okan road	Khatme nabwat	636	40	40	TST	Bad	No	No	Commercial road provide access to the residents of block 8

				chowk								and serves the whole town. 25 % of bazaar is in bad shape dues to potholes and surface damage.
7	S	Shaheed-e-millet	Khatme nabwat	Mall mandi	2150	40	20	TST	Fair	No	Yes	Serves the residents of block 5&17.Shops of all kinds are located on this road and encroachment problems are present.
8	S	Jamia Masjied road	Okan road	Bukari chowk	630	40	20	TST	Fair	Yes	Yes	Commercial street provides approach to block 8 &12.
9	M	Girls College road	Okan road	City disposal	3102	60	14	TST	Bad	No	No	Long street providing access to the residents of block 13,14,15,16,19 and an approach to Govt.Girls College. 35 % of the road is in bad shape with depressions and surface damage.
10	M	Housing scheme road	G.G.C	Okan road	1400	25	14	TST	Bad	No	No	Serves residential areas in the south of town and provide access to public and ladies park. It connects girls college road, Okan Wala road and Bypass Road. 20 %

												of the road is in bad shape with depressions/flooding problems.
11	M	Mall Mandi road	GT road	By pass	6647	20	20	TST	Fair	No	No	It is main road that connects the town with the bypass Road in south. It passes though the residential areas of ward 19,21 and blocks 17,18 &19.
12	S	Al Fatah road	GT road	By pass	3998	15	15	TST	Fair	No	No	Provides connection of the western residential areas of the town with the bypass. It passes through Babu town, Shakir colony and Alfalah town.
13	S	Ghousia road	Al fatah road	Canal road	1562	10	10	TST	Fair	Yes	Yes	Small road serving the residential areas on both sides of Alfateh Town and Shaker Colony
14	M	Canal road	Burewala chow	By pass	9846	12	12	TST	Bad	No	No	Major road traverse around the whole town in north along the railway track. Ahmad Nagr, Buraewala, okan wala, Rehmani, Mall Mandi and Alfatheh roads intersect this

												road at different points on it entire length. Most of the tubewells and Over heads Reservoirs present in the town are located along this road.
15	S	Rail way road	GT road	Railway station	635	28	28	TST	Bad	No	Yes	Emerges from the GT road, moves to the north and ends up at the railway station. 40 % of the road is in bad shape with potholes and depressions.
16	S	Grain Market Road	GT road	Railway station	753	12	12	TST	Bad	No	No	Commercial road provides link to the grain market located in the north of town. 30 % of the road is in bad shape with potholes.
17	S	Civil line Road	Canal road	Okan wala road	1007	14	14	TST	Fair	No	No	Connects the residential area of the center of the town to the GT road and Okanwala road. It is the main approach to the Govt Girls High school
18	S	Timber market	GT road	Railway station	743	14	14	TST	No	No	No	Provides access to the timber market located in the north

												of the town.
19		Sadar bazaar road	Post office road	Khaten nabwat chowk	557	44	44	TST	No	No	Yes	Wide commercial road serves the residential areas of block 3&4
20		Niya bazaar road	Khaten nabwat chowk	Bazaar chowk	620	44	44	TST	Yes	Yes	Yes	Wide commercial road serves the residential areas of block 7&8.connects post office road with the girls college road
21	S	Rahmani road	Jinnah road	Rehman road	907	22	22	TST	Yes	No	Yes	Commercial road providing access to the residents of block 3& 2.
22	M	Daras road	Jinnah chowk	PiyalaChowk	1240	14	14	TST	No	No	No	Commercial road connecting exchange road with girls college road serving the block 6,7,10,11

Major Crossings

Chowk No.	Name of Chowk	ROADS CROSSING				Traffic Signal
		1	2	3	4	Yes /No
1	Burewala chowk	Katacha track	Canal road	Kamalia road	Burewala road	No
2	Rehman chowk	Post office road	Exchange road	-	-	No
3	Madina	39/12 L road	College road	Burewala	Burewala	No

4	Cresent	Cresent road	Ahmed nagar	College road	College road	No
5	Palace	Railway road	Okan wala road	Canal road	GT road	No
6	Khame nabawat	Main bazaar	Shaheed Millet	Sadar bazaar	Niya bazaar	No
7	Jinnah road	Shaheedi mallet road	Shaheedi Millet road	Rehmani road	Daras road	No
8	Wali chowk	Shaheedi mallet road	Shaheedi Millet road	Qasre abu talib	-	No
9	Bukhari chowk	Niya bazaar	Jamia Masjid road	Daras road	-	No
10	Daras chowk	Daras road	Daras road	Daras road	Daras road	No
11	Ghanta ghar	-	-	-	-	No
12	FarooqShaheed	College road	Rahman surgical	-	-	No
13	Pyala					No
14	Fawara					No
15	Lashker	Burewala	Burewala	By pass	By pass	No

Annex-B

Designed Discharge of Tube Wells

sr.	T/Well Location	Designed Discharge (cusec)	Depth (ft)	Year of Installation
1	Block No. 3	0.75	425	1990
2	Block No.17	0.75	400	1970
3	Near Court Ahmad Nagar	0.75	425	1980
4	Canal Road/Ahmad Nagar	0.75	425	2005
5	Near Forest Park	0.75	425	2000
6	Near Shamaspura	0.75	425	1983
7	Opposite Gvt. Collage	0.75	425	2001
8	Near Rahat Park	0.75	425	1995
9	Near City Police Station	0.75	425	2005
10	Lakker Mandi	0.75	425	2005
11	Mall Mandi	0.75	425	1987
12	Canal Road, Alnawaz Hospital	0.75	425	1992
13	Shakir Colony	0.75	425	2005
14	Dastgir Park	0.75	400	2006
15	Block No. 10	0.5	450	2006
16	Eid Gah	0.75	450	1988
17	Ward No. 17	0.75	450	1988
18	Ward No. 18	0.75	450	1988
19	Ward Nol.20-21	0.75	450	1988
20	Mahar Abad	0.5	425	2005

Present Production Capacity Based on designed discharge

Present (2008) Population of the town: 89,828 Persons

sr.	T/ Well Location	Designed Discharge (cusec)	Present Working Hours	with 8 hours pumping,present production/day (gallon)	with 16 hours pumping,possible production/day (gallon)
1	Block No. 3	0.75	8	135,000	270,000
2	Block No.17	0.75	8	135,000	270,000
3	Near Court Ahmad Nagar	0.75	8	135,000	270,000
4	Canal Road/Ahmad Nagar	0.75	8	135,000	270,000
5	Near Forest Park	0.75	8	135,000	270,000
6	Near Shamaspura	0.75	8	135,000	270,000
7	Opposite Gvt. Collage	0.75	8	135,000	270,000
8	Near Rahat Park	0.75	8	135,000	270,000
9	Near City Police Station	0.75	8	135,000	270,000
10	Lakker Mandi	0.75	8	135,000	270,000
11	Mall Mandi	0.75	8	135,000	270,000
12	Canal Road, Alnawaz Hospital	0.75	8	135,000	270,000
13	Shakir Colony	0.75	8	135,000	270,000
14	Dastgir Park	0.75	8	135,000	270,000
15	Block No. 10	0.5	8	90,000	180,000
16	Eid Gah	0.75	8	135,000	270,000
17	Ward No. 17	0.75	8	135,000	270,000
18	Ward No. 18	0.75	8	135,000	270,000
19	Ward Nol.20-21	0.75	8	135,000	270,000
20	Mahar Abad	0.5	8	90,000	180,000
				2,610,000	5,220,000

Estimated Present Per Capita water production with 8 hours pumping: 29 GPCD

Possible Per capita water production with 16 hours pumping: 58 GPCD

Per capita demand as per PHED criteria: 40 GPCD

Annex-C

Pumping Machinery & Chamber

S. No.	Disposal Works	Pump			Motor		Working hrs per day	Operational status	Remarks
	Pumping station	Nos	Discharge (cusec)	Condit-ion	BHP	Condition			
1	Main disposal	1	5	fair	60	Fair	24	Working	
		2	5	fair	50	fair	24	Working	
		1	5	Fair	60	fair	24	Working	
		2	unknown	fair	25	fair	24	standby	
2	Graveyard	1	unknown	Bad	25	Fair	20	Working	
3	City pull	1	3		40	fair	18	Working	
4	Shamas pura	1	2	Fair	40	Bad	18	Working	
		2	2	Fair	25	good	18	working	
5	Housing Colony	1	2	Good	25	Good	18	working	

Trunk Sewer

ID	DIAMETER	LOCATION
1	36"	Suji Mill to Main Disposal
2	30"	Block No.16 to Disposal Mall Mandi
3	24"	Al Fateh Pull to Main Disposal
4	24"	Bagum Shah Nawaz Chok to Disposal Graveyard
5	18"	Laker Mandi to Pull City
6	18"	Dewash Pura to Disposal Shamaspura
7	18"	Housing Colony

Ultimate Disposal

S #	Name of Disposal works	Sullage carrier / Forced main				Treatment status	Ultimate Disposal
		Size	Length	Material	Condition		
1	Mall mandi main	4x3	2000’	bricks	Bad	Untreated	Fields
2	Graveyard	8”	2500’	AC	Good	Untreated	Fields
3	Near City pull	6”	20’	MS	Good	Untreated	Fields
4	Shamas pura	2.5x3	1600’	Brick masonry	Fair	Untreated	Fields
5	Housing colony	2x4	3000’	Katchi	Bad	Untreated	Fields