





OKARA

PUNJAB MUNICIPAL SERVICES IMPROVEMENT PROJECT



PUNJAB MUNICIPAL DEVELOPMENT FUND COMPANY

2011

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION

- 1.1 Background
- 1.2 Punjab Municipal Service Improvement Project (PMSIP)
 - 1.2.1 Key Features of PMSIP
- 1.3 PMSIP Planning
 - 1.3.1 Limitations of PMSIP Planning
- 1.4 The Planning Process
 - 1.4.1 Secondary Data Collection
 - 1.4.2 Mapping
 - 1.4.3 Field Data Collection
 - 1.4.4 Data Analysis
 - 1.4.5 The Visioning Workshop
 - 1.4.6 Interim Appraisal by the World Bank
 - 1.4.7 One day Planning Refresher Workshop for Year I TMAs

CHAPTER 2 TMA PROFILE

- 2.1 District Profile
 - 2.1.1 *History*
 - 2.1.2 Location
 - 2.1.3 Area/Demography
- 2.2 TMA/Town Profile
 - 2.2.1 Municipal Status
 - 2.2.2 Location
 - 2.2.3 Area/Demography

CHAPTER 3 URBAN PLANNING

- 3.1 Situation before Planning Exercise
- 3.2 Mapping by PMDFC
- 3.3 TO (P) Office
- 3.4 Existing Land Use Characteristics
- 3.5 Katchi Abadis
- 3.6 Growth Direction

CHAPTER 4 STATUS OF MUNICIPAL INFRASTRUCTURE

- 4.1 Road Network
 - 4.1.1 Major Roads
 - 4.1.2 TMA Roads
 - 4.1.3 Chowks/Flyovers/underpasses
 - 4.1.4 Traffic Congestion
 - 4.1.5 Conclusions
 - 4.1.6 *Needs*
- 4.2 Street Lights
 - 4.2.1 Operation & Maintenance of Street Lights
- 4.3 Water Supply
 - 4.3.1 Existing Condition
 - 4.3.2 Tube Wells
 - 4.3.3 Consumer Connections
 - 4.3.4 Water Distribution Network
 - 4.3.5 Water Service Area
 - 4.3.6 Water Storage
 - 4.3.7 Water Demand
 - 4.3.8 Chlorination
 - 4.3.9 Needs
- 4.3 Sewerage
 - 4.3.1 Existing Sewerage System
 - 4.3.2 Ongoing Scheme
 - 4.3.3 *Needs*
- 4.4 Solid Waste Management
 - 4.4.1 Existing Collection System
 - 4.4.2 Existing Land Fill/Dumping Sites
 - 4.4.3 Manpower and Machinery
 - 4.4.4 Needs
- 4.5 Fire Fighting
 - 4.5.1 Existing Fire Fighting Arrangements
 - 4.5.2 Fire Equipment
 - 4.5.3 Water Refill Points
 - 4.5.4 Operation & Maintenance
 - 4.5.5 Needs & Requirements of Fire Fighting Arrangements
- 4.6 Parks
 - 4.6.1 Vacant Spaces Earmarked for Parks

CHAPTER 5 WORKSHOP ON VISIONING AND PRIORITIZATION OF DEVELOPMENT SECTORS

- 5.1 Pre-Workshop Consultations
- 5.2 Workshop Proceedings
 - 5.2.1 General
 - 5.2.2 Workshop Participants
 - 5.2.3 The Session
 - 5.2.4 Group Formation
- 5.3 Prioritized Sectors

CHAPTER 6 INSTITUTIONAL ANALYSIS OF TMA OKARA

- 6.1 Capacity Building at TMA
- 6.2 Performance Management System
- 6.3 Financial Management System

CHAPTER 7 OUTLINE STRUCTURE PLAN

- 7.1 Brief Introduction
- 7.2 Visioning and Priority of Stakeholders
- 7.3 Development Plan
- 7.4 Growth Direction
- 7.5 Densification of the Existing Built-Up Area
- 7.6 Land Requirements for Future Urban Expansion
- 7.7 Proposals

CHAPTER 8 ACTION PLAN FOR OKARA

- 8.1 Action Plan for Water Supply
- 8.2 Action Plan for Drainage & Sewerage
- 8.3 Action Plan for Solid Waste Management
- 8.4 Action Plan for Roads
- 8.5 Action Plan for Parks
- 8.6 Action Plan for Fire Fighting Arrangements

Annex-I

Annex-II

Annex-III

Annex-IV

Annex-V

Annex-VI

Annex-VII

ABBREVIATIONS

ADP : Annual Development Plan ATO : Assistant Tehsil Officer BI : Building Inspector

CCB : Citizen Community BoardCTS : Complaint Tracking System

CO : Chief Officer

DCR : District Census Report

FMS : Financial Management System
GIS : Geographic Information Systems

ID : Institutional Development

NGO : Non-Governmental Organization

O&M : Operation & Maintenance

OHR : Overhead Reservoir

PHED : Public Health Engineering Department PLGO : Punjab Local Government Ordinance

PMDFC : Punjab Municipal Development Fund Company

PMS : Planning Management System

PMSIP : Punjab Municipal Services Improvement Project

ROW: Right of Way

TMA : Tehsil Municipal Administration

TMO : Tehsil Municipal Officer

TOs : Tehsil Officers

TO (F) : Tehsil Officer Finance

TO (P&C) : Tehsil Officer Planning & Co-ordination TO (I&S) : Tehsil Officer Infrastructure and Services

TO (R) : Tehsil Officer Regulation

UC : Union Council WB : World Bank

LIST OF TABLES

- Table 2.1: Demographic Details of the District
- Table 2.2: Population Projection
- Table 2.3: Incremental Population (2010-2030)
- Table 2.4: Detail of CO Units
- Table 3.1: Detail of Posts in Planning Office (June, 2011)
- Table 4.1: Road Network
- Table 4.2: Total Points of Street Lights
- Table 4.3: Detail of Expenditure
- Table 4.4: Details of Water Storage
- Table 4.5: Overhead Reservoirs
- Table 4.6: Water Demand of 2008
- Table 4.7: Water Supply Expenditure
- Table 4.8: Water Supply Contingency Expenditure
- Table 4.9: Water Rate Collection
- Table 4.10: Detail of Disposal Works
- Table 4.11: Manpower and Machinery
- Table 4.12: The Equipment available with TMA Okara
- Table 4.13: Budgetary Position of Sanitation Branch
- Table 4.14: Detail of Available Fire Equipment
- Table 4.15: Operation & Maintenance
- Table 5.1: Prioritized Sectors
- Table 7.1: Population Projections
- Table 7.2: Incremental Population

LIST OF FIGURES

- Figure 1.1: Flow Chart for Planning Process
- Figure 3.1: Base Map
- Figure 3.2: Land Use Map
- Figure 4.1: Road Hierarchy Map
- Figure 4.2: Water Supply Map
- Figure 4.3: Sewerage Map
- Figure 4.4: Solid Waste Management Map
- Figure 7.1: Density Map
- Figure 7.2: proposed Map
- Figure 7.3: Structure Plan
- Figure 8.1: Action Plan Roads

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 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.

1.2 Punjab Municipal Service Improvement Project (PMSIP)

Under these circumstances the Government of Punjab launched Punjab Municipal Service Improvement Project (PMSIP) 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.

1.2.1 Key Features of PMSIP

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

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 municipal service delivery, a number of interventions, have been introduced such as establishment of systems like (PMS, CTS, CFMS) provision of trainings to TMA staff and development of GIS based municipal and Urban Planning Maps

1.3 PMSIP Planning

Under PMSIP planning, rapid appraisal of municipal services is undertaken to identify service delivery gaps on the basis of technical analysis. The main function of PMSIP Planning is the involvement of stakeholders to make the planning exercise meaningful and demand driven.

Outcome of this exercise is a municipal service data base, improved GIS based maps and a list of development projects, ensured by stakeholders that may be funded by PMSIP and other funding sources.

1.3.1 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 for 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.

It is assumed that experience gained in the urban areas would be replicated in the entire Tehsil by the TMA staffs who have gained experience and training during the planning process, whose details are as follows.

1.4 The Planning Process

The adopted Planning process incorporates an overall strategy for highlighting the development options and the community's agreed outputs. These outputs 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 leads to identify community's preferences for development process.

Following steps were adopted for the planning process:

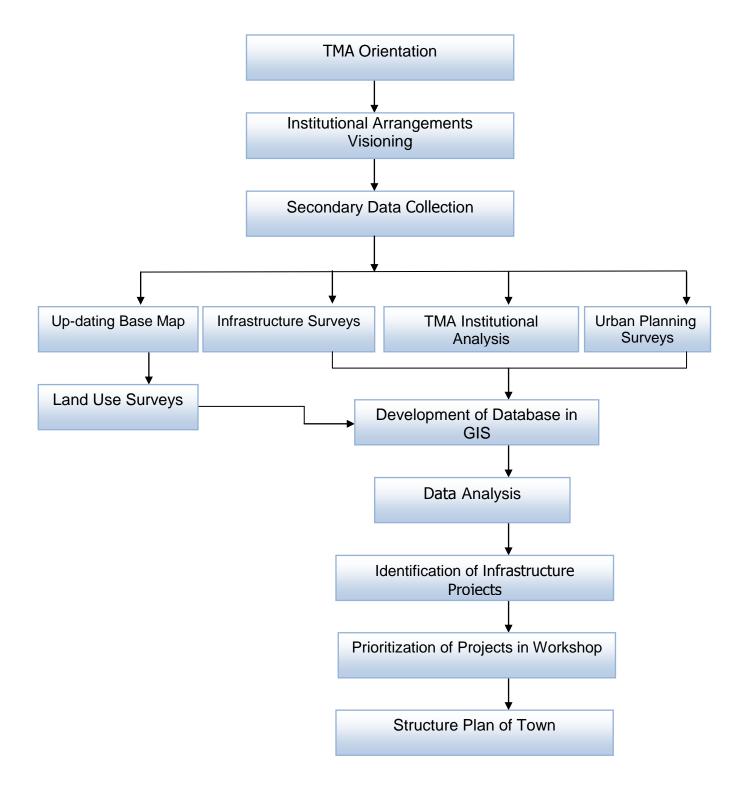


Figure 1.1: Flow Chart for Planning Process

1.4.1 Secondary Data Collection

First, the sources were identified for the previous attempts that were made in Okara for planning. It includes, DCR, online 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 the years.

The maps from Public Health reflected the water supply and sewerage schemes. Information was also gathered whether the projects had completed their designed life. These plans were again used at the analysis stage and compared with the data collected during the current planning exercise.

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 Field Data Collection

Preliminary Meetings

Once the data collection forms were finalized the planning team initiated 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 land use 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.

1.4.4 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 further updation and review and hence a final draft was made.

1.4.5 The Visioning 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 stakeholders.

The planning exercise was to be reviewed in order to assess the implications of the whole process in year-1 TMAs. Therefore, it was important to get back to these TMAs. For this purpose an interim appraisal was made by WB in November 2009. The details are as follows:

1.4.6 Interim Appraisal by the World Bank

Two day Consultative Workshop was held as a schedule arrangement during *World Bank Implementation Support Mission* in November 2009. The World Bank mission was to make interim appraisal of the PMSIP activities undertaken in Year-1 TMAs.

In addition, it provided a forum for Tehsil Officers Planning TO (P) s, the World Bank and PMDFC to share common approach to improve capacity building efforts for the planning office of the partner TMAs.

1.4.7 One day Planning Refresher Workshop for Year - I TMAs

A refresher workshop was conducted on April 9, 2009 to develop a close liaison between PMDFC and TMAs. TO(P)s from partner TMAs attended the workshop. Presentations were designed to give a snapshot of the planning exercise. The main objectives of the workshop were;

- To review the existing planning process
- To initiate the process of up-dating of the planning reports and maps
- To share the maps and reports prepared by PMDFC with partner TMAs

In addition to it, information was also collected regarding the interventions, their viability and suggested improvements.



CHAPTER 2 TMA PROFILE

2.1 District Profile

2.1.1 History

The district Okara derived its name from a tree known as "OKAAN" which was standing on the embankment of a water-tank, being maintained by a person known as "RANA". Prior to colonization, that was the only place for rest and drinking water in an otherwise, barren tract.

Bifurcation of the Sahiwal district was, as envisioned by the far-sighted administrators, like Mr. F.B Wace and Mr. F.C Bourne, a matter of time; and the 1933 Edition of the Montgomery District Gazetteer said so. Growth of population, and its attendant problems was the basic cause. The paramount consideration was, taking the administration to the door-steps of the people beset by development pressure and escalating needs. After much consideration of several alternatives, Okara an erst-while sub-divisional headquarters of Sahiwal district emerges as the headquarters of the new district of Okara on the 1st of July, 1982. It consists of three tehsils: Okara Renala Khurd and Depalpur.

2.1.2Location

The Okara district is composed of three tehsils: Okara, Renala Khurd and Depalpur. Birth of Okara as district was in July, 1982. Okara the District Headquarter is about 127 kilometers to the south-west of Lahore, on the National Highway, and on the main Lahore-Karachi Railway Line. Okara district is bounded by district Faisalabad and Sheikhupura on the north-west where river Ravi forms the natural boundary for the whole length of Okara district, which is about 40 kilometres. On the north-east lies the district of Kasur, on the south is located the district of Ferozepur (India). On the south is the district of Bahawalnagar and south-west is Pakpattan district and the boundary of Sahiwal district on the west. On the south runs the river Satluj with some area of Tehsil Depalpur across the river alongwith Indo-Pak border.

2.1.3 Area/Demography

The total area of the district Okara is 4,377 square kilometres with a population of 2,232,992 as per DCR 1998. It comprises three tehsils namely Depalpur, Okara and Renal Khurd.

The demographic details of the district are as:

Table 2.1: Demographic Details of the District

	Population 1998							1981- 98		
Tehsil Area (sq.km.)	Both sexes	Male	Female	Sex ratio	Population density/sq. km.	Urban proportion	Avg. HH size	Population 1981	Avg. annual growth rate (%)	
Okara District	4,377	2,232,992	1,167,481	1,065,511	109.6	510.2	23.0	6.5	1,487,261	2.42
Depalpur	2,502	1,030,836	536,516	494,320	108.5	412.0	20.3	6.2	668,673	2.58
Okara	1,241	862,364	456,281	406,083	112.4	694.9	31.6	6.8	578,263	2.38
Renala Khurd	634	339,792	174,684	165,108	105.8	535.9	9.5	7.0	240,325	2.06

Source: District Census Report 1998, Population Census Organization, Statistics Division, Government of Pakistan, Islamabad.

2.2 TMA/Town Profile

2.2.1 Municipal Status

Okara was raised to the level of Municipal Committee in 1937. After the implementation of Punjab Local Government Ordinance 2001, it was given the status of TMA.

2.2.2 Location

Okara Tehsil is about 127 kilometers to the south-west of Lahore, on the National Highway, and on the main Lahore-Karachi Railway Line. Okara is bounded by district Faisalabad and Sheikhupura on the north-west where river Ravi forms the natural boundary. On the north-east lies the district of Kasur. On the south is the district of Bahawalnagar and south-west is Pakpattan district and the boundary of Sahiwal district on the west. On the south runs the river Satluj with some area of Tehsil Depalpur across the river alongwith Indo-Pak border.

2.2.3 Area/Demography

Table 2.2: Population Projection

Sr. No.	Year	Population
1	2010	375,791
2	2015	429,785
3	2020	491,469
5	2030	642,756

Okara Tehsil spreads over an area of 1,241 square kilometres with a population of 862,364 (as per DCR 1998). The city population was 272,324 persons as per 1998 Census with a growth rate of 2.74 percent per annum. The population for year 2010 was 375,791 persons, which is expected to grow up to 642,756 persons up to year 2030.

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

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

 $P_n = P_o \left(1 + r/100\right)^{n-1}$ Where $P_n =$ Population of the desired year, $P_o =$ Population of the base year, r =Population Growth Rate, n = Number of years.

Table 2.3: Incremental Population (2010-2030)

Population	Incremental Population					
1998	2010-2015	2015-2020	2020-2025	2025-2030		
272,324	53,994	61,684	70,576	80,711		

The detail of CO Units is as follows:

Table 2.4: Detail of CO Units

CO Unit	Pop	oulation 1998		Population annual Avg.			
	Both sexes	Male	Female	1981	growth rate (%)	size	
Okara	201,815	104,245	97,570	127,455	2.74	7.2	
Saddar Gogera	13,972	7,198	6,774	-	-	7.3	

Source: District Census Report 1998, Population Census Organization, Statistics Division, Government of Pakistan, Islamabad.

CHAPTER 3 URBAN PLANNING

Urban planning under TMA has a crucial role in guiding the present and future growth of the town. The Planning office is responsible to produce spatial plans and exercise development control for change of land uses in the town. Further it maintains a comprehensive data base and information system on TMA and is responsible to execute and manage development plans for infrastructure projects. For the entire development of the Tehsil it is mandatory to produce different maps like base map, land use map, zoning map, etc. The planning office is responsible to prepare Annual development plans and long term plans. These plans are made under the direction of Tehsil Nazim.

3.1 Situation before Planning Exercise

At the start of planning exercise, the available information with the TMAs was very limited, out dated and rudimentary. The maps were either quite old, or were not present at all. Most of the mapping was done by hand drawings. The TO(P) office main function of development control was severely hampered due to lack of information such as updated maps.

The one of the basic objective of PMSIP exercise was to build the capacity of TO(P) Office. For this purpose availability of updated maps was kept on top priority. Satellite images were obtained and developed with the help of GIS technologies. All important information regarding urban planning and infrastructure situation was put on the maps.

3.2 Mapping by PMDFC

At present, with the completion of planning exercise in Okara a number of maps have been prepared and handed over to the TO (P) office. It included land use, density, growth direction, water supply, sewerage, solid waste management, roads and street light maps. Moreover, for analysis purposes various maps are prepared further. e.g. density maps, service coverage maps etc. These maps are helpful in making recommendations for improved services in the town.

In further as capacity of TMA would be enhanced the soft copies will be handed over so that they could develop/improve their own maps. These maps would also be prepared in Auto Cad.

3.3 TO (P) Office

As the Planning office is newly created in the devolved set up, the planning practices are not common with the TMA. The most important function of the planning office is the development control and sanctioning of the building plans.

Table 3.1: Detail of Posts in Planning Office (June, 2011)

S/No	Post	Available Posts	Status
1	TO(P)	1	1
2	Sub-Engineer	1	-
3	Building Inspector	1	1
4	Draftsman	1	-
5	Senior clerk	1	1
6	Junior clerk/billing Clerk	2	2
7	Driver	1	-
8	Naib Qasid	3	2

Source: Field survey, PMDFC

The above table shows the comparison of available posts against filled posts. It is clear that there is no sub engineer and draftsman in TMA Okara.

Since sub engineer is responsible for assessment of the preliminary engineering details of the submitted building plans. Also in the absence of draftsman the preparation of maps and other engineering design remain stagnant.

3.4 Existing Land Use Characteristics

Okara is located on Lahore-Multan GT Road. This road divides the town diagonally in two parts as it runs through it from north-east to south-west direction. Along this road there is a railway track also which runs parallel to this road. There are two intersection points on this road one is with Diplapurl Road which leads to south-eastern side of the town other one is power house road which leads to north-western side of the town.

Okara was originally planned as a colony/mandi town on radial pattern. Like other mandi towns the foundation of this settlement was laid on the combination of gridiron and radial pattern. There is commercial central point and major commercial zone around it in the shape of bazaars which are followed by residential blocks.

In this town there is mixed type of land uses i.e. residential and commercial area are mixed up with each other. The older part of the city which is called as CBD located on Benazeer Road and is called CBD of Okara. It is surrounded by Power house Road in the west, stadium Road in the north, church Road in the east and Benazeer Road in the south side. The older part is characterized by mix type of uses. Important land uses include Civil Hospital, Government College Okara and Government High Schools for Boys and giRls. Population density in this area is high as compared to other parts of the town. Residential areas include A, B, C, D, E and F blocks.

Main commercial area is located in the central part of the town. There are four major markets which originate from Gol chowk, these include Rail Bazaar, Katchery Bazaar, Saddar Bazaar and Hospital Bazaar. There are a number of other markets

in the CBD which include Anarkali Bazaar, Haq Bazaar, Saraafaz Bazaar. Service area of these bazaars is the whole town.

District complex is located in the south-western side of the town, along Lahore Multan GT road and across 4-L minor. This zone include District offices i.e. DCO Office, DO Fertility, Civil Rest House, Nazim Office, DHQ Civil Defense, District Health Development Offices, District office Buildings and District Secondary Education offices. Other buildings include Civil Rest House, Police Lines, Miltary Dairy Farm, and Government Residences.

In Okara there are few parks and play grounds located in different parts of the town. Major parks include Safdar Shaheed park and Jinnah park. Jinnah park is located on Allama Iqbal Road and along 4-L Minor at Jahaz Chowk. Safdar Shaheed Park is located along Tehsil Road in the central part of the town. Two parks in District complex are reserved for ladies and children.

There are two stadiums in the town i.e. new stadium and Old stadium. New stadium is located in the District complex. Old stadium is located along Stadium road in the central part of the town. It is in the north-western direction of the CBD.

There are three main graveyards in the city one is located on Jane Mohalla Road, other in Ahmad Town and the biggest graveyard is located in the north of Old stadium.

In Okara, there is one degree college for women and one Boys College in addition to a number of secondary and high schools for boys and girls. Women College is located in the south of the town near 36/2-L road and Boys College is located on Stadium road. There is one nursing school and one vocation training institute in the city.

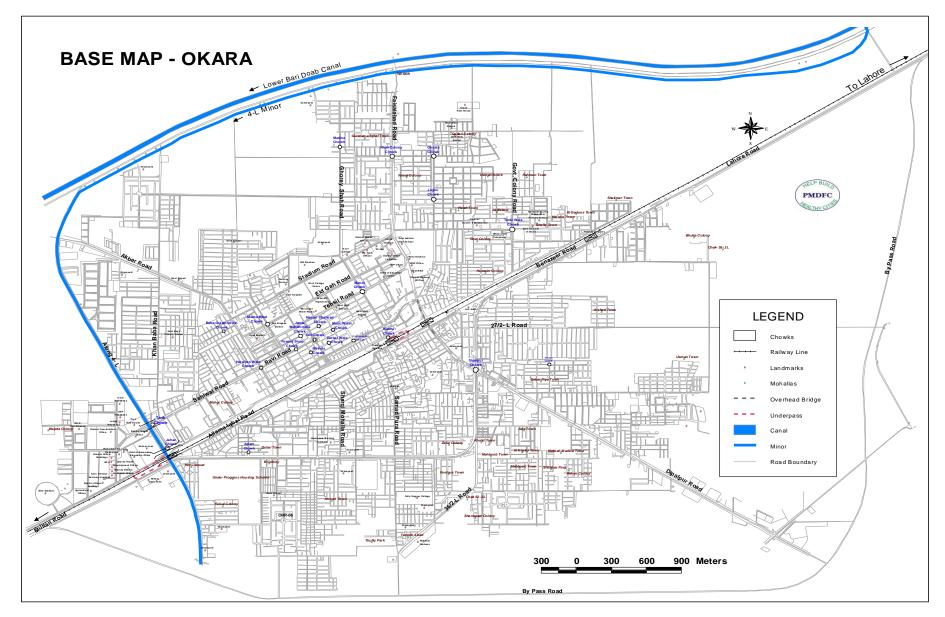


Figure 3.1: Base Map

DRAFT

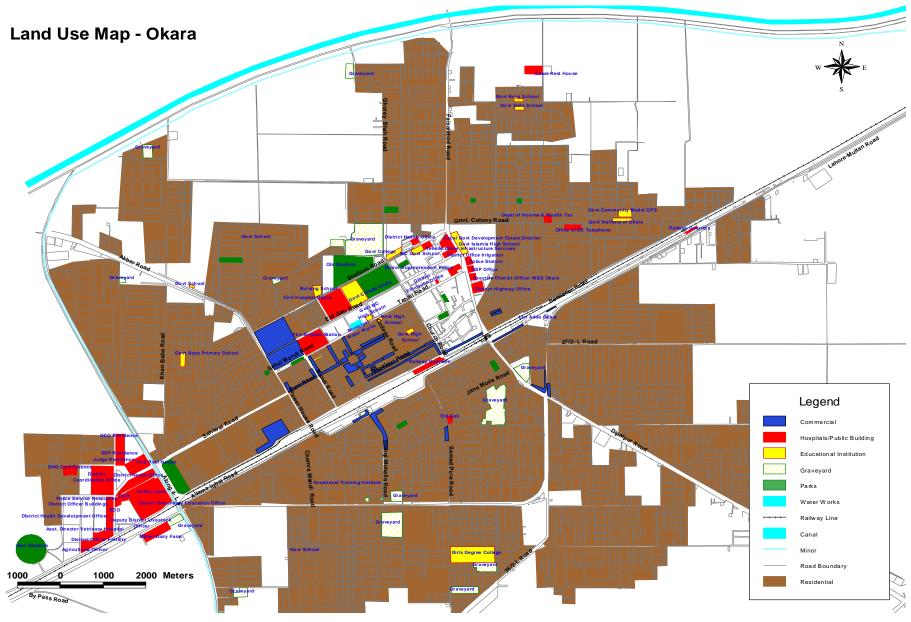


Figure 3.2: Land Use Map

3.5 Katchi Abadis

Sr.No.	Name of Declared Katchi Abadi	Total Dwelling Units
1	Ahmad Abad	433
2	Basti Bohar	61
3	Mustafa Park	52
4	Chamra Mandi	80
5	Cristian Colony	188
6	Faiz Abad	449
7	Ghazi Abad	452
8	Kot Amir Ali Shah	151
9	Kot Fateh Jamal	163
10	Kumhar Mohalla	113
11	Mansoor Abad	353
12	Muhammad Pura	162
13	Muzafar Colony	393
14	Nai Abadi	113
15	Niaz Market	147
16	Qaim Pura	40
17	Samad Pura	1243
18	Sindhi Mohallah	599
19	Sirki Mohallah	59
20	Sobka Singh	103
	Total	5364

3.6 Growth Direction

Like other intermediate cities of Punjab Okara is growing in very haphazard manner in the absence of a master plan. Colonies are being developed wherever site is available. On the northern and western side of Okara there are some natural barriers to the growth of city i.e. Lower Bari Doab canal and 4-L minor due to these hindrances the development of the city is not possible on that side. City is mainly growing in the southern direction.

CHAPTR 4 STATUS OF MUNICIPAL INFRASTRUCTURE

4.1 Road Network

Okara was originally planned as a colony/mandi town on the pattern of radial planning. Commercial zones lead to a central point and residential block on the back. The roads are straight and wide having right of way varying from 28ft -99ft. Congestion prevails through out the town especially in central areas due to the lack of proper development control.

Controlling Name of Road¹ No. **Department** 1. Lahore – Multan Road (N-5) NHA Provincial High 2. Okara - Faisal Abad Road Way Provincial High 3. Okara Depalpur Road Way 4. **By-Pass Road** NHA

Table 4.1: Road Network

4.1.1 Major Roads

Major roads passing through the town are as follows:

GT Road

Lahore-Multan Road: GT Road that passes through the town is the main artery of entire road network. Being on the main GT Road, has led different land uses to concentrate along the Highway. Its repercussions are two fold. On one hand, lot of traffic both slow and fast moving had been generated on the Grand Trunk road, causing obstruction in through traffic, accident hazards and lack of flow of fast moving vehicles.

By-Pass Road

Commercial activity and residential areas have sprung up along the GT Road. In addition, present Bus Stand created a lot of congestion. This haphazard development created need for diverting the through traffic outside the city area. Therefore, By Pass Road was constructed in the south of the town. This road diverts from the GT road in the southern direction, runs parallel to the town and then joins the Highway in south west of the town. With the construction of By pass, all of the fast moving through traffic moves without being obstructed by the slow moving traffic.

⁻

¹ *The information regarding provincial highways passing through the town may needs clarification. Furthermore all the information regarding road ownership status is reported as per the information provided by TMA staff.

4.1.2 TMA Roads

The most important roads of TMA Okrara jurisdiction are those that are situated in the hub of the city. All of the major commercial and institutional activities are situated along these roads. The entire city population comes to this centralized location in pursuit of shopping, educational facilities, medical facilities etc. These roads are discussed below with their relative importance and suggestions are made for their improvement.

• Roads in Bad Condition

The roads that are frequently in use but are in extremely bad condition are Tehsil Road, Chamra Mandi Road, 36/2-L Road, Jane Maola Road, 27/2-L Road, Khan Baba Road, Sabzi Mandi Road, Old Mall Mandi Road and Ghalla Godown Road.

The surface condition of all of these roads is very poor. There are pot holes, broken surface that causes hindrance in driving and smooth flow of traffic. During rains, due to lack of adequate drainage services water stays for days on the roads. This further deteriorates the surface condition. Only Church Road and Tehsil Road have some partial drainage and street lights available, and all rest of the roads mentioned above are without street lights, drainage and adequate surface condition.

These roads need immediate attention as these are mainly commercial roads with school, colleges and public offices situated along the same. Lot of traffic is generated from Mandi Road, Church Road and Tehsil Road. There are frequent traffic jams due to lack of maintenance of the roads.

Roads in Fair Condition

The roads that are relatively better condition are; Benazeer road, Eid Gah road, College Road, Depal Pur Road, Mandi Road, Ravi Road, Power House Road, Lalazar Colony Road, Allama Iqbal Road, Samad Pura Road, Sharqi Mohalla Road, Govt Colony Road, Stadium Road, Ghoray Shah Road.

Of these roads, Benazeer Road is one of the main arteries of the town. A number of major commercial and institutional activities are situated on the either sides of it. The railway track runs parallel to it in the northern direction. These roads serve access to the residential areas and bear rigorous commercial activities on either sides. There are schools, hospitals, food markets, government offices, hotels, technical institutions etc.

Roads in Good Condition

Sahiwal road, along 4-L Distributary, Akbar road are in good condition. The surface condition is good as these roads are carpeted, with street lights and adequate drainage facility. The uses that are present on the either side are commercial, schools, Food market, institutions.

4.1.3 Chowks/ Flyovers/ underpasses

The important chowks of the town are Fecto Chowk, Mehboob Alam Chowk, Tank Chowk, Jahaz Chowk, Harma Wala Chowk, Sahiwal Chowk, Gol Chowk, and Depalpur

Chowk. All of these chowks are without traffic signals though lot of traffic passes haphazardly through them.

There is one major flyover in the centre of the town on Okara Faisilabad Road. It was constructed by Highway department. It is very important as it connects the town bifurcated by the railway track. It saves time and energy. Under this an under pass has been constructed on Benazir road. Another By pass was constructed on GT Road and the road passing under in ¾ L road. These structures facilitate flow of traffic in Okara.

TMA roads and chowks are mentioned in Annex I.

4.1.4 Traffic Congestion

The entire town of Okara due to lack of proper planning suffers from traffic congestion. The most acute is along Faisilabad - Okara Rosad. Although a by pass has been constructed that diverts the through traffic outside the city area but due to ribbon development a number of commercial and institutional activities are situated here. This results in generating traffic both fast and slow.

4.1.5 Conclusions

- Town is well connected by a network of provincial highways.
- Most of the main roads in the town are in fair to good condition.
- Sewerage problems are present in most areas.
- ➤ The major bazaars/commercial areas are suffering from temporary encroachments.
- Available ROW varies from 10ft to 100ft.
- ➤ Road drainage in the town is almost non- existent. Gully grating chambers are present on some of the main roads which are either broken or choked.
- Most of the major roads have street lights.

4.1.6 **Needs**

- ➤ Tehsil Road is a major road that needs major repair as it has pot holes and surface damage at various locations.
- Other roads in bad shape that need immediate attention are: Chamra Mandi Road, Sabzi Mandi Road, Allama Iqbal Road to GT Road, Old Mal Mandi Road, Church Road 27/2- L Road, Jane Molla Road, Khan Baba Road, 36/2-L Road and Mandi Road.

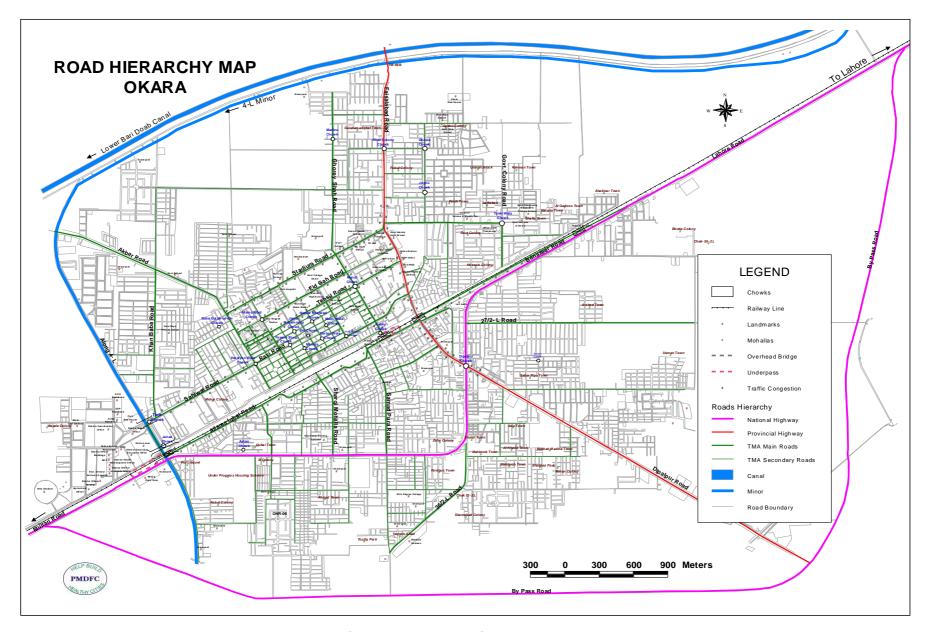


Figure 4.1: Road Hierarchy Map

4.2 Street Lights

Although all major roads are provided with the facility, but the secondary roads have partial supply. Roads provided with street lights include Benazir Road, Tehsil Road, College Road, Mandi Road, Along 4-L Road Samad Pura Road, Sharqui Mohallah Road, Church Road and Depalpur Road.

Following roads are with partial street Lights:

Eid Gah Road, Akber Road, Power House Road, Allama Iqbal Road, Jane Mola Road, Khan Baba Road, 27/2-L Road, Sabzi Mandi Road, Old Mall Mandi Road, Ghalla Godown Road, Govt Colony Road and Ghoray Shah Road. 36/2-L Road.

UC Total Sr.No No Bulb **Mercry Bulb Soduim Bulb** Simple Bulb 89/1 90/2 91/3 92/4 93/5 94/6 95/7 96/8 97/9 98/10 99/11 Total

Table 4.2: Total Points of Street Lights

4.2.1 Operation & Maintenance of Street Lights

There are only two electricians and two helpers for the town to maintain street lights. They have one wheeled high platform available as the only equipment. Detail of expenditure breakup is shown as below:

Sr. No.	Type of charges	Exp year 2006-2007 (Rs)	Exp year 2007- 2008 (Rs)
1.	Establishment charges	266,750	297,767
2.	Electric bills	4,443,325	3,711,797
3.	Repair charges/ New purchases	1,028,616	1,0223,15
Total		5,738,691	5,031,879

Table 4.3: Detail of Expenditure

4.3 Water Supply

4.3.1 Existing Condition

Okara town is a plain with a minor slope. The shallow sub soil water of the town is brackish and unfit for human consumption. Present source of water supply system in the town is with deep T/wells installed at depth of 165 to 220 ft. Water table is at 45 feet. Most of the town is dependent on TMA water supply. Water supply coverage of the town is about 60%. 16 T/Wells of TMA are installed near LBD Canal. While six tube wells installed near 5/4-L Minor and one tube well is at Bus Stop. Two tube wells under Public Works Department are installed near LBDC to supply water to Hospital, Girls Collage and Officers Colony.

4.3.2 Tube Wells

To feed the present water supply system of the town, there are 23 tube wells out of which 16 tube wells are operational and working 10-12 hours/day

Details of tube wells and present production capacity are summarized at Annex-II.

4.3.3 Consumer Connections

The total number of consumer connection is 9766 out off which commercial connection are only 43 while 9723 are domestic which are further segregated as 357 with electric motor, 9239 with out electric motor and 127 free connections for TMA servants. Water supply tariff for domestic, domestic with electric motor and commercial is 30, 50 and 150 respectively. Installation of house service connections is usually performed by plumbers of TMA. Bills of Water Supply are not 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 tariff was revised in year 2001. Connections are not metered and consumers pay by norms rather than actual consumption. Consumption is generally excessive and inefficient in relation to uses of water. Piped drinking water is used for firefighting, while non potable ground water is generally available in the city. Piped water is also used extensive for horticulture.

4.3.4 Water Distribution Network

Nearly 60 % of the Okara Town is covered by water supply whereas the rest of the population is constrained to drink shallow brackish water through privately installed hand pumps/power pumps. The quality of water from these shallow source is not so good and is mostly contaminated. Therefore, situation necessitates expansion of distribution network to those areas which are without piped water supply.

4.3.5 Water Service Area

Approximately 60 % 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. Some areas are partly served with this facility. 40% area is un-served, some areas are partly served and some have services with low pressure and contamination problems

Un-served areas and areas with service problem are presented at Annex-III.

4.3.6 Water Storage

There are four under Ground Storage Tanks and five over head reservoirs, details of which are given below:

Table 4.4: Details of Water Storage

Water		Ground Storage Tanks					
Works Name	Location	Nos.	Dimensio n	Capacity (glns)	Condition		
1	Tehsil Road	1	25	80000	Fair		
2	Shansia Colony	1	25	80000	Fair		
3	Chamra Mandi	1	25	80000	Fair		
4	Ghazi Abad	1	25	80000	Bad		
Total Capacity				240,000			

Table 4.5: Overhead Reservoirs

Sr. No.		Type RCC/ Brick Masonry	Capacity (Gallons)	Year of construction	Condition (Leakages etc)	Remarks
1	Tehsil Road	Rcc	50000	1935	Good	Operational
2	Ghazi Abad	Brick	50000	1985		Abandoned
3	Lalazar Colony	Brick	50000	1960		Abandoned
4	Ghalla Mandi	Brick	50000	1960		Abandoned
5	Govt. Clony	Brick	50000	1980		Abandoned
Tota	l Capacity	250,000				

4.3.7 Water Demand

Presently population of the city is 200,901 persons. The average daily water demand is 13,124,400 gallons calculated based on the PHED standard of per capita per day demand (50 gallons/capita/day). Total water production per day is 5,130,000 gallons. So the present deficiency is 14,556,600 gallons per day. Following table presents the detailed calculations of water demand. Detailed calculations for water demand and production are given in the table below.

Table 4.6: Water Demand of 2008

Description	Quantity	Unit
Population as 1998 Census	200,901	Persons
Project Population in 2008 with a growth rate of 2.71	262,488	Persons
As per PHED Criteria Per Capita water Consumption	50	GPCD
Average Daily Demand	13,124,400	Gallons
Maximum Daily Demand	19,686,600	Gallons
Present water production	5,130,000	Gallons
Presently Deficiency	14,556,600	Gallons
If all existing tubewell connected and work for 16 hours then Possible Water Production	7,020,000	Gallons
If all existing tubewells work for 16 hours then Deficiency	12,666,600	Gallons

4.3.8 Chlorination

No chlorination is done by TMA staff. Bleaching powder solution is used monthly and during the rainy days it is added after 15 days basis.

Table 4.7: Water Supply Expenditure

Actual Year 2004-05	Actual Year
4,726,063	1,179,194

Table 4.8: Water Supply - Contingency Expenditure

Actual Year 2004-05	Actual Year 2005-06	Actual Year 2006-07	Revised Year 2007-08	Budgeted Year 2008-09
5,074,208	4,064,175	16,369,046	12,540,000	16,155,000

Table 4.9: Water Rate Collection

Actual Year 2004-05	Actual Year 2005-06	Actual Year 2006-07	Revised Year 2007-08	Budgeted Year 2008-09
1,328,757	1,291,411	1,254,723	2,200,000	2,200,000

Collection percentage between year 2004-05 to 2006-07 is just around 25 %, which is too low.

4.3.9 **Needs**

It seems that there is acute shortage of water in the town where as others are un-served. The discharge of present T/Wells needs to be measured and the additional source capacity needs to be worked out for cater for water shortage and un-served areas.

- I. Net work needs to be provided in the un-served areas.
- II. OHRs need to be put in operation.

DRAFT

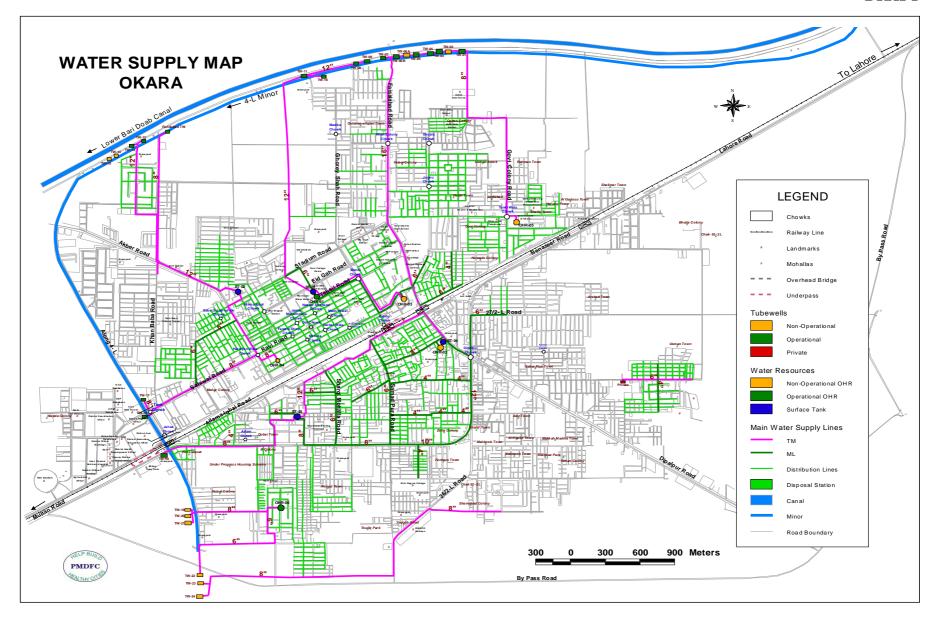


Figure 4.2: Water Supply Map

4.3 Sewerage

4.3.2 Existing Sewerage System

Topography of Okara town is flat. Sewerage coverage is 50 % of the town and 25 % is served with open drain while remaining 25% are totally un-served area. Details of unserved and problematic areas are attached are Annex-IV

50% of the existed Sewerage is silted up. There is lot of stress on its trunk sewer; especially in monsoon season, flooding occurs in different locations.

There are four disposal stations in the town; untreated waste water is being sold to the farmers by annual tender. For sewer cleaning 20 sewer man have been deputed whose duty is to clean the sewer lines regularly. De-silting is also being done manually. 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.

Details of pumping machinery and ultimate disposal works are placed at Annex-V

The system comprises of four disposal works those are summarized as under:

S. No.	Disposal Works	Outfall Or	Trunk Sewer	Collecting Tanks		Screening Chambers		Remarks	
	Pumping station	Intermediate	Size (inch)	No	Size	Conditio n	Nos.	Condition	Kemarks
1.	Chungi No. 6	O/F	42	2	25	Poor	2	Poor	
2.	L.B.D.C	O/F	48	2	25	Poor	2	Poor	
3.	Govt. Colony	Intermediate	21	2	18	Poor	2	Poor	Waste water is pumped to Disposal Chungi No; 6
4.	5/4 L	Intermediate	11	1	16	Poor	1	Poor	Waste water is pumped to Disposal Chungi No; 6

Table 4.10: Detail of Disposal Works

4.3.2 Ongoing Scheme

A Sewerage Scheme of amount Rs.201 millions for southern side and some areas like Govt. Colony, Saith Colony, Alipur Muhalla, Lalazar and Mustafa Park of northern side of the town is in progress, which will work under gravity flow and no pumping station will be required.9" to 66" dia. Pipes of 22000 ft length will take waste water and put in to a 7x5 sullage carrier of brick masonry of length 3350 ft and ultimately it will be disposed of in Shahbhore seepage drain.

4.3.3 Needs

There are four disposal stations in the town and those need improvement. Town has grown from when it was developed many years back. There is lot of stress on its trunk sewer; especially in monsoon season, flooding occurs in different locations. Machinery like suction Unit and Jetting Units can be very helpful to improve the sewerage system of the town.

Sewage is being disposed of in open fields without treatment. Improvement and extension of Sewerage system is a real need of the northern side of the town as southern side will be covered with ongoing scheme, provided that TMA agreed to acquire required land for waste water treatment.

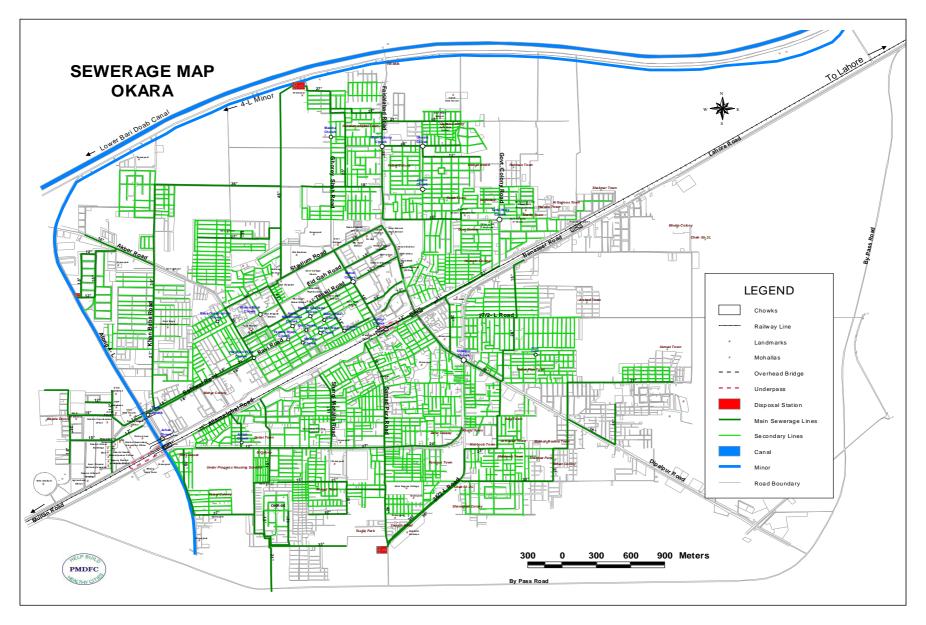


Figure 4.3: Sewerage Map

4.4 Solid Waste Management

4.4.1 Existing Collection System

Solid waste generation in Okara is 105 tons per day. Most of the town is covered by solid waste management system. Detail of service level in mohallahs and roads along with location of container are shown in *Annex VI*. Solid waste management in Okara comprises of primary collection from streets, secondary collection and final disposal.

Primary Collection

After sweeping the streets and roads the sanitary workers carry the solid waste in wheel barrows driven manually and collect at certain collection points (48). Sanitation staff starts work at 5:30 am each morning and ends the first shift at 9:30 am. Second shift is between 2:00 pm to 5:00 pm.

Secondary Collection

TMA has placed 37 containers at various points in the town as shown below and in the SWM map.

List of Containers Placed at different locations is attached at Annex-VI.

4.4.2 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 LBDC Canal on Faisalabad Road, Akbar Road near Cattle Mandi, Akbar Road near Sabri Colony and at Mansoorabad Pond. The solid waste is dumped in open spaces creating in-sanitary & unhygienic conditions.

Area Required for Landfill

TMA required 53 acres land for landfills till 2028. For a 10 year span 21 acres would be sufficient

	f Solid Waste			Collection	<u>,</u>			Okara		Total Area
Year	Population	Per Capita	Total Waste	Collection Efficiency	Total Wt.	Total Vol.	Yearly Vol.	Vol. for Landfill	Area for Landfill	Required Including 10% for Infrastructure
		kg	Tons	%	Tons	m³	m^3	m ³	Acre	Acre
2008	262,488	0.400	105.00	80.0	84.00	70	25,549	25,549	1.4	1.54
2009	269,601	0.400	107.84	80.0	86.27	72	26,241	51,790	2.8	3.13
2010	276,908	0.406	112.42	80.4	90.39	75	27,493	79,283	4.4	4.79
2011	284,412	0.412	117.20	80.8	94.70	79	28,805	108,088	5.9	6.53
2012	292,119	0.418	122.19	81.2	99.21	83	30,178	138,266	7.6	8.35
2013	300,036	0.425	127.38	81.6	103.94	87	31,615	169,881	9.3	10.26
2014	308,167	0.431	132.79	82.0	108.89	91	33,121	203,002	11.1	12.26
2015	316,518	0.437	138.44	82.4	114.07	95	34,697	237,699	13.1	14.36
2016	325,096	0.444	144.32	82.8	119.50	100	36,348	274,047	15.0	16.55
2017	333,906	0.451	150.46	83.2	125.18	104	38,076	312,122	17.1	18.85
2018	342,955	0.457	156.85	83.6	131.13	109	39,885	352,007	19.3	21.26
2019	352,249	0.464	163.52	84.0	137.36	114	41,779	393,787	21.6	23.79
2020	361,795	0.471	170.47	84.4	143.88	120	43,763	437,549	24.0	26.43
2021	371,599	0.478	177.72	84.8	150.70	126	45,839	483,388	26.5	29.20
2022	381,670	0.485	185.27	85.2	157.85	132	48,013	531,401	29.2	32.10
2023	392,013	0.493	193.15	85.6	165.33	138	50,289	581,690	31.9	35.14
2024	402,636	0.500	201.36	86.0	173.17	144	52,671	634,361	34.8	38.32
2025	413,548	0.508	209.91	86.4	181.37	151	55,166	689,526	37.9	41.65
2026	424,755	0.515	218.84	86.8	189.95	158	57,777	747,303	41.0	45.14
2027	436,266	0.523	228.14	87.2	198.94	166	60,510	807,813	44.4	48.79
2028	448,089	0.531	237.84	87.6	208.34	174	63,372	871,185	47.8	52.62

4.4.3 Manpower and Machinery

There are 403 sanitary workers in the TMA. Population is 651 525 persons ratio of sanitary workers for the population to be served is higher than the standard 1:500. Therefore, at least 125 more sanitary workers are needed to serve the town.

Table 4.11: Manpower and Machinery

Sr.No.	Post	Total
1	Superintendent	1
2	Sanitary Inspectors	1
3	Sanitary Supervisors	11
4	Sanitary Workers	403 (240 Permanent, 163 Daily wages)
5	Vehicle Drivers	9

Table 4.12: The Equipment available with TMA Okara

Qr.		Numbers availabl	le	
Sr. No.	Description	Total	Out of order	Working
1.	Wheel barrows / tricycles	60	20	40
2.	Walled waste dumps	10		10
3.	Covered containers	48		48

4.	Tractor trolleys (manual	15 (2 Front	15
	loading/ unloading)	Loaders, 3	
		Loaders	
5.	Container carrier	8	8
6.	Mechanical sweepers	1	1

Table 4.13: Budgetary Position of Sanitation Branch

S. NO	Head	Budget Allocation for (2007-08) (Rs)	Expenditure up to 31.03.2008 (Rs)	
1	P.O.L	3,500,000	2,245,348	
2	Repair of Tractors	500,000	206,530	

4.4.4 Needs

TMA needs 100 wheel barrows to collect primary solid waste from households and streets.

- Waste is dumped inside the city creating unhygienic condition, therefore; a proper landfill site should be developed to dispose of solid waste.
- > At least, 21 acre of land is required to serve the town for 10 years for proper disposal of solid wastes.

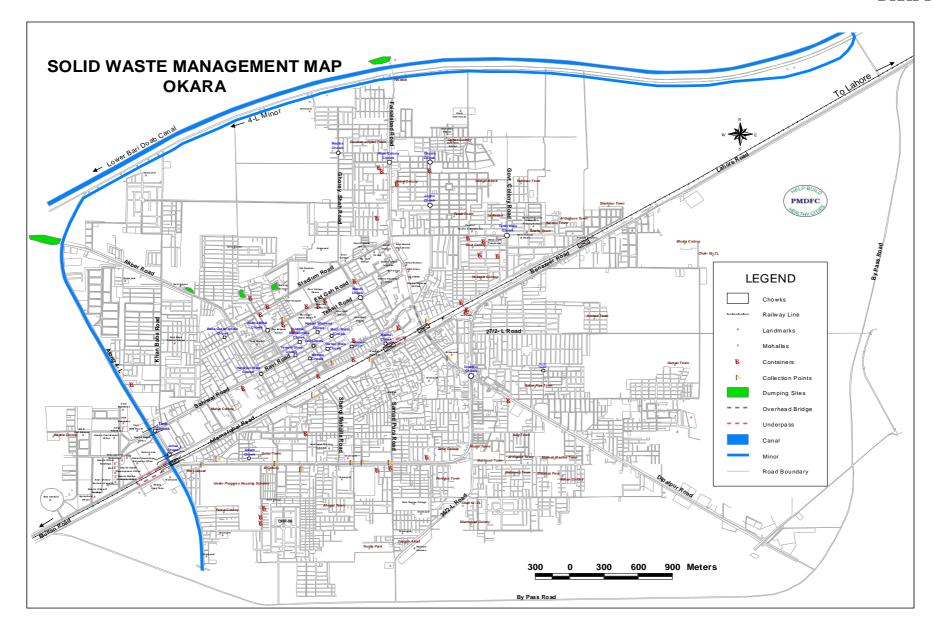


Figure 4.4: Solid Waste Management Map

4.5 Fire Fighting

4.5.1 Existing Fire Fighting Arrangements

The existing building of fire fighting system is at a distance of 2 km from district head quarter. There is fire brigade office but the condition of this office is very poor. There are only two sheds for four (4) vehicles and these sheds are not large enough to house the 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.

4.5.2 Fire Equipment

There acute shortage of vital equipments. TMA has 4 fire vehicles as follows:

- 1. Heno (2004) model has 9000 litre capacity and is in good running condition.
- 2. Two Heno (1994) model fire engines with 7,000 litre capacity and are in fair condition but need repair most of the time.
- 3. Bedford (1984) model is bad condition.

The under mentioned fire equipment is available with TMA at present:-

Table 4.14: Detail of Available Fire Equipment

Sr.	Description	Qty
1	Helmet Plastic	10
2	Fireman axe	1
3	Delivery hose pipe 2.5" dia with coupling	700 ft
4	Suction hose pipe 4" dia	30 ft
5	strecher	1
6	Coupling set 2.5 dia brass complete	2
7	Jet nozzles, Brass 2.5" dia	1
8	Gum boots size	6
9	Tool kit complete	2
10	Hose pipe winding machine	1

Source: TMA record

4.5.3 Water Refill Points

There are only two water refill points in the town: Sahiwal Road (near District Complex) and at Eidgah Road near the Fire Station. Third one which is not operative is in Chowk Depalpur.

4.5.4 Operation & Maintenance

Following are staff in fire fighting section of TMA:

Table 4.15: Operation & Maintenance

S.No	Designation	posts
1.	Fire Station In charge/Suptd.	1
2.	Head Fireman	1
3.	Fireman	8
4.	Driver, Fire brigade	3

Source: TMA record

The table indicates that there are 13 staff members in the fire fighting system of the town. They work in two 12 hours shifts. This strength seems to be inadequate for the town like Okara. In addition, staff is not properly equipped for the delivery of their services.

S. #	Description	Year 2006-07 (Rs)	Year 2007-08 (Rs)
1.	Establishment Charges	1,730,551	2,123,345
2.	POL Charges	624,012	1,084,823
3.	Repair & Maintenance	171,884	171,940
4.	Purchase of Equipment	-	-
	Total	2,526,447	3,380,108

Major industries that the TMA fire fighting are Baba Fareed Sugar Mill and Anmol Textile Mill. In addition, hundreds of restaurants, shops, workshops, schools, colleges etc. are also served.

4.5.5 Needs & Requirements of Fire Fighting Arrangements

- Fire Station needs new larger sheds to accommodate the four (4) vehicles.
- > Two new fire engines are needed to replace the old in-efficient ones to serve the population of the town and the surrounding areas.
- ➤ There are only two water refill points for fire engines. The town needs several others for efficient utilization of the equipment in case of emergency.
- > Staff is not sufficient as per the size of the town and machinery.

4.6 Parks

Okara town is blessed with a number of small and medium sized open spaces scattered through out the town. However, two of the main parks are Safdar Shaheed Park and Jinnah Park.

Safdar Shaheed Park:

The area of this park is 7 acres. The plots are green and a good number of trees have been planted. These trees provide shade and add aesthetic beauty to the park.



The facilities that are provided include the jogging track, and walkways. In the morning and evening a number of people come for walk and exercises. There are two fountains. The park has a boundary wall.

Jinnah Park

It is located on Allama Iqbal Road and Along 4-L Minor at Jahaz Chowk. The total area of this park is 6 acres. The park is bounded by a boundary wall. The plots are grassy and the level of plantation is very good. There is one fountain and electricity lights are present.

Small parks / open spaces:

Other than these main parks, there are a number of small parks/open spaces scattered throughout the town. The size of the open spaces vary from 15 marla, I kanal, 2 kanal and 4 kanals.

Fateh town park, Gulshan e Fatima park and Rehmat ullah town park are in good condition.

Following are the parks/ open spaces:

Mehboob Alam Park, Sher Rabbani Town Park, Qadir Colony Park, Sharif Pura Park, Sabri Park, Nawab Colony Park, Waris Colony Park, Ameer Colony Park, Lalazar Colony Park.

4.6.1 Vacant Spaces Earmarked for Parks

Government colony- 1 acre, Faisil Colony - 4 kanal, Khalid Town - 3 kanal and Dar ul Ehsan Town - 15 marla

The sites suggested for parks like, Govt Colony Park and Dar ul Ihsan Town are currently in use as a playing area. Faisal colony and Khalid Town are being used as parks. Both of these parks are provided with boundary wall.



CHAPTER 5 WORKSHOP ON VISIONING AND PRIORITIZATION OF DEVELOPMENT SECTORS

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.), followed by intra-sector prioritization, e.g. in case of roads sector, individual road projects for the whole town were prioritized.

5.2 Workshop Proceedings

5.2.1 General

The work shop was held on 24th October, 08. It commenced at 10:00 am and was concluded at around 12:00 p.m.

5.2.2 Workshop Participants

The number of participants was 27. The stake holders were mainly the representatives of the Tehsil Council and Union Naib Nazims, from urban UCs of TMA.

List of participants is appended at the end of this report.

5.2.3 The Session

The workshop was formally started in which a presentation was given by PMDFC on the existing situation of the different sectors of the town. The presentation gave a comprehensive account of water supply, sewerage, solid waste management, roads etc indetail with pictorial view of the services. The problems with the existing condition of the infrastructure were highlighted.

The Nazim confirmed the improvements needed in sectors identified by PMDFC, in his address to the workshop. He was keen to take up the most pressing issue of the town i.e sewerage through PMDFC. He assured his full support for accomplishing

this project. He briefed the workshop participants for his efforts for seeking funds from different departments and organizations for infrastructure development.

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 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 water supply was the most important problem of the town they were to assign 1 before water supply and so on.









Moreover, the stakeholders mentioned the areas where problems with infrastructure are most prevalent. Hence the parts of town where solid waste was not picked up were: Kot Nehan Singh, Jalal kot, Sabri colony near primary school, Akbar road, Mandi road near civil hospital, Benazir road and Mohalla Ali Pur near overhead bridge.

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 and relative weightage determined, the sector prioritization was finalized.

5.3 Prioritized Sectors

Thus a prioritized list of projects was developed for TMA Okara, as shown below:

Table 5.1: Prioritized Sectors

Sectors	Priority	Sub Projects
Water Supply	1	Improvement of Water supply
		Network
Sewerage	2	Improvement/Extension of
		Sewerage
SWM	3	Improvement of SWM
Roads/street lights	4	Improvement of roads
Parks	5	Improvement of parks
Fire fighting	6	Improvement of Fire Fighting
		System

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

The Planning process adopted minimizes 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 OKARA

6.1 Capacity Building at TMA

Field visit of TMA Okara 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 Okara for basic computer training for its staff, PMDFC will fund computer training for the following TMA staff, at a local Computer Training Institute:

Sr.	Name of Trainee	Designation	Branch
No.			
1	Kunwar Anwaar Ali	TMO	TMO
2	Javed Anwar Gondal	Tehsil Officer (Planning)	TO(P)
3	Muhammad Azhar	Steno/PA to Tehsil Nazim	Tehsil Nazim
3	Muhammad Javed	Office Superintendent	TMO
4	Muhammad Zahid Khan	Senior Clerk (deputed	-do-
		Computer Operator)	
5	Javaid Rauf	Senior Accounts	TO (F)
		Assistant	
6	Shahid Jamil	Junior Clerk	-do-
7	Abida Tasneem	Junior Clerk	-do-
8	Zafar Iqbal Majid	Superintendent	TO (R)
9	Junaid Shah	Junior Clerk	-do-
11	Muhammad Ijaz	Junior Clerk	TO (P)
12	Aamir Naveed	Senior Clerk	TO (I&S)
13	Muhammad Akram	Junior Clerk	-do-

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 System

FINANCIAL COMPONENT

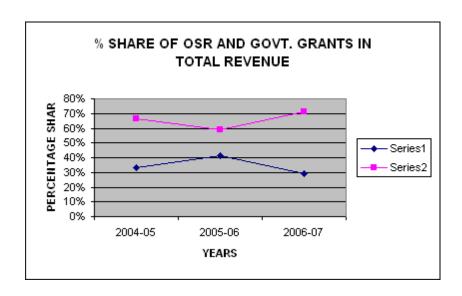
Law requires that no Local Government can pass a deficit budget. The intention is to provide built-in mechanism for fiscal efficiency. This constraint forces a Local Government to either raise revenue or to economize in expenditure or to do both. In general a local government has to maintain within its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

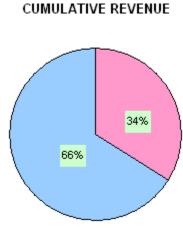
TMA staff is conversant with the budget formulation process but relies predominantly on the historical data for future projections. Monitoring committees are operative and audit is being conducted regularly.

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

Source		2004-05	2005-06	2006-07	Cumulat	ive
Own S Revenue	Source	47,038,901	64,881,885	64,964,000	176,884,786	34%
Govt. Grants		94,408,400	92,542,000	159,752,000	346,702,400	66%
Total		141,447,301	157,423,885	224,716,000	523,587,186	100%

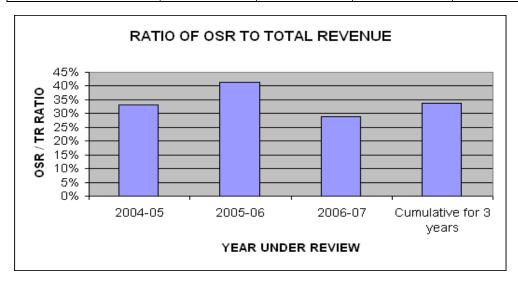
Source		2004-05	2005-06	2006-07
Own Revenue	Source	33%	41%	29%
Govt. Grants		67%	59%	71%





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	33%	41%	29%	34%



Ratio of Own Source Revenue (OSR) to total revenue has been decreasing over the years. This ratio reflects the fiscal effort of the TMA and it is evident that, on average, the TMA is making efforts to increase OSR but ratio was going down due to increase in government grants. From the data above it is clear that TMA Okara is striving to increase its OSR which is a positive sign and are consistent in its OSR collection over the years.

OSR registered an extra ordinary increase in FY 2005-06 from FY 2004-05 and in 2006-07 it was leveled with FY 2005-06. In absolute terms OSR was Rs. 47 m, 64.8 m and 64.9 m in FY 2004-05, 2005-06 and 2006-07 respectively. The extraordinary increase in FY 2005-06 was mainly on account of 6 items namely Building Plan Fee, Advertisement Tax, Gutter Tax, Rents, Teh Bazari, and Tax on Transfer of Immovable Property (TTIP).

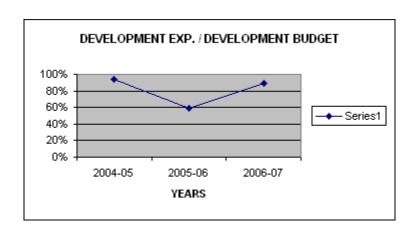
Following table shows comparitive analysis in the development and non-development expenditures over the years.

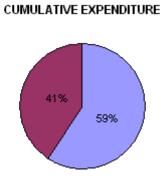
BUDGET ESTIMATES	2004-05	2005-06 20		Cumulative		
Current Expenditures	90,800,000	101,070,000	105,619,000	297,489,000	53%	
Development Expenditures	75,386,000	76,748,000	113,576,640	265,710,640	47%	
Total Expenditures	166,186,000	177,818,000	219,195,640	563,199,640	100%	

ACTUAL EXPENDITURES	2004-05	2005-06	2006-07	Cumulat	ive
Current Expenditures	83,457,976	95,427,081	133,550,000	312,435,057	59%
Development Expenditures	70,984,156	45,759,713	101,000,000	217,743,869	41%
Total Expenditures	154,442,132	141,186,794	234,550,000	530,178,926	100%

Ratio II = D.EXP/D.BUDGET

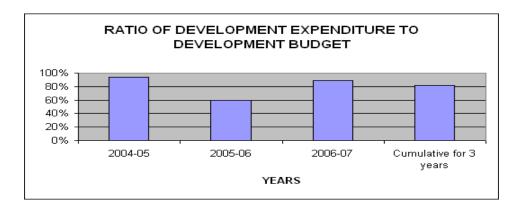
Source	2004-05	2005-06	2006-07	
DEV	94%	60%	89%	





From the table above it is evident that there was an upward trend in the current expenditures of the TMA over the years. However it is encouraging to see that TMA is with in its budget allocation for non-development expenditures except in 2006-07. As far as development expenditures are concerned, TMA Okara showed good expenditure management when it was able to utilise the budget or stayed with in the budgeted amount for 2004-05, 2005-06 and 2006-07.

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	94%	60%	89%	82%

CHAPTER 7 OUTLINE STRUCTURE PLAN

Due to rapid urbanization the cities in Punjab are growing in a haphazard manner, without any development control. The available infrastructure in these towns is deteriorating as the population pressure is not keeping pace with the available resources for the extension of the infrastructure. These towns face the problems like incompatible land uses, unhealthy environment, and loss of amenity. Hence, an Outline Structure Plan has been devised for Okara. This plan identifies the growth potential in an economical and contiguous manner for future development of the town.

7.1 Brief Introduction

This plan has been prepared as a part of the planning report of Okara. The report indicates that the town is expanding without proper planning and development control. The Outline structure plan, thus prepared describes the **strategy** and **outline spatial plan.** In essence, the strategy identifies immediate development priorities for various service sectors. The spatial plan provides general information on planned land uses and the structure of development in the town

The plan provides a systematic approach to address the immediate development needs as well as long term development requirements for next 20 years. The plan highlights remedial measures to solve existing problems as well as suggests ways for future systematic growth of the town.

7.2 Visioning and Priority of Stakeholders

Focus of PMSIP planning is constant input of various stakeholders in all planning stages. Initial contact was developed with TMA leadership and the relevant staff. Field data collection was done in collaboration with line TMA staff and various segments of the society. This assisted in developing broad vision for existing fabric of the municipal services. Finally, a formal stakeholder workshop attended by elected representatives, NGOs, important citizens etc prioritized municipal services to finalize a vision for the town. This process is hence the amalgamation of technical inputs and the aspiration of the stakeholders' improved municipal services with an effective O & M framework were deemed a vision to improve life of citizens. Further, general consensus was developed on the priority sectors that needed immediate attention.

The order of importance to stakeholders for improving various municipal serves is as follows:

- 1. Water supply
- 2. Sewerage
- 3. Solid waste management
- 4. Roads
- 5. Parks
- 6. Fire fighting

Therefore, improved water supply is the most important need of the town followed by sewerage and solid waste management.

7.3 Development Plan

After determining the priorities, the next step of the Plan was to provide broad guidelines to suggest measures to control the future growth of the town. This has been determined after assessing the potentials and constraints in the existing urban set up. The plan is prepared with 20 years perspective from year 2010 to year 2030.

This section of the report deals with an outline of proposals regarding;

- Identifying the growth potentials for the town as a whole so that the provision and extension of infrastructure remains economical.
- Identifying gaps in exiting municipal services as well as identifying needs for the incremental population growth.

Development Strategy

Okara is a medium sized town of Punjab. Okara District is located about 110km away from Lahore on Lahore-Multan Road. Sahiwal, Kasur, Lahore, Pakpattan, Sheikhupura, Faisalabad and Bahawalnagar are the other nearest districts.

- Since the trend of growth is towards east and south, so development should be encouraged in this direction.
- Decentralization, by proposing more than one growth centers in either directions.
- To improve the flow of traffic within the town by improving physical condition of the existing roads..
- Emphasis is made on filling the vacant pockets surrounded by the By Pass to achieve contiguous development and to make provision of infrastructure facilities economical.
- Future residential development to follow neighborhood pattern of growth. Self contained neighborhoods, provided with all basic public and utility services, be developed.
- Provision of a park in the town.
- Improving the existing infrastructure, its maintenance and operation.
- Provision of municipal infrastructure to the newly suggested growth corridors.
- Inculcate Operational & Maintenance culture with provision of capacity building for the same.

Table 7.1: Population Projections

Year	1998	2010	2030	Incremental population for next 20 years
Population	272,324	375,791	642,756	266,965

Growth rate = 2.74%

The population of Okara according to 1998 census was 272,324 persons. The estimated population for 2030 is 642,756 persons, i.e at the end of plan period. The

total area occupied by the urban uses or the built up area is 4480 acres. The incremental population is estimated to be 266,965 for next 20 years time. This has been calculated by using the growth rate 2.74 %.

7.4 Growth Direction

In the town there is mixed type of land uses i.e. residential and commercial area are mixed up with each other. The older part of the city which is called as CBD located on Benazeer Road and is called CBD of Okara. It is surrounded by Power house road in the west, stadium road in the north, church road in the east and Benazeer road in the south side.

Main commercial area is located in the central part of the town. There are four major markets these include Rail bazaar, Katchery bazaar, Saddar bazaar and Hospital bazaar. There are a number of other markets in the CBD which include Anarkali bazaar, Haq bazaar, Saraafa bazaar.

Like other intermediate cities of Punjab, Okara is growing in very haphazard manner in the absence of a master plan. Colonies are being developed wherever site is available. On the northern and western side of Okara there are some natural barriers to the growth of city i.e. Lower Bari Doab canal and 4-L minor due to these hindrances the development of the city is not possible on that side. City is mainly growing in the south and east directionBy Pass encircled the town in south and east direction and attracting the commercial activities in these vacant pockets.

7.5 Densification of the Existing Built-Up Area

Densification criteria vary from city to city. Each city has its own growth and development potential, based on economic activity, social, cultural and geographically strategic importance. Not all of the incremental population shifts towards the newly developed areas, rather some of the percentage is absorbed in the existing one. This is mainly because of the economic reasons. Its most serious consequences are, the overburdening of the existing infrastructure, therefore upgrading may be needed with the passage of time.

The density map above shows existing density in the town. Since the dark brown area is the most densely populated and is the oldest part of the town, there fore it is expected that not much vertical expansion occurs. Also, the structures are deteriorated and in shabby condition. The road widths are narrow and irregular. These structures are unable to bear the load of vertical expansion. Therefore, in this area densification would be low, i.e. between 10-20 % is expected in the plan period. Light brown area is relatively less dense area. This part of the town grew in pre partition. The approximate densification would be 20-30 % that may occur in this area during the plan period. Yellow area is sparsely populated and 50-60 % may be densification may occur in the plan period. This part of the town is recently developing area. Here new developments are taking place. This part also determines the growth direction of the town.

7.6 Land Requirements for Future Urban Expansion

To identify the area required for future growth depends upon two important criteria. First is the location criteria and the second is the allocation criteria of land. The location criteria explain the availability of land in terms of the direction of growth, with respect to physical, socio-economic factors.

The allocation is defines the density. In turn the density determines the area requirement. The proposed growth strategy recommends filling up these vacant pockets first, then opening up new areas for development.

Year 2010-2015 2015-2020 2020-2025 2025-2030 Total Incremental 53,994 70,576 80,711 266,965 61,684 population After taking account 186,873 37,795 43,178 49,403 56,497 densification factor of 30 % Residential Land 455 520 595 680 2,250 Requirement (Acres)*

Table 7.2: Incremental Population

The total land requirement would be 2250*3/10=675+2250 = 2925 acres.

7.7 Proposals

The strategy suggests improving the connectivity among different parts of the town and guiding the growth of the town in the east and south of the town. In case of Okara, growth could not be encouraged in the north and west direction as it is bounded by the natural barrier canal in these parts of the town.

Stage-I

Proposal I: Filling the existing areas

In the first stage, the vacant pockets in the town will accommodate the growing population. Though currently, the development is being sprouting in south of the town, it would be more economical to allow areas to develop in the immediate vicinity first. It would make infrastructure to be provided at the economical cost. The map of the town shows the adjacent areas. Two areas are identified for the future development of the town at the first stage. The most important roads along which such pressure will develop are Dipalpur Road in the south and Ghory Shah Road in the north-west part of the town. These are the expected built up areas for the first stage development.

^{*} Residential density of 83 persons/acre are assumed for proposed land use plan

Stage-II

Proposal II

There is a dire necessity to develop other centers so as to decentralize the population pressure over the town centre. Area of 1710 acres is reserved for second stage development. For this reason, in the east, an institutional-commercial zone has been proposed, shifting of the institutions, commercial activities here would act as another centre of different activities. This would greatly help to diversify the land use activities, lessen the pressure over existing town area.

Area of 1065 is reserved for *stage-I* development. The map shows the neighborhood plan. With the development of the institutions, it has been proposed to widen the roads and development should take place keeping adequate right of way for the roads.

Proposal III

A park is planned for the *stage-II* development. This park will cater for both the areas that will be developed in the successive stages. This park will serve the old city and the newly developed areas. It will provide more visually pleasant and green area.

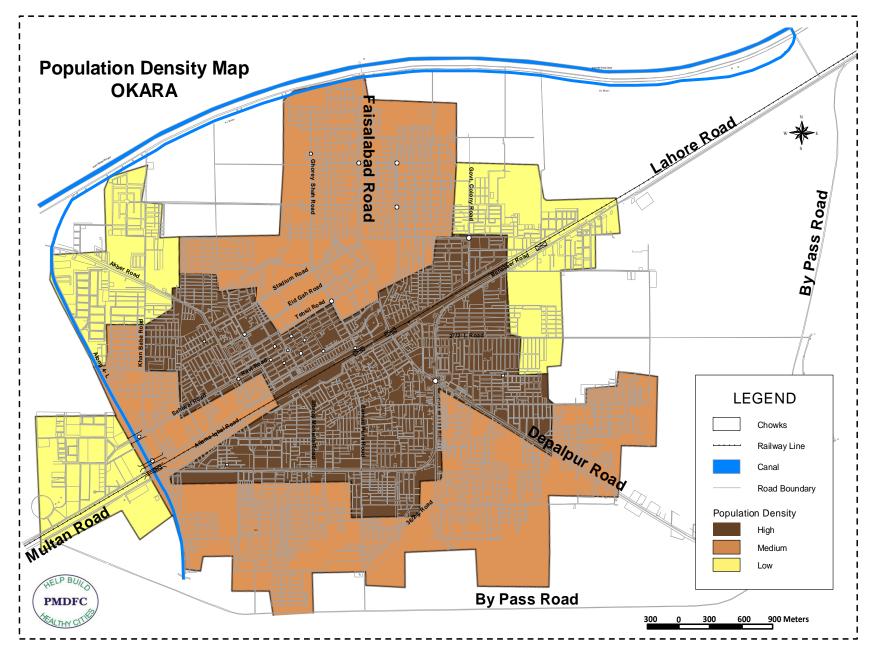


Figure 7.1: Density Map

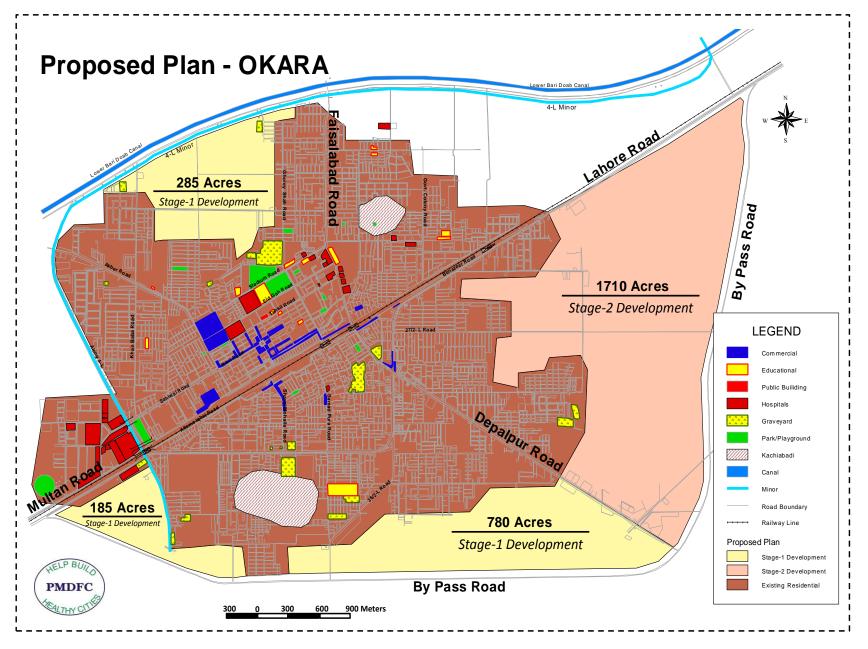


Figure 7.2: proposed Map

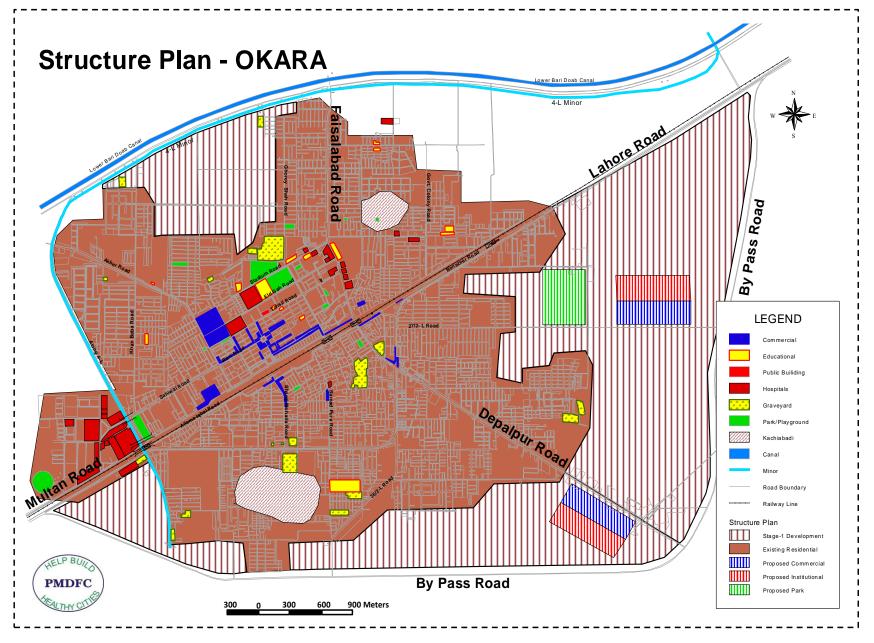


Figure 7.3: Structure Plan

CHAPTER 8 ACTION PLAN FOR OKARA

Following Action Plan has been envisaged for Okara. It takes into account stakeholder consultations, technical considerations combined with information from secondary and primary sources.

The Action Plan includes several options that may be undertaken by the TMA to improve municipal services for its citizens. Each sector may have several options. Action-1 deals with options that may be fulfilled by little investment or better management practices. Whereas, Actions 2 & 3 usually require larger investment for which TMA may seek external funding.

8.1 Action Plan for Water Supply

Action Plan -1

- Development of user connection database
- Measurement of the present discharge of each tubewell to find out which tubewells are running economically.
- Tube wells No. 20,21 and 22 at 4L Minor would be made operational
- Replacement of the pipelines which are leaking and causing contamination.
- Improvement of Ground Surface Tank at Ghazi Abad would be done.
- Overhead Reservoirs at Ghazi Abad, Lalazar Colony, Ghalla Mandi and Govt.Colony would be made Operational.
- Operation & Maintenance training to water supply staff
- Allocation of sufficient Operation & Maintenance budget in the Annual TMA budget.

Action Plan -2

- New tube wells would be installed in place of tube wells No. 3,10,14 at LBD Canal.
- Old pipes causing contamination in areas mentioned in Annex III would be replaced.
- Extension of the system to unserved/partially served areas mentioned in Annex III.
- Additional sources of water would be developed to cater needs of unserved/partially served areas as well as for low pressure areas.
- Additional sources of water would be developed to cater needs of future demand.

8.2 Action Plan for Drainage & Sewerage

Action Plan - 1

Up-grading of Existing Sewers and Drains

- All existing sewers and drains will be inspected and problematic parts of the networks will be cleaned and repaired so that they are brought back to acceptable working conditions.
- Map of sewer network and drainage would be updated and their condition mentioned on it.
- Operation & Maintenance training to sewerage staff
- Allocation of sufficient Operation & Maintenance budget in the Annual TMA budget.

Action Plan - 2

Improvement of Existing Sewers

- Improvement of trunk sewers at Ahmadabad (Blockage), Gulshan-e-Fatima (Not connected with trunk Sewer flooding occurs), Sheikh Basti (Not properly leveled, Flooding occurs), Chamra mandi (Not properly leveled, Flooding occurs), Bajwa Colony (Not properly leveled, Flooding occurs) and Govt. Colony (Undersize Sewer)
- Improvement of all four disposal stations.

Provision of Lateral sewers to cover Developed Areas

This Action Plan-2 will provide with lateral sewerage facilities in the city. Most
of the town is not served by laterals therefore; connecting existing trunk
sewers with them would improve sanitation condition in the town.

Action Plan - 3

Construction of Sewage Treatment Plant

 Development of a safe effluent treatment plant, which will safeguard public health and will protect agricultural lands from pollution would be constructed before final disposal of sewage.

8.3 Action Plan for Solid Waste Management

Action Plan -1

Improvement of Solid Waste Collection System

- Replacement of 20 non-operational wheel barrows.
- Procurement of additional wheel barrows and other requisite equipment for primary collection.
- Recruitment of at least 125 more sanitary workers to improve service level deficiency in localities and roads mentioned in *Annex V*.
- House-House collection started on pilot basis in few localities.
- Operation & Maintenance training to solid waste management staff.
- Allocation of sufficient Operation & Maintenance budget in the Annual TMA budget.

Action Plan -2

Improvement of Collection System

- Permanent points in place of open secondary collection points
- Procurement of additional collection vehicles.
- Procurement of wheel barrows for primary collection.

Action Plan -3

Development of Disposal Site

- Elimination of disposal points in the city at: open spaces near LBDC Canal on Faisalabad Road, Akbar Road near Cattle Mandi, Akbar Road near Sabri Colony and at Mansoorabad Pond
- No proper landfill site is available in or out side of the town. For landfill site addition manpower and machinery would be required. TMA required 53 acres land for landfills till 2028. For a 10 year span 21 acres would be sufficient.

8.4 Action Plan for Roads

Action Plan - 1

- Road marking and improvement of foot paths on main roads.
- Procurement of road level.
- Operation & Maintenance training to road staff.
- Allocation of sufficient Operation & Maintenance under roads head in the budget.

Action Plan - 2

Following roads would be improved to provide smoother traffic flows, safer environment, reduction of congestion and travel time.

- Tehsil Road
- Chamra Mandi Road
- Sabzi Mandi Road
- Allama Igbal Road to GT Road
- Old Mal Mandi Road
- Church Road
- 27/2- L Road
- Jane Molla Road,
- Khan Baba Road,
- 36/2-L Road
- Mandi Road.

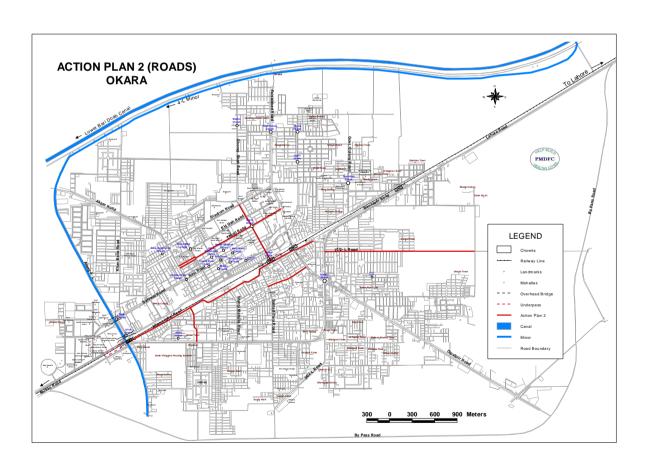


Figure 8.1: Action Plan Roads

8.5 Action Plan for Parks

Action Plan - 1

Improvement of Parks

Following parks would be improved.

- Mehboob Alam Park,
- Sher Rabbani Town Park
- Qadir Colony Park
- Sharif Pura Park
- Sabri Park
- Nawab Colony Park
- Waris Colony Park
- Ameer Colony Park
- Lalazar Colony Park.

8.6 Action Plan for – Fire Fighting Arrangements

Action Plan - 1

- More Water Refill points (fire hydrants) in the town
- Staff training

Action Plan -2

- Additional structure/shed would be built to accommodate four vehicles.
- Two old Fire engines would be repliced with new ones along with the requisite equipment.

DRAFT Annex – I

Serial			Location		Length	Right	Paved width	Surface type	Surface	Street	Drainage	Remarks	
no.	Type of Road (M or S)	Name	Starting Point	Ending Point	(feet)	of way (feet)	(feet)		condition (Good, Fair, Bad)	Light (Yes/No)	(Yes/No)		
1	M	Benazeer Road	Railway Crossing	Distric Chowk	13000	50	20	Carpeted	Fair	No	Yes	Commercial/ institutional	
2	М	Tehsil Road	M.A Chowk	Fecto Chowk	3280	65	21	Carpeted	Bad	Partially	Yes	Govt.offices edu off, SSPoff, high school	
3	М	Eid Gah Road	FSD Chowk	Akbar Road	4920	60	20	T.S.T	Fair	No	Partially	Fire brigade,govt. college,municipal wate works	
4	M	College Road	Free Hospital Road	Eid Gah Road	2500	60	20	T.S.T	Fair	Partially	Yes	Govt high school,	
5	M	Church Road	S.S Chowk	Govt. Collage	3280	60	18	T.S.T	Bad	Partially	Yes	Schools, commercial	
6	M	Depalpur Road	S.S Chowk	HBL Chowk	2500	60	24	T.S.T	Fair	Yes	Yes	commercial	
7	M	Mandi Road	M.A Chowk	Banazer Road	2000	60	20	Carpeted	Fair	Yes	Yes	Food market, commercial	
8	M	Ravi Road	MCB Chowk	Hariyan Wala	1000	60	24	-do-	Fair	Yes	Yes	Commercial.	
9	M	Sahiwal Road	Harnyan Wala Chowk	Tank Chowk	3300	100	20+20	-do-	Good	Yes	Yes	Residential, commercial	
10	M	Along 4- L Distributary	Tank Chowk	Ralway Crossing	5420	100	20+10	-do-	Good	Yes	Yes	Distt.Nazim off,police lines, rest houses, DCO res, judges res,distt.secondary education off	
11	S	Akber Road	Harniyan Wala Chowk	Iqbal Nagar	5700	100	20+20	Carpeted	Good	No	Partially	Govt. school,residential, open areas	

DRAFT

												DIALI
12	M	Power House Road	Harniayan Wala Chowk	Banzer Road	900	60	20	-do-	Fiar	Partially	-do-	Food market, commercial
13	M	Lala Zar Colony Road	FSD Chowk	S.S Chowk	800	60	20	T.S.T	Fair	Yes	Yes	Residential/ commercial
14	M	Allama Iqbal Road	Ralway Crossing	GBS	6600	55	20	Carpeted	Fair	Partially	Partially	Residential/ commercial
15	M	Samad Pura Road	Allama Iqbal Road	GT Road	3300	35	18	T.S.T + Carpeted	Fair	Yes	Yes	Residential/ commercial;floor mill, hotels,clinics, UC off
16	M	Sharqi Mohalla Road	Allama Iqbal Road	GT Road	2400	35	18	-do-	Fair	Yes	Yes	residential
17	M	Chamra Mandi Road	Allama Iqbal Road	GT Road	3300	25	10	T.S.T	Bad	No	Partially	Residential, open area, schools
18	S	Stadium Road	FSD Road	Akbar Road	6000	45	12	T.S.T	Fair	No	Partially	Nursing school,civil hospital,old stadium
19	M	36/2-L Road	Chungi No.	Disposal	4900	30	12	T.S.T	Bad	No	No	Pascow godown,disposal station
20	S	Govt. Colony Road	FSD Road	Banazer Road	4900	60	20	T.S.T	Fair	No	Partially	Commercial, govt deptt.,DE telephone off
21	S	Ghorey Shah Road	GC Chowk	Suffa School	4100	30	12	T.S.T	Fair	No	-do-	Graveyard /residential
22	S	Jane Molla Road	Fsd Road	Samad Pura Road	3300	25	12	T.S.T	Bad	Partially	-do-	Commercial, graveyard, /residential
23	S	27/2- L Road	GT Road	Allah Dita Colony	1900	25	12	T.S.T	Bad	No	No	Commercial/ hotels
24	M	Khan Baba Road	Jinah Chowk	Akbar Road	4100	25	12	T.S.T	Bad	No	No	Residential/ commercial; school, ice factory, engg works, open areas

DRAFT

25	M	Sabzi Mandi Road	M.A Chowk	Akbar Road	800	40	12	T.S.T	Bad	No	No	Commercial/ municipal water works
26	M	Old Mall Mandi Road	M.A Chowk	Akbar Road	800	50	12	T.S.T	Bad	No	No	Food market
27	M	Ghalla Godown Road	Mandi Road	Akbar Road	1200	60	12+12	T.S.T / Carpeted	Fair/Bad	Yes	Partially	commercial

^{*}The information regarding provincial highways passing through the town needs clarification. All the information regarding road ownership status is reported as per the information provided by TMA staff.

Road Chowks

Chowk		ROADS C	CROSSING			Traffic Signal
No.	Chowk	1	2	3	4	Yes /No
1	Fecto	Tesil	Faisalabad			
	Chowk	Chowk	Road			
2	Mehboob	Mandi	Tehsil	Sabzi	Christian	No
	Alam	Road	Road	Mandi	Colony	
	Chowk			Road		
3	Tank	Shaiwal	1/G.L Road	Complex	Jenah Park	No
	Chowk	Road		Road	Road	
4	Jahaz	Banazir	3/G-L	Shaiwal		No
	Chowk	Road	Road	Road		
5	Harman	Akbar	Sahiwal	Power	Ravi	No
	Wala	Road	Road	House	House	
	Chowk			Road		
6	Sahiwal	Church	Banazir	Railway		No
	Chowk	Road	Road	Crossing		
7	Gol Chowk	Ravi				
		Road				
8	Depalpur	Multan	Lahore	Depalpur	Faisalbad	No
	Chowk	Road	Road	road	Road	
9	S. S Chowk	Church	Lalazar	Depalpur		
		Road	Colony	Road		
			Road,			

Annex-II

Tube Well

Sr.	T/Well Location	Designed Discharge (cusec)	Depth (ft)	Year of Installation	Remarks
1	LBD Canal	1	210	1998	Operational
2	LBD Canal	1	210	1996	Operational
3	LBD Canal	1	210	1988	Non-operational due to Transformer & Motor Problem
4	LBD Canal	1	210	1987	Operational
5	LBD Canal	1	210	1987	Operational
6	LBD Canal	1	210	1987	Operational
7	LBD Canal	1.5	210	2005	Operational
8	LBD Canal	1	210	1988	Operational
9	LBD Canal	1.5	210	2004	Operational
10	LBD Canal	1	210	1992	Non-operational due to sand blowing
11	LBD Canal	1	210	1997	Operational
12	LBD Canal	1	210	2004	Operational
13	LBD Canal	1.5	210	2004	Operational
14	LBD Canal	1	210	1989	Non-operational due to Lowering of bore
15	LBD Canal	1	210	1994	Operational
16	4L Minor	0.5	165	1998	Operational
17	4L Minor	0.5	165	1994	Operational
18	4L Minor	0.5	165	1994	Operational
19	4L Minor	0.5	165	1994	Operational
20	4L Minor	0.5	165	1994	Non-operational due non payment of electricity bill.(not paid by user committee)
21	4L Minor	0.5	165	1994	Non-operational due non payment of electricity bill.(not paid by user committee)
22	4L Minor	0.5	165	1994	Non-operational due non payment of electricity bill.(not paid by user committee)
23	Bus Stand	0.5	165	1994	Operational

Present Production Capacity Based on designed discharge

		Designed	Present	Present Water	Possible Water
Sr.	T/Well	Discharge	Working	production/day	production/day (gallon),
٦١.	Location	•	•		
1	LBD Canal	(cusec) 1	Hours 12	(gallon)	working 16 hors per day
2	LBD Canal	1	12	270,000	360,000
				270,000	360,000
3	LBD Canal	1	0	0	360,000
4	LBD Canal	1	12	270,000	360,000
5	LBD Canal	1	12	270,000	360,000
6	LBD Canal	1	12	270,000	360,000
7	LBD Canal	1.5	12	405,000	540,000
8	LBD Canal	1	12	270,000	360,000
9	LBD Canal	1.5	12	405,000	540,000
10	LBD Canal	1	12	270,000	0
11	LBD Canal	1	12	270,000	360,000
12	LBD Canal	1	12	270,000	360,000
13	LBD Canal	1.5	12	405,000	540,000
14	LBD Canal	1	12	270,000	0
15	LBD Canal	1	12	270,000	360,000
16	LBD Canal	1.5	12	405,000	540,000
17	4L Minor	0.5	12	135,000	180,000
18	4L Minor	0.5	12	135,000	180,000
19	4L Minor	0.5	12	135,000	180,000
20	4L Minor	0.5	0	Ô	180,000
21	4L Minor	0.5	0	0	180,000
22	4L Minor	0.5	0	0	180,000
23	Bus Stand	0.5	12	135,000	180,000
Tot	Total water production per day (gallon)			5,130,000	7,020,000
	Total Water F	Production (M	GD)	5.13	7.02

Annex-III

Un-Served/Low Pressure Areas

sr no	Location	Status	sr no	Location	Status
1	A Block	Low Pressure	43	Karkhana	Low Pressure
	Nwab Colony	Low Pressure	44	Nai Abadi	Low Pressure
3	Waris Colony	Low Pressure	45	Rahman Colony	Unserved
4	Dilber Colony	Low Pressure	46	Allah Dad Colony	Unserved
5	Javed Town	water not reaching	47	Ghafoor Colony	Unserved
6	Haq Town	water not reaching	48	Shasfqat Block	Unserved
7	Chaman Zar	Low Pressure	49	Arshad Town	Unserved
8	Fateh Town	Low Pressure	50	Basty Mehr Den	Unserved
9	Faisal Colony 1	Low Pressure	51	Alkhalid Town	Unserved
10	Faisal Colony 2	Unserved	52	Gulshan Fatima	Contaminated Water
11	Gulraiz Colony	Low Pressure	53	Sarki Mohalla	Contaminated Water
12	Choudhry Colony	Low Pressure	54	Bajwa Colony	Contaminated Water
13	Rehmat Pura	Unserved	55	Chamra Mandi	Low Pressure
14	Model Town	Low Pressure	56	Gadoon Town	Low Pressure
15	Govt Colony	Low Pressure	57	Dera Usman	Low Pressure/Contaminated
16	Latif Abad	Unserved	58	Saman Abad	Low Pressure
17	Haroon Town	Unserved	59	Rafee Colony	Low Pressure
18	Rahmat Ullah Town	Unserved	60	Jalal Kot	Low Pressure
19	Aziz Yaqoob Town	Unserved	61	Kot Nehal Singh	Low Pressure
20	Rahmat Pura	Unserved	62	Kot Dilber Ali	Low Pressure
21	Ayob Park	Unserved	63	People's Colony	Low Pressure
22	Saith Colony	Contaminated Water	64	Atta Colony	Low Pressure
23	Husain Colony	Contaminated Water	65	Abdullah Town	Unserved
24	Mustafa Park	Contaminated Water	66	Mehboob Town	Unserved
25	Museeb Pura	Unserved	67		Contaminated Water
26	Nadeem Park	Unserved	68	Ahmad Abad	Contaminated Water
27	Basti Borh	Contaminated Water	69	Glass Factory	Contaminated Water
28	Mansoor Abad	Unserved	70	Firdos Town	Unserved
29	Qaim Pura	Contaminated Water	71	Sadeeg Nager	Low Pressure
30	Purani Laker Mandi	Low Pressure	72	Wazeer Colony	Low Pressure
31	New Laker Mandi	Low Pressure	73	Ahmad Town	Unserved
32	Makah Godam	Low Pressure	74	Ibraheem Colony	Unserved
33	Sabzi Mandi	Low Pressure	75		Low Pressure
34	Naseem Fatima Colony		76	Faisal mehmood Co	
35	Azeem Abad	Unserved	77		Contaminated Water
36	Basti Shah Ameen	Unserved	78	Rashem Pura	Unserved
37	Raheem Kareem Town	Unserved	79	Muzafer Colony	Contaminated Water
38	Fazal Town	Unserved	80	A line	Contaminated Water
39	Sidra Ghafoor Town	Unserved	81	B Line	Low Pressure
40	Yasir Ghafoor Town	Unserved	82	C Line	Low Pressure
41	Kerya Ram	Contaminated Water	83	Basharat Park	Low Pressure
42	Sher Rabani Town	Contaminated Water	84	Magbool Park	Low Pressure

Annex-IV

Partially Served Areas

sr no	Location	Description
1	A Block	Open Drain
2	B Block	Open Drain
3	C Block	Open Drain
4	D Block	Open Drain
5	E Block	Open Drain
6	F Block	Open Drain
7	Ghalla Mandi	50% Drain & 50% Sewerage
8	Shamsia Colony	Open Drain
9	Saleem Colony	50% Drain & 50% Sewerage
10	Faiz Abad	Open Drain
11	Rehmat Pura	Open Drain
12	Model Town	75% Sewerage& 25% Drain
13	Husain Colony	50% Drain & 50% Sewerage
14	Museeb Pura	50% Drain & 50% Sewerage
15	Basti Borh	50% Drain & 50% Sewerage
16	Purani Laker Mandi	50% Drain & 50% Sewerage
17	New Laker Mandi	Open Drain
18	Makah Godam	50% Drain & 50% Sewerage
19	Sabzi Mandi	Open Drain
20	Azeem Abad	Open Drain
21	Basti Shah Din	Open Drain
22	Shasfqat Block	Unserved
23	Arshad Town	Unserved
24	Sabria Town	30% Unserved& 70% Sewerage
25	Basty Mehr Den	40% Unserved& 60% Sewerage
26	Chamra Mandi	50% Drain & 50% Sewerage
27	Saman Abad	30% Drain & 70% Sewerage
28	Jalal Kot	30% Drain & 70% Sewerage
29	Kot Nehal Singh	Open Drain
30	Mehboob Town	40% Unserved& 60% Sewerage
31	Firdos Town	20% Unserved& 80% Sewerage
32	Sadeeq Nager	50% Unserved&50% Sewerage
33	Ibraheem Colony	Open Drain
34	Kot Liaquat Hyat	50% Drain & 50% Sewerage
35	Shaikh Basty	50% Drain & 50% Sewerage
36	A line	50% Drain & 50% Sewerage
37	B Line	50% Drain & 50% Sewerage
38	C Line	50% Drain & 50% Sewerage

Problematic Areas

Sr.	Location	Problem		
1	Ahmadabad	Blockage		
2	Gulsham –e- Fatma	Not connected with trunk Sewer flooding		
		occurs		
3	Shaik Basty	Not properly leveled, Flooding occurs		
4	Chamrra Mandi	Not properly leveled, Flooding occurs		
5	Bajwa Colony	Not properly leveled, Flooding occurs		
6	Faisal Colony	Not properly leveled, Flooding occurs		
7	Govt. Colony	Under Size Pipe		

Annex-V

Pumping Machinery

S.	Disposal Works	PUMP			Motor		Working hrs per	Operational
No.	Pumping station	No	Discharge (cusec)	Condit-ion	ВНР	Condition	day	status
	Chungi No. 6	1	5	Fair	80	Fair	22	Working
		2	5	Fair	80	Fair	22	Working
1		3	4	Fair	80	Fair	22	Working
		4	4	Fair	80	Fair	22	Working
		5	3	Fair	80	Fair	22	Working
	L.B.D.C Disposal	1	5	Fair	80	fair	22	Working
		2	5	Fair	60	fair	22	Working
2		3	4	Fair	60	fair	22	Going to be replaced
		4	4	Fair	80	fair	22	Going to be replaced
	Govt. Colony	1	2	Fair	20	fair	16	Working
3		1	2	Fair	20	fair	16	Working
4	5/4 L Disposal	1	1.5	Fair	40	Fair	5	Working
		1	1.5	Fair	40	Fair	5	Working

Ultimate Disposal

_)	Sullage	carrier / Fo	rced main			
S #	Name of Disposal works	Size	Length	Material	Condition	Treatment status	Ultimate Disposal
1	Chungi No.6	4X4	7000'	Bick Masonary	Bad	Untreated	Fields
2	LBDC	3X4	500'	RCC	Bad	Untreated	Fields
3	Govt. Colony	12"	1000'	R.C.C Pipe	Fair	Untreated	Chungi No.6
4	5/4L	12"	500'	R.C.C Pipe	Fair	Untreated	Chungi No.6

Annex-VI

S. No	Mohallas	Unserved	Daily	Alternate Day	Third Day	Weekly
1	A Block		V			
3	B Block C Block		1			
4	D Block		V			
5	E Block		V			
6	F Block		V			
7 8	Ghalla Mandi Shamsia Colony		7			
9	Saleem Colony		V			
10	Sabri Colony					V
11	Mehr Pori		V			
12	Faiz Abad Ghazi Colony		V			
14	Shadman		Ì			
15	Kot Fateh Jamal		√			
16 17	Christian Colony Sindhi Mohalla		√ √			
18	Lalazar		V			
19	Nwab Colony		V			
20	Waris Colony		,	√		
21	Dilber Colony Javed Town		V			
23	Haq Town		V			
24	Chaman Zar		V			
25 26	Fateh Town		V	√		
26	Faisal Colony 1 Faisal Colony 2		V		√	
28	Gulraiz Colony		V			
29	Choudhry Colony		V			
30	Rehmat Pura		V			.
31 32	Model Town Govt Colony		√		√	
33	Latif Abad		V			
34	Haroon Town		V			
35 36	Rahmat Ullah Town		1			.
36	Aziz Yaqoob Town Rahmat Pura		V			
38	Ayob Park					V
39	Shora Kothi		V			
40 41	Saith Colony		V			
41	Husain Colony Mustafa Park		7			
43	Museeb Pura		į.			
44	Nadeem Park			√		
45 46	Basti Borh Mansoor Abad		√		V	
47	Qaim Pura		√		V	
48	Purani Laker Mandi		į.			
49	New Laker Mandi		V			
50	Makah Godam Sabzi Mandi		1			
51 52	Naseem Fatima Colony		- V			
53	Azeem Abad		V			
54	Basti Shah Ameen		√			
55 56	Raheem Kareem Town Fazal Town				V	V
57	Sidra Ghafoor Town	√			•	
58	Yasir Ghafoor Town		V			
59	Kerya Ram		√			
60 61	Sher Rabani Town Dara Basty		V	٧		
62	Karkhana		V			
63	Nai Abadi		V			
64	Rahman Colony		V			
65 66	Allah Dad Colony Ghafoor Colony	√	√			
67	Shasfqat Block		√			
68	Arshad Town		V			
69	Sabria Town		1			
70 71	Basty Mehr Den Alkhalid Town		V			
72	Gulshan Fatima		1			
73	Sarki Mohalla		1			
74 75	Bajwa Colony Chamra Mandi		1			
76	Gadoon Town		7			
77	Dera Usman		V			
78	Saman Abad		V			
79 80	Rafee Colony Jalal Kot		√		J	
81	Kot Nehal Singh		√		v	
82	Kot Dilber Ali		V			
83	People's Colony		V			
84 85	Ata Colony Abdullah Town		√ √			
86	Mehboob Town		V			
87	Samad Pura		V			
88	Ahmad Abad		V			
89 90	Glass Factory Firdos Town		1			
91	Sadeeq Nager		7			
92	Wazeer Colony		V			
93	Ahmad Town		V			
94			√			
05	Ibraheem Colony		V			
95 96	Ibraheem Colony Kot Liaquat Hyat Faisal mehmood Colony		1	V		
96 97	Ibraheem Colony Kot Liaquat Hyat Faisal mehmood Colony Shaikh Basty		V	√		
96 97 98	Ibraheem Colony Kot Liaquat Hyat Faisal mehmood Colony Shaikh Basty Rashem Pura		V V	V		
96 97 98 99	Ibraheem Colony Kot Liaquat Hyat Faisal mehmood Colony Shaikh Basty Rashem Pura Muzafer Colony		V	1		
96 97 98	Ibraheem Colony Kot Liaquat Hyat Faisal mehmood Colony Shaikh Basty Rashem Pura		\ \ \ \ \	1		
96 97 98 99 100 101 102	Ibraheem Colony Kot Liaquat Hyat Faisal mehmood Colony Shaikh Basty Rashem Pura Muzafer Colony A line B Line C Line		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	√ 		
96 97 98 99 100	Ibraheem Colony Kot Liaquat Hyat Faisal mehmood Colony Shaikh Basty Rashem Pura Muzafer Colony A line B Line		\ \ \ \ \	7		

ROAD SWEEPING

Swept off Totally Swept off Occasionally

Banazeer Road Govt. Colony Road

Akbar Road Tehsil Road
Shah Din Road Church Road
Hospital Road Dial Pur Road

Ilama Iqbal University Road Girls Collage Road
Boya Collage Road Faisalabad Road
Junior Model School Road Stadium Road
Mundi Road Gohar Shah Road
Ravi Road Faisalabad Road
M.A Jinah Road Okara Depal pur road

Katchery Road G.T Road

Sadar Bazar Girls Collage No. 2 Road
Rail Bazar Over Head Bridge Faisalabad

Hospital Bazar Under Pass 1

Haq Bazar Second Under Pass

Sarky Mohala Road Samad Pur Road Railway Road

Annex-VI

List of Containers Placed with in TMA (Okara)

Sr.	Location	No of
		Containers
1	Junior Model School	1
2	Banazeer Road	3
	Kalama Chowk	
	Sindhi Mohala	
	Hussain Colony	
3	Lala Zar near Raseed Hospital	1
4	Model town Street no. 1	1
5	Zafar Colony (back of Ghulshan Cinema)	1
6	Wahab Town (Near the house of shaukt Qurashi Advocate)	1
7	Mansorabad Street no. 1	1
8	Eid Gah Road Daras near to DHQ Hospital	1
9	Fire Bright Colony	1
10	Kadar Colony near Ali Street	1
11	-	1
12	Data Chowk Girls Collage Road	1
	M.C High School	1
13	Special Education School Shamsa Colony	2
14	Gull Riaz Colony Street No. 1	1
15	Ghala Ghudam near Saman Cinema	
16	General Bus Stand	2
17	Government Colony	4
	Near to Z Block Park Class Cla	
	• Ghol Chowk	
	W Block Ground Start Nr. 2	
18	Street No. 2 Kaime Pura Chowk	1
		1
19	Basti Mushira Colony Maniel Colony No. 1 poor to Javed Hodel TO (P&C)	1
	Mansial Colony No. 1 near to Javed Jhodal TO (P&C) Chamra Mandi at front to Water Works	
21		1
22	TMA Office	1
23	C Line	2
24	C Line near to Naib Nazim Home	1
25	Near office Fire Bridge Office	1
26	Wazeer Colony	1
27	Deaf and Defective School	1
Total		35