

Report of the Public Private Partnerships for Water Safety in Hyderabad (2006-07)

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Chapter One: Introduction

I. Background

The provision of an adequate supply of safe water was one of the eight components of primary health care identified by the International Conference on Primary Health Care in Alma-Ata in 1978¹. Poor quality drinking water and inadequate sanitation are among the world's major preventable causes of early mortality, disease and economic burden for individuals and communities. While access to drinking water in India has increased over the past decade, the tremendous adverse impact of unsafe water on health continues. It is estimated that 21% of communicable diseases in India are water related. Of these diseases, diarrhoea alone killed over 700,000 Indians in 1999².

Despite investments in water and sanitation infrastructure, many low-income communities in India and other developing countries continue to lack access to safe drinking water. Poverty, poor sanitation, lack of sufficient and good quality drinking water, malnutrition, crowded living, lack of access to health care, poor hygienic practices etc., contribute to perpetuation of waterborne diseases in such communities, especially urban slums. Ensuring adequate and safe supply of water, therefore plays a crucial role in interrupting this vicious cycle of waterborne disease epidemics. A key preventive measure is therefore to periodically check water quality and conduct sanitary surveys in slum and other high risk areas. Given that principal risks to human health associated with consumption of polluted water are microbiological in nature, it is critical that quality of water supplied for drinking purposes be continuously monitored, at the minimum, for indicators of fecal pollution, turbidity, and disinfection of water (residual chlorine)³.

In Hyderabad, The Hyderabad Metropolitan Water Supply and Sewerage Board (HMWSSB), provides water supply that caters to the drinking water needs of about 6 million persons, including those living in about 800 slums. The HMWSSB has in-house testing facilities. Other additional facilities in Hyderabad include the Institute of Preventive Medicine (IPM) as well as a few private laboratories. Since existing mechanisms for drinking water quality testing

¹ Guidelines for drinking- water quality, Surveillance and control of community supplies, Second edition, Vol.3, WHO1997.

² Combating diarrhoeal disease in India through safe drinking water Justin DeNormandie and Janette Sunita, Population Services International (PSI) Delhi, India: WHO 2002

³ Guidelines for drinking- water quality, Surveillance and control of community supplies, Second edition, Vol.3, WHO1997.

within the public sector are not enough to meet the challenges of such a large city, the feasibility of a Public Private Partnership (P3) model to monitor water quality in the city was explored. As a first step, the HMWSSB entrusted the Institute of Health Systems the responsibility of conducting a pilot study in Attagutta slum. Incorporating lessons learned from the pilot, a more systematic public-private partnership model is currently being implemented in Hyderabad since February 2005 to monitor water quality and associated risks in high priority areas such as urban slums and the distribution system. The Hyderabad Metropolitan Water Supply and Sewerage Board and the Institute of Health Systems are the key partners representing the public and private side of the partnership, respectively. This report cover activities in the second year of the partnership, i.e. April 2006 to March 2007

II. Objectives

The main objectives of the partnership are:-

1. To augment the HMWSSB's quality control mechanisms as a third party check
2. To expand water testing capacity in Hyderabad and to supplement testing done by the HMWSSB in high priority areas such as reservoirs and urban slums
3. To identify risks to water safety in the high priority areas.
4. To systematize drinking water quality monitoring based on a Public Private Partnership model and to develop the required data and experience for planning and implementation of similar projects

III. Scope of Work

1. Monitoring of quality of water supplied from reservoirs identifying risks to water safety at the reservoir level
2. Monitoring of quality of water supplied to residents in urban slums.
3. Monitoring of quality of bore well/ hand pump water in and around the slum areas
4. Testing of stored household water samples in urban slums for bacteriological quality.
5. Monitoring quality of water supplied by hotels and street vendors in and around slum areas
6. Monitoring of sewerage overflows in identified slum areas
7. Enumeration of health care providers in the identified slum areas
8. Empowering slum residents for prevention of waterborne infections

IV. The PPP Model: Methodology

A. Monitoring at Reservoir Points

IHS personnel visits the reservoirs daily and collects water samples from designated sampling points. All samples are tested for “Residual Chlorine” using Diethyl Phenylene Diamine (DPD) method at the site itself. If water supplied at a sampling point has Nil Residual Chlorine (RC), a sample is collected for Microbiological analysis at the IHS laboratory. In addition to RC test results, the IHS personnel also record their observations pertaining to any circumstances at the reservoir site that could have an impact on water quality, such as: improper functioning of chlorine machines, availability of chlorine cylinders, absence of operators, power failures, damage to pipes etc.

B. Monitoring at Urban Slums

The slums to be monitored are assigned by the Board on a daily or weekly basis depending on information regarding risks to water quality. The following work is carried out in urban slums identified by the HMWSSB.

1. Monitoring Quality of Water Supplied to Residents in Urban Slums

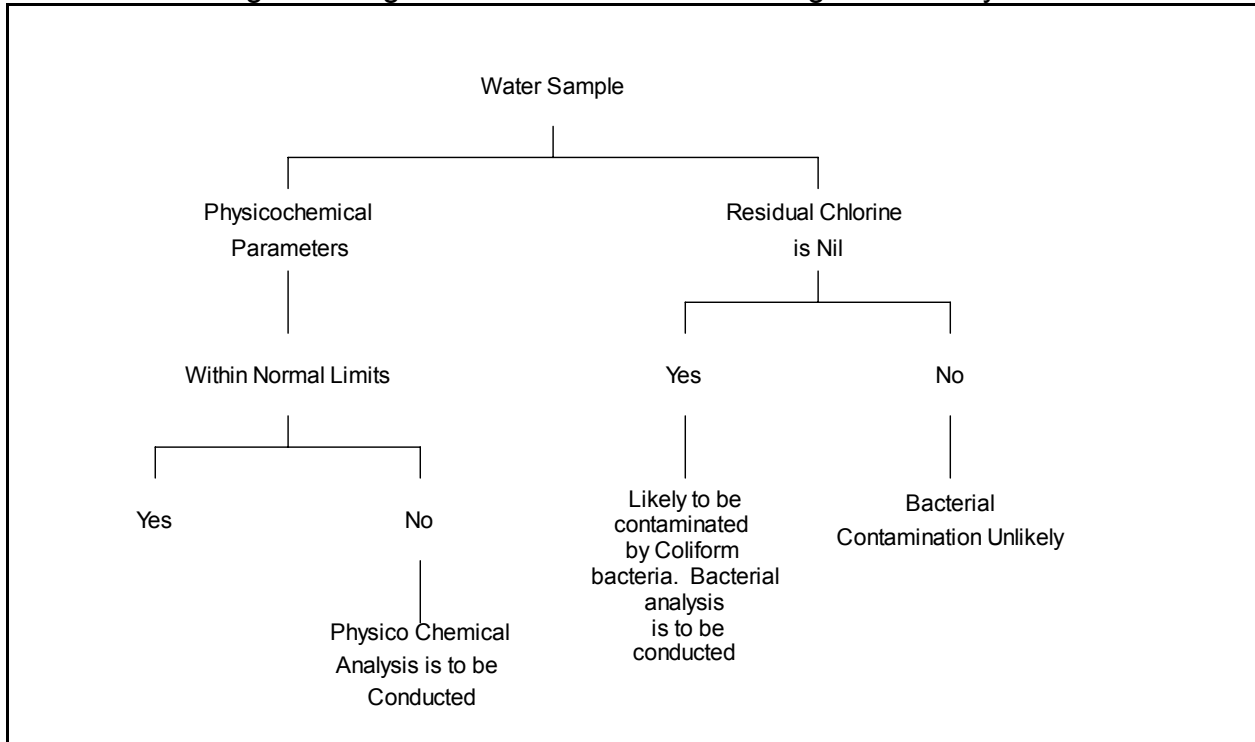
The residents of slums receive water for drinking purpose, predominantly from HMWSSB sources. Sometimes utilize water from other private sources. Sources of drinking water in urban slums include:

- i. House Taps or HTs
- ii. Public Stand Posts or PSPs
- iii. Pit Taps or PTs
- iv. Metro Water Tanker or MWT
- v. Metro Bore wells or MB



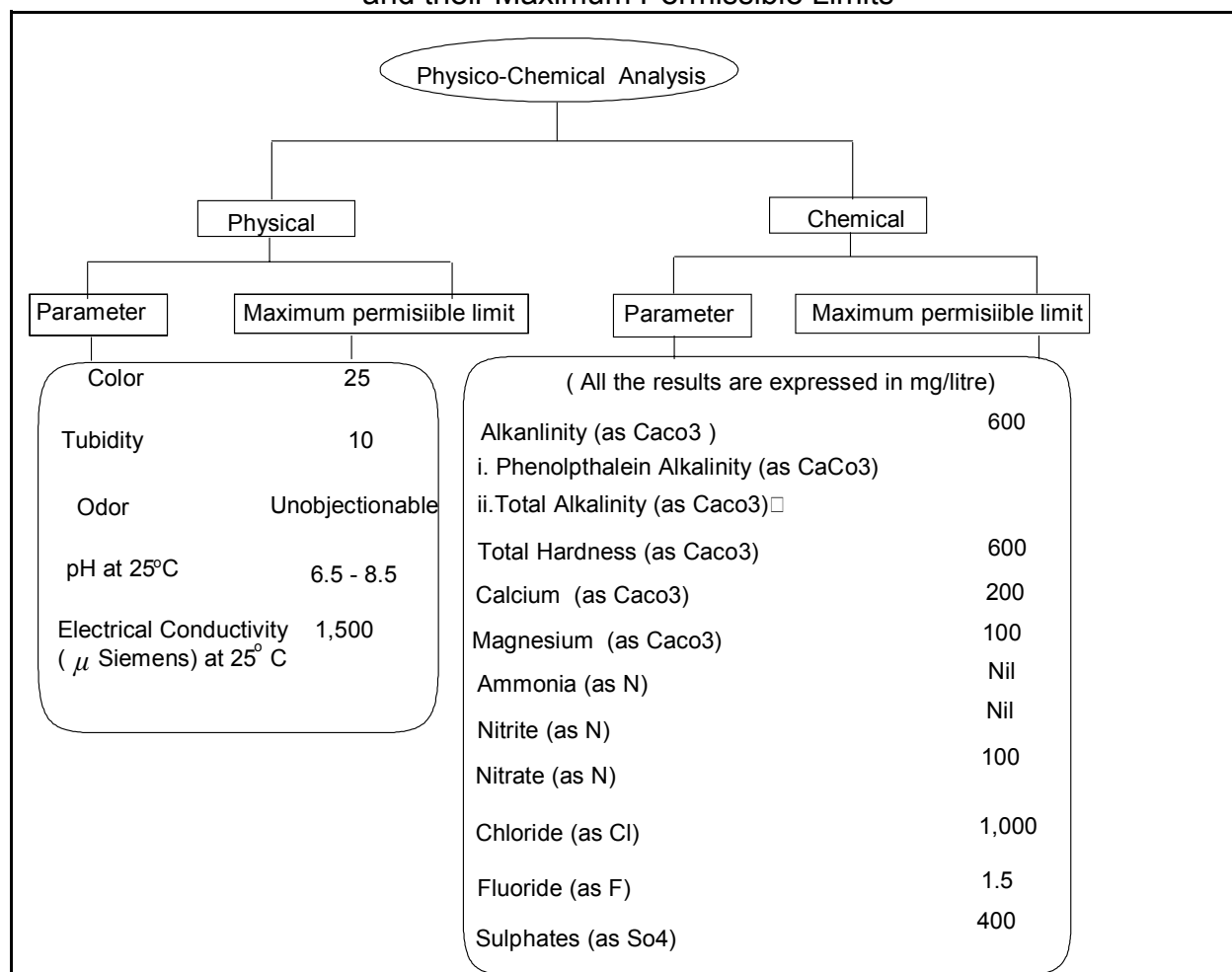
Residual chlorine of piped water supplied by the Board in identified slums were monitored in each slum. Water samples were collected as per the algorithm in Figure -2. Direct samples were collected from (a) All public stand posts (b) All pit taps (c) 5% of the house taps, which are randomly selected , and (d) if the selected public stand posts and pit taps did not have water supply on the day of survey, a stored water sample was also collected

Figure 2: Algorithm followed for conducting water analysis



Residual chlorine was tested, using DPD (N,N-Diethyl paraphenylene diamine), as recommended by the World Health Organization, at the site itself. If the residual chlorine levels are within normal limits (0.2 - 0.5 PPM), the water sample is unlikely to be contaminated with bacteria and hence considered bacteriologically satisfactory for drinking purpose. If the residual chlorine levels are less than normal limits or the supply is unchlorinated, water could be bacteriologically contaminated and hence a sample was collected for bacteriological analysis. Further, even in the presence of satisfactory levels of chlorine, a sample was collected for bacteriological analysis when the tap is located in very close vicinity to manholes, sewerage overflows and drainage pipelines. If the general appearance, odour and turbidity of the water was found to be objectionable, a sample was collected for physicochemical analysis. Details of physicochemical tests parameters used for the monitoring is given in Figure-3 Samples for laboratory testing were collected in IHS Water Sample Collection Bottles. All samples were analyzed by the IHS Water Quality Testing Laboratory (WQT Lab).

Figure-3: Physical and Chemical Parameters for Drinking Water Quality Monitoring and their Maximum Permissible Limits



In addition to RC test results, the IHS personnel also record their observations pertaining to any circumstances at the slum site that could have an impact on water quality, such as: leakage of the tap, damage of the sewerage pipelines, cross connections with sewerage pipes, cracked or eroded tap stand, presence of open defecation in the near vicinity, presence of farm animals or industrial pollution.

2. Monitoring Quality of Bore-well or Hand-pump Water

Water samples are collected from the functional hand pumps and bore wells utilized by residents for drinking and other domestic purposes, in and around the selected slums. Samples are tested for bacteriological quality and physiochemical parameters like color, odor, taste, turbidity, PH , conductivity, TDS, total hardness, estimation of dissolved mineral contents like fluoride, calcium, magnesium ,and natural pollutants like nitrites, nitrates, ammonia and sulphates.

3. Monitoring Quality of Water Supplied by Hotels and Street Vendors

Water samples are collected from hotels, permanent eateries, street vendors, etc., operating in and around the selected slums. Samples are tested for bacteriological quality and all samples for physiochemical parameters like color, odor, taste, turbidity, PH, conductivity, TDS, total hardness, estimation of dissolved mineral contents like fluoride, calcium, magnesium, and natural pollutants like nitrites, nitrates, ammonia and sulphates. Results are communicated to the Board and the respective establishments.

4. Sanitary Surveys and Monitoring of Sewerage Overflows

Sanitary survey of the piped water lines was done during the residual chlorine monitoring. Factors like eroded or cracked overhead tank, logged tap stand, leakage in the pipeline, sewerage line, crisis crossing of sewerage lines, presence of fecal matter adjacent to the tap stand, etc., were identified. An 'on-site inspection is done by IHS personnel to identify any sewerage overflows in the selected slums. The Board is notified of all such sewerage overflows, with exact address. When the overflows are from within houses, respective households are informed of their potential health hazards. The status of these overflows is followed up during repeat visits.

5. Enumeration of Health Care Providers

During the field visits IHS personnel enumerate health care providers in and around the slums. The personnel also interact with them to enquire whether any increase in incidence of gastroenteritis was observed among their patients.

6. Empowering Slum Residents for Prevention of Water Borne Diseases.

IHS personnel conduct the Focus Group Discussions in selected slums where the RC is monitored for a regular period of time, after informing the residents well in advance. During these discussions the residents are informed about the potential health hazards such as pit taps, sewerage outflows, unsanitary surroundings etc., and educated about good hygiene practices and measures to prevent water contamination. The discussions also serve to get feedback from the community regarding quantity and quality of water supplied, storage and handling practices, sewerage system, awareness and their awareness regarding prevention of water borne infections. The residents are also informed of whom to contact when there is a problem with water supply or sewerage system.

V. Periodicity of Reporting

The test results are communicated to the Board daily. In addition consolidated weekly, monthly and annual reports are also submitted to the Board. This summary report pertains to the test results and other findings for the period between March 2006 and March 2007.

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3. Water Safety Plans: Managing drinking-water quality from catchment to consumer. World Health Organization, Geneva, 2005.
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Chapter Two: Results and Findings

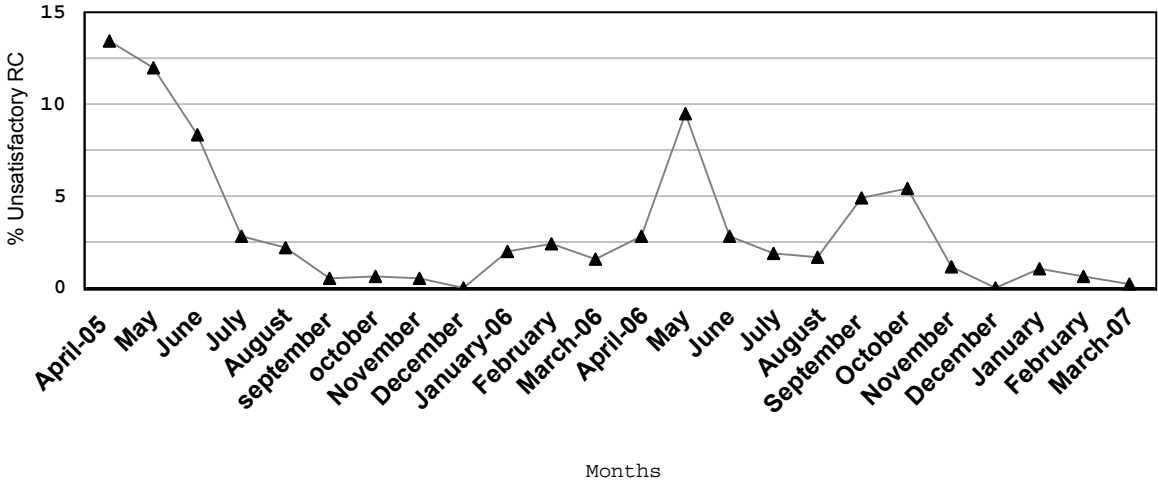
I. Monitoring at Reservoir Points

A. Residual Chlorine Test Results

Reservoir wise details of RC Tests done for each month of the reporting period is provided in Annexure-1. A total of 5473 samples were tested for residual chlorine. Of these, 149 samples (approximately 2.7% of the total) had unsatisfactory levels of chlorination. There is an overall improvement in chlorination levels in the reporting period compared to that of the previous year in which 3.4% of the samples had unsatisfactory levels of chlorination.

Month wise trends of unsatisfactory RC levels for the period between April 2005 to March 2007 is shown in Figure-4. Peaking of Unsatisfactory RC levels during the period of April- June is observed in both years. The peak levels of unsatisfactory chlorination during this period was lower in the reporting year, compared to the previous year. While higher levels of unsatisfactory chlorination was reported from most of the reservoirs in this period during 2005-06, peak values of unsatisfactory chlorination in April-June 2006-07 was primarily on account of Saheb Nagar, Autonagar and Balapur reservoirs. In September- October period of the reporting year another peak of unsatisfactory levels of chlorination was observed. This was primarily contributed by the Erragadda, Madhapur and Narayanguda reservoirs.

Figure-4: Month-wise Trends in Unsatisfactory Chlorination (All Reservoirs) 05-07



During the reporting period, consistency of level of satisfactory chlorination varied from reservoir to reservoir. 100% of the samples from reservoirs like Aliyabad, Alwal, Asmangadh, Boggulakunta, Chanchalguda, Jahanuma and Mishrigunj had satisfactory levels of chlorination. Levels of satisfactory chlorination in reservoirs such as Saheb Nagar, Autonagar, Madhapur, Erragadda, Balanagar and Narayanguda were comparatively poorer than the rest of the reservoirs. The Saheb Nagar reservoir particularly showed high levels of unsatisfactory chlorination. Saheb Nagar is a service reservoir and it is likely that chlorination is not done regularly as the water is already chlorinated at Gunagal. However since Gunagal is at a distance from the reservoir, it is likely that inadequate chlorination may result from evaporation. Secondly there is no outlet source at this reservoir and hence sample is collected directly from the reservoir. Since there is heavy flow in the reservoir it may be possible that chlorination which occurs at one place may not spread evenly to the point of sample collection. Details of the better performing and poorly performing reservoirs, in terms of satisfactory levels of chlorination are given in Table 1 and Table 2 respectively.

Table 1. Better performing reservoirs in terms of satisfactory levels of chlorination

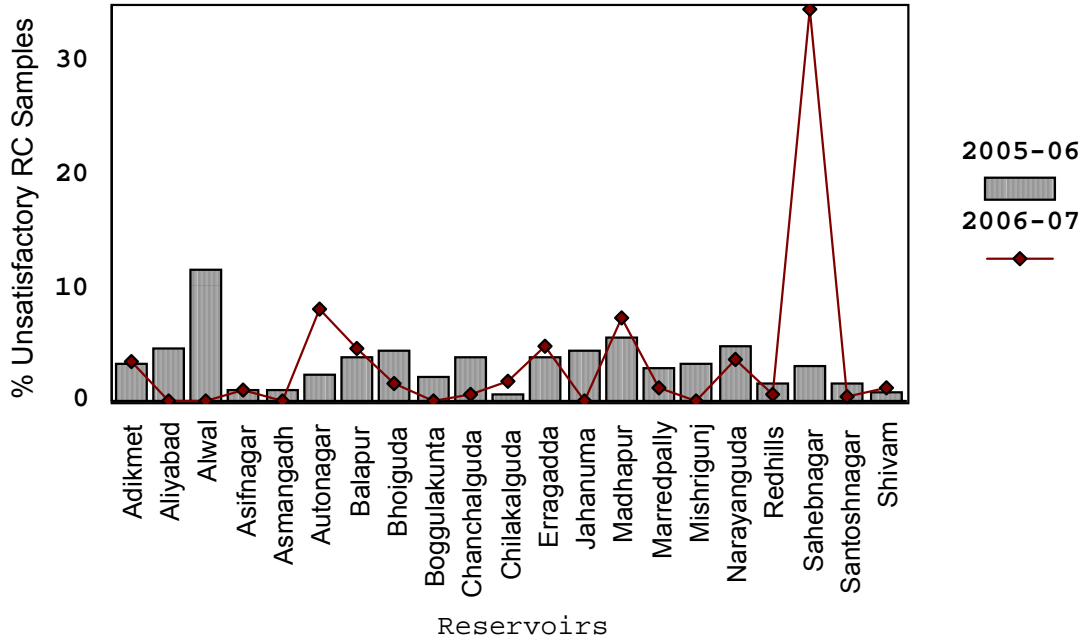
Reservoir	# of samples	RC Test		% of Samples Unsatisfactory
		# Satisfactory	# Unsatisfactory	
Aliyabad	350	350	0	0.0
Alwal	146	146	0	0.0
Asmangadh	322	322	0	0.0
Boggulakunta	312	312	0	0.0
Chanchalguda	303	303	0	0.0
Jahanuma	255	255	0	0.0
Mishrigunj	307	307	0	0.0
Santoshnagar	239	238	1	0.42
Redhills	308	306	2	0.64
Asifnagar	189	187	2	1.06

Table 2. Poorly performing reservoirs in terms of satisfactory levels of chlorination

Reservoir	# of samples	RC Test		% of Samples Unsatisfactory
		# Satisfactory	# Unsatisfactory	
Saheb Nagar	121	79	42	34.71
Autonagar	268	246	22	8.2
Madhapur	202	187	15	7.42
Erragadda	310	295	15	4.83
Balapur	210	200	10	4.76
Narayanguda	338	325	13	3.84

Comparison of average levels of unsatisfactory chlorination for each reservoir between the reporting year and previous year is given in Figure-5.

Figure 5: Reservoir-wise Average Unsatisfactory Levels of Residual Chlorine, 05-07



Sahebnagar, Autonagar, Madhapur, Chilakalguda, Balapur and Erragadda reservoirs performed worse than the previous years. All other reservoirs have performed as well or better than the previous year. Alwal, Aliyabad, Chanchalguda, Jahanuma, Bhoiguda and Mishrigunj reservoirs have significant improvement in chlorination levels during 2006-07. The reporting year performance of Alwal which reported highest levels of unsatisfactory chlorination among all reservoirs in 2005-06 is particularly noteworthy. While 11.8% of samples from Alwal had unsatisfactory RC levels in 2005-06, none of the samples in 2006-07 had unsatisfactory RC levels.

B. Bacteriological Test Results

Reservoir wise details of Bacteriological Tests done for each month of the reporting period is provided in Annexure-2. A total of 637 samples were tested for bacteriological contamination. Of these, 9 samples were found to be contaminated with pathogenic thermotolerant coliform bacteria. Klebsiella, Citrobacter and Irregular coliforms were isolated in 55.55%, 11.11% and 33.3% of the samples respectively. In the reporting year significant improvement in reservoirs like Jahanuma, Madhapur, Alwal and Chanchalguda reservoirs which

had comparatively higher prevalence of bacteriological contamination in the previous year was observed. E-Coli, a major indicator organism of faecal pollution was not detected this year.

Table 3: Bacteriological Contamination in Reservoirs 2006-07

Reservoir	Samples for Bacteriological Testing		% Samples Unsatisfactory	Organism Isolated		
	Total Satisfactory	Unsatisfactory		Klebsiell	Citrobacter	Irregula
Autonagar	28	25	10.71	1	0	2
Shivam	26	25	3.86	0	1	0
Boggulakunta	26	25	3.85	1	0	0
Mishrigung	29	28	3.45	0	0	1
Narayanaguda	30	29	3.33	1	0	0
Asmangandh	32	31	3.13	1	0	0
Erragadda	43	42	2.33	1	0	0
According to Organism in %				55.5	11.11	33.3

C. Physico-Chemical Analysis Results

A total of 359 samples were tested for physico-chemical analysis from each reservoir from different source points. Of these 17 samples were from Public Stand Post, 13 from Pump, 139 from Tap, 119 from Tankers, 10 from Booster, 4 from Tanker Filling Point and 3 directly from the reservoir. Details of Physico-chemical tests done is given in Figure-3. All the samples tested had were within the permissible range.

Table 4: Reservoir wise details of Physico-chemical Tests done from April 06- March 07

Reservoir	Sample Source Tested						
	PSP	Pump	Tap	Tanker	Tanker Filling Point	Booster	Direct Source
Adikmet	0	0	11	5	0	0	0
Aliyabad	7	4	4	13	0	0	0
Alwal	1	3	5	0	0	0	0
Asifnagar	0	2	4	4	0	0	0
Asmangandh	8	0	5	6	2	0	0
Autonagar	2	0	5	12	0	0	0
Balapur	0	1	6	4	3	0	3
Banjarahills	2	0	2	4	0	0	0
Bhoiguda	0	0	9	4	1	0	0
Boggulakunta	1	2	6	8	0	0	0
Chanchalguda	3	0	2	4	0	0	0
Chilakalguda	9	1	5	7	0	0	0
Erragadda	1	0	7	8	1	0	0
Jahanuma	12	0	2	1	0	4	0
Madhapur	2	0	8	8	0	0	0
Marredpally	6	0	4	4	0	0	0
Mishrigung	0	0	6	11	0	0	0
Narayanaguda	9	0	5	4	0	0	0
Redhills	7	0	7	7	0	0	0
Saheb Nagar	0	0	12	0	0	0	0
Santhoshnagar	1	0	9	2	0	0	0
Shivam	0	0	15	3	2	0	0
Taranagar	0	0	0	0	1	0	0
Total	71	13	139	119	10	4	3

D. Probable Reasons for Unsatisfactory Chlorination

When chlorination levels are unsatisfactory, IHS field personnel also investigates probable reasons for the same. While a specific cause could be identified for unsatisfactory chlorination of about 80% of the samples, no specific cause could be attributed to the remainder of the samples. In the case of the remainder of about 20% of samples there was no evidence of chlorination. This has been attributed to operator negligence. In about 54% of the unsatisfactory samples, chlorination was improperly done. Thus about three fourths of the unsatisfactory samples are on account of human error. Technical reasons such as power failure, malfunctioning of chlorine machine, unavailability of chlorine gas and breakage in chlorine pipes account for a quarter of the unsatisfactory samples.

Table 5: Probable Reasons for Improper Chlorination in Reservoirs April 06- March 07

Reasons	% of Unsatisfactory Samples Attributed	Reservoirs Affected	
		More Commonly ¹	Occasionally
Power Failure	6.71	Autonagar, Madhapur.	Adikmet
Malfunctioning of Chlorine Machine	4.03	Madhapur, Marredpally, Redhills	
Unavailability of Chlorine gas	12.08	Narayanguda, Chilakalguda	Adikmet, Autonagar, Balapur, Chanchalguda.
Breakage in chlorine Pipes	2.68	Narayanguda.	
Negligence of operator	20.13	Redhills, Narayanguda, Autonagar, Erragadda.	Adikmet, Balapur, Banjarahills, Bhoiguda, Erragadda, Madhapur.
Improper Chlorination	54.36	Erragadda, Saheb Nagar, Alwal Autonagar, Madhapur, Chilakalguda, Marredpally, Narayanguda, Redhills.	Asifnagar, Balapur, Jahanuma, Banjarahills, Bhoiguda, Santoshnagar

¹: Listed in order of prevalence

Table 6 compares performance of reservoirs between 2005-06 and 2006-07 based on probable reasons for unsatisfactory chlorination. Compared to 2005-06, a different set of reservoirs have been commonly affected in 2006-07 by technical reasons such as power failure, malfunctioning of chlorine machine, breakage of chlorine pipes and unavailability of chlorine gas. Mishrigunj was affected by breakage of chlorine pipes in both years. In the reporting year, availability of operators have been ensured and no unsatisfactory sample was attributed to absence of operator. More or less similar set of reservoirs (Saheb Nagar, Erragadda, Autonagar, Madhapur and Narayanguda) were affected by operator error/negligence in both years.

Table 6: Comparison of Performance of Reservoirs between 2005-06 and 2006-07 based on probable reasons for unsatisfactory chlorination

Reasons	% Share of US Samples		Reservoirs Commonly Affected	
	2005-06	2006-07	2005-06	2006-07
Power Failure	12.26	6.71	Alwal,Balapur, Missirigunj, Madhapur, Jahanuma.	Autonagar Madhapur
Malfunctioning of Chlorine Machine	8.08	4.03	Alwal, Asmangadh, Boggulakunta.	Maredpally, Red Hills, Madhapur
Unavailability of Chlorine gas	6.69	12.08	Aliyabad, Asmangadh, Madhapur.	Narayanguda, Erraguda
Breakage in chlorine Pipes	1.95	2.68	Misrigunj	Narayanguda
Absence of operator	2.79	0	Adikmet Misirigunj, Narayanguda.	
Negligence of operator/ Improper Chlorination	64.24	74.5	Alwal, Aliyabad, Erragadda, Madhapur, Narayanguda, Sahebnagar, Autonagar	Sahebnagar, Erragadda, Autonagar, Madhapur, Narayanguda

E. Maintenance of Distribution System

1. Residual chlorine levels are required to be monitored on an hourly basis and results recorded in a log register. It was observed that not much attention was given to proper recording and maintenance of the log registers in any of the reservoirs.
2. While satisfactory levels of chlorination are generally maintained during community supply hours, the same is not the case outside this time. However, it has been observed that tankers and PSP's present in the reservoir premises were being supplied with water after the regular supply hours.
3. Distribution networks are especially vulnerable to contamination when the pressure falls, particularly in the case of intermittent supply. Therefore it is always recommended to clean the reservoirs twice a year. However, cleaning of reservoirs is not regularly done. Actual date

of last cleaning was available only for 9 of the 22 reservoirs. For the remaining 13, the year in which the reservoir was last cleaned was available. In rest of the seven reservoirs, no information on the dates of last cleaning was available. Only 2 of the 22 reservoirs were cleaned during the reporting period (Table-7).

Table- 7: Status of Cleaning of Reservoirs

Reservoir	Date of Last Cleaning
Adikmet	15/07/2006
Aliyabad	17/05/2003
Alwal	2006
Asifnagar	Not Available
Asmangandh	26/04/2005
Autonagar	08/07/2003
Balapur	Not Available
Banjara Hills	14/12/2005
Bhoiguda	30/07/2004
Boggulakunta	2002
Chanchalguda	2005
Chilakalguda	27/05/2003
Erragadda	Not Available
Jahanuma	2003
Madhapur	21/08/2005
Marredpally	Not Available
Mishrigung	2004
Narayanaguda	Not Available
Redhills	Not Available
Sahebnagar	Not Available
Santoshnagar	2004
Shivam	17/04/2006

II. Monitoring at Urban Slums

A. Coverage

A total of 246 slums in eight municipal divisions were covered during the reporting period. Division wise number of slums covered is given in Table 8.

Table 8: Division-wise Number of Slums Covered (2006-07)

Municipal Division	Number of Slums
I	47
II	64
III	20
IV	35
V	40
VI	19
VII	19
IX	2
Total	246

B. Residual Chlorine Testing

A total of 19169 metro water samples from different type of sources were tested for residual chlorine during the reporting period. Source wise distribution of samples and results of RC Tests are given in Table-9. Bulk of the samples were taken from Pit Taps (55.5%) as they are very commonly found in the slums. About 1.5% of samples collected from Public Stand Posts and Pit Taps had unsatisfactory RC levels compared to 0.57% samples collected from house taps

Table-9: Distribution of Samples for RC Test by Source of Sample

Sources	Residual Chlorine Test Results			% Samples Unsatisfactory
	Satisfactory	Unsatisfactory	Total	
Public Stand Post	834	13	847	1.5
House Taps	7652	44	7696	0.57
Pit Taps	10469	157	10626	1.48
Total	18955	214	19169	1.12

Overall there has been a significant improvement in chlorination levels in slum areas in the reporting year, compared to the previous year. In the year 2005-06 about 6.72% of the samples collected from slums were found to be unsatisfactorily chlorinated, compared to 1.2% in the reporting year. Slum wise and month wise details of RC Tests done is provided in Annexure-3. While most slums received water supply with adequate chlorination consistently some slums fared poorly in terms of satisfactory levels of chlorination. These include Baggi Khana, Amber Nagar, Madannapet Mandi and Mader basthi slums. Unsatisfactory chlorination in the distribution system at slums may be on account of improper chlorination at the reservoir level or pollution at the local level. Possible causes for unsatisfactory chlorination have been identified division-wise in Annexure-4.

C. Bacteriological Test Results

A total of 1321 samples were collected from different sources for bacteriological analysis as shown in Table-10. Slum wise and month wise details of bacteriological tests done for each type of source is provided in Annexure-5.

Table-10: Source wise results of bacteriological testing of water samples

Source	Total	Unsatisfactory	% Unsatisfactory
Direct Piped Water	934	37	3.961
Stored Water	69	20	28.98
Bore wells	183	80	43.71
Street Vendors	135	31	22.96
Total	1321	168	12.72

About 11.5 % of the total samples tested for bacteriological contamination were found to be contaminated with coliform bacteria. Contamination of about 43.7% of the borewells and about 23% of the street vendor samples indicate a significant health risk to the general public who avail these facilities. About 4% of the direct piped water samples and 29% of the stored water samples (water stored for drinking purpose by the household either in vessels, pots or plastic buckets) were found to be contaminated, indicating significant risk of intra-household contamination in these areas. E.Coli, Klebsiella, Citrobacter and Irregular bacteria were isolated in 82.48%, 5.83%, 2.91% and 8.75% of the contaminated samples respectively. Distribution of

coliforms in contaminated samples from each type of source is given in Figures 6 and 7. It is seen that E. Coli is the major contaminant in all types of sources.

Figure-6: Distribution of Coliforms in Unsatisfactory Source and Stored Samples

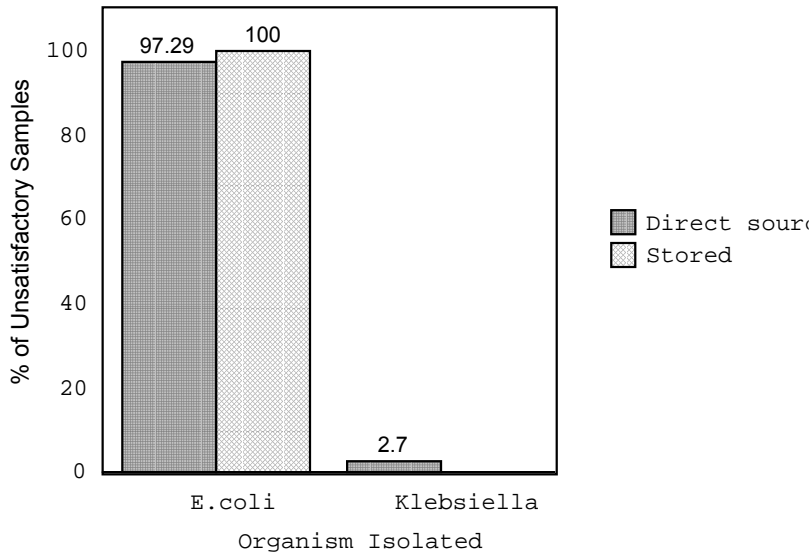
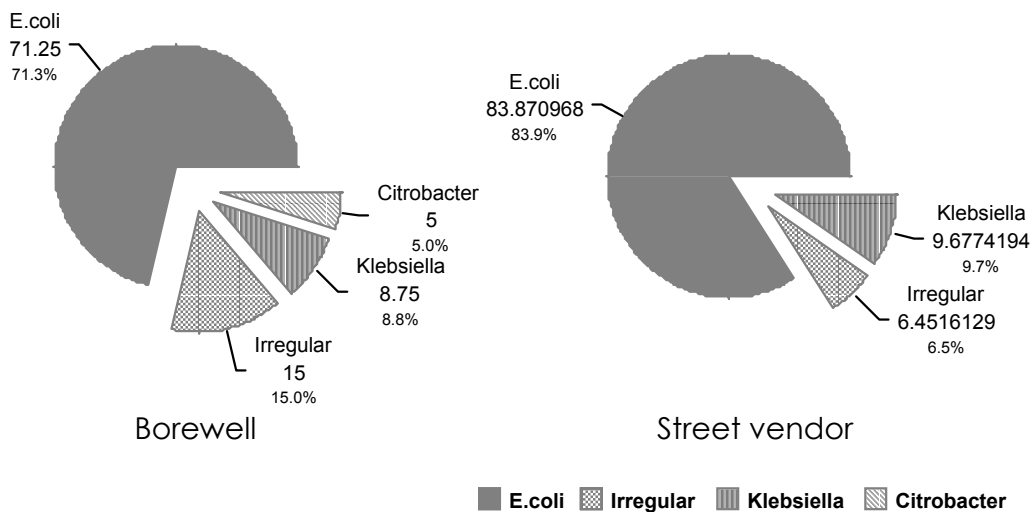


Figure-7: Distribution of Coliforms in Unsatisfactory Borewells & Streetvender Samples



D. Physicochemical Analysis

788 water samples from hotels, permanent eateries, street vendors etc., operating in and around the selected slums and 1133 borewell samples were collected for physicochemical analysis. Significant proportion of the borewell samples are not potable as one or more physicochemical parameters exceed the maximum permissible limits prescribed for drinking water (Table-11). The levels of Calcium and Magnesium which are the chief contributors to

hardness of water was above the maximum permissible limits in 61% and 44% of borewell samples. 27% of the borewell samples had nitrate content in excess of the maximum permissible limits. High levels of nitrates in drinking water have been linked to methaemoglobinemia in infants. While about 50% of the borewell samples had sulfate levels in excess of 400 mg/litre, the maximum permissible limits prescribed by the WHO, all samples were within the maximum permissible limit for sulfates (1000mg/L) prescribed by the National Drinking Water Mission. About 11% of borewell samples had levels of fluorides in excess of the maximum prescribed levels. Presence of fluoride in excess of 1.5 mg/L is associated with dental and skeletal fluorosis. Street vendor/hotel samples where the source was a borewell had more or less similar physicochemical characteristics.

Table-11: Physicochemical Characteristics of Street Vendor/Hotel & Borewell Samples

Characteristics	Street Vendor/Hotels (n=787)			Borewell (n=1133)		
	WMPL	OMPL	% OMPL	WMPL	OMPL	% OMPL
Color	787	0	0	1133	0	0
Turbidity	787	0	0	1133	0	0
Odor	787	0	0	1133	0	0
p ^H	584	203	25.79	1052	81	7.15
Conductivity	747	40	5.08	990	143	12.62
Alkalinity	787	0	0	1133	0	0
Total Hardness	750	37	4.70	1006	127	11.21
Calcium	616	171	21.73	440	693	61.17
Magnesium	546	241	30.62	637	496	43.78
Ammonia	787	0	0.00	1130	3	0.26
Nitrites	786	1	0.13	1132	1	0.09
Nitrate	699	88	11.18	827	306	27.01
Chloride	787	0	0.00	1133	0	0
Fluoride	740	47	5.97	1013	120	10.59
Sulfate	615	172	21.86	573	560	49.43

WMPL- Within Maximum Permissible Limits; OMPL- Outside Maximum Permissible Limits

E. Monitoring Sewerage Overflows

Sewerage overflows from manholes, household drainage pipes, drainage pipes of the Metro Board, open sewerage drains, storm drains etc., were observed in slums. 175 instances of sewerage overflows were identified during the reporting period (Annex-6). Sewerage overflows were reported in higher numbers from Divisions I, II, IV and V especially during monsoon season. More instances of sewerage overflows were identified in Gowlipura (25), Sultanshahi (23) and Yakutpura (14) slums. These slums reported more number of overflows in the previous years also. The Board was notified of all such sewerage overflows, with exact address. When the overflows were from within houses, respective households are informed of their potential health hazards. The status these overflows was followed up during repeat visits. In most instances, it was observed that sewerage overflows were rectified following communication to the Board. In some instances, where the sewerage overflow posed a significant public health risk, the matter was taken up directly with higher Board officials.

F. Enumeration of Health Care Providers

During the field visits IHS personnel interact with medical practitioners working in and around the slums to ascertain whether there has been any reported cases of gastroenteritis. The medical practitioners are requested to provide clients with information regarding good hygiene practices and measures to prevent water borne diseases. Support of 27 health care practitioners was enlisted during the reporting period. (See Annex-7 for details). The local health care practitioners are generally responsive and interested in participating in the awareness programs conducted by the NGO's. They are willing to distribute chlorine liquid or tablets to their patients if the necessary supplies are provided to them.

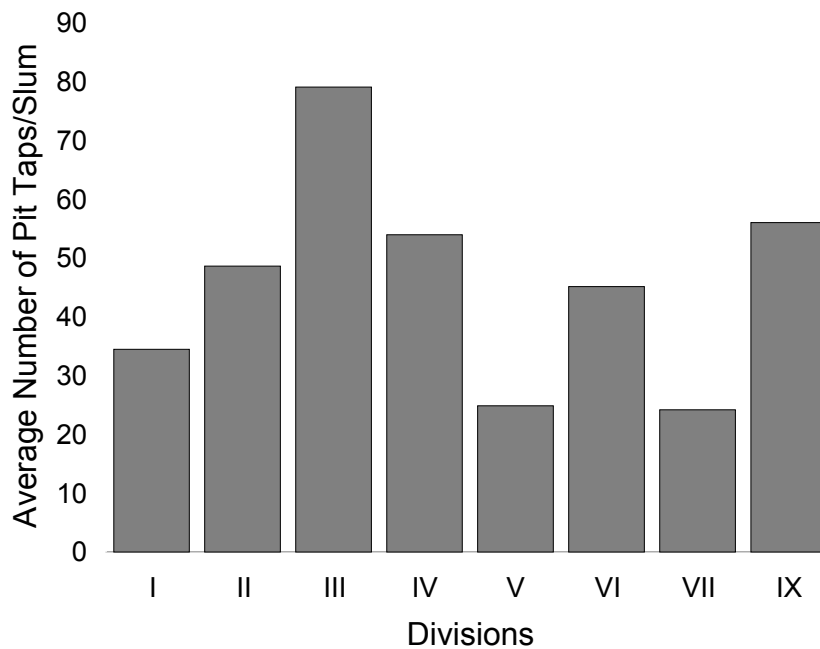
G. Empowering Slum Residents for Prevention of Water Borne Diseases

Effective and sustainable programmes for water safety require the active support of local communities, who should be involved at all stages in such programmes including initial surveys; monitoring and surveillance of water supplies; reporting faults, carrying out maintenance and taking remedial action; and supportive actions including sanitation and hygiene practices. Focus Group Discussions were conducted in slum areas monitored for daily RC by the IHS field staff, to get feedback and provide information on water quality, water use practices, hygiene practices

and health risks. Potential risk areas identified during daily monitoring are selected for FGDs. Monthly five FGD's in different slums were conducted.

A potential public health risk identified in many slums was the use of pit- taps for drinking water purposes. Either because they cannot afford legal connections or due to low pressure in pipes, residents establish pit-taps, which are connected to main pipe lines. Pit taps are more vulnerable to contamination than others as their base is not cemented and there is water stagnation around the tap. In most instances the surroundings are unsanitary. IHS personnel demonstrate how water gets stored in pipe, explain how such connections are a risk for water contamination and their role in water borne infections. The residents are also encouraged to approach the Board for proper connections. A total of 10626 pit taps were identified last year. On an average about 40 pit taps were identified per slum. The average number of pit taps identified per slum was higher in Divisions III, IX, IV and II. Reliance on pit taps were found to be more in certain slums such as: Sultanshahi, Moghalpura, Metharbasthi, Gowlipura, Hanumannagar, M.S.Maqtha, PS Nagar, Kumarwadi, Hashamabad, Chandrayangutta (Annex-8).

Figure-8: Division wise Average Number of Pit Taps Identified Per Slum



Focus group discussions were held with women in slum population to learn about their water usage, storage and handling practices, health status, difficulties encountered in accessing potable water and to educate them on good hygiene practices and measures to prevent water-borne diseases. Residents were found to be generally receptive to such interactions. A total of 60 FGDs were done in the reporting year. Details of FGD visits is given in Annex-9. Division wise number of FGDs conducted is provided in Table 12.

Table-12: Division-wise Number of FGDs Conducted

Division	Slums Covered	No. Of FGDs
II	SultanShahi, Daniah Nagar, Shivajinagar, Darushifa Gowlipura, Medarwadi, Moinbagh, Dabeerpura	8
III	Bestiwada, Feelkhana, Pottisriramulunagar, Syednagar, Ravindranagar, Sabzi Mandi(Karwan Section) Gollabasti (Shaikpet Filter Beds)	7
IV	Osmangunj, Poolbagh(Basheerbagh) Jinsi Chowra, Patelnagar, Afzalsagar, BJJR Nagar	6
V	Bapunagar, New Premnagar, Bathkammakunta Burjagalli, Kumarwadi, Pochammabasti, Anjaya nagar,Nagamayya kunta Harispenta, Krishna nagar, Anjayanagar, Sundarnagar, Nimboliadda, Rajmohalla, Medharbasti, Nagamayya kunta, Sai Sharan Colony	19
VI	Devarakondabasthi, Nandinagar, Panjagutta, Lakshminagar, Waddarabasthi	5
VII	Sitaphalmandi (Tarnaka), Bansilalpet, Chacha- Nehrunagar, Sanjay Gandhinagar, AlluriSitharam raj nagar, Ranganagar, Rasoolpura, Jainagar Colony	9
IX	Siddique nagar, Anjaiah Nagar, Taranagar, Chandanagar and Rajivnagar, Hafeezpet	6

Summary of each FGD is given in Annexure-10. Key division wise findings are summarized below.

1. Water Supply

Division II: Metro water supply is from Aliyabad, Chanchalguda and Balapur reservoirs. Alternate day supply for 2 hours. People in Daniahnagar and Shivajinagar slums rely on borewell water for drinking purposes also. Majority of the people in the slums depend on PSP's for drinking and Handpumps for domestic purposes.

Division III: Metro water supply is mainly from Asifnagar and partly from Banjara Hills reservoirs. Alternate day supply for 2 hours. Bestiwada dwellers rely on metro and borewell

water for drinking as the water is supplied on the alternate days is inadequate and the supply in the designated time is intermittent.

Division IV: Metro water supply is from Boggulakunta and Redhills reservoirs. Alternate day supply for 2 hours. In Patel Nagar many rely on borewell water for drinking as the water supplied is over chlorinated. In Osmangunj many depend on borewells due to inadequate supply of water

Division V: Water supply is from Adikmet, Chilkalguda, Narayanaguda and Shivam reservoirs. Bathakammakunta Nagamayyakunta, Burjagalli, Sundarnagar, Bapunagar have 24X7 since few months Other slums have alternate day supply for 2 hours. In 24X7 supply areas people do not depend on borewell water now

Division VI: Water supply is from Banjara Hills and Erragadda reservoirs. Alternate day supply for 2 hours. The people of the lower Panjagutta slum depend mostly on PSPs for drinking purposes Some residents of Panjagutta slum collect water from hand pump located in MLA quarters when there is insufficient water. Many residents of Nandinagar depend on tanker water due to insufficient supply. In Devarakondabasthi people rely on borewells also.

Division VII: Water supply is from Marredpally and Bhoiguda reservoirs. Alternate day supply for 1-2 hours. Rasoolpura has very few house taps and residents depend mostly on PSP's, Tankers, Handpumps and Sintex tanks even for drinking. All other slums depend on borewells for their domestic purposes only.

Division IX: Water supply is from Serlingampally Municipality and Madhapur reservoir. Alternate day supply for about 2 hours. In Hafeezpet area people mostly depend on tanker or borewells. A large number of bore wells were were not in working condition.

2. Water Handling and Storage Practices

Knowledge of safe water handling and storage practices was generally limited. As most of the residents are daily wage laborers, in many instances collection of water is the responsibility of children. Water is generally collected in steel, plastic and brass pots. Water is mostly consumed without any treatment process. In few slums use of nylon net, cloth, candle and steel water filters was reported. Some boil water during rainy season. Residents reported that they treat only if any color change appears or during rainy season.

3. Perceptions Regarding Quality of Water

Division II: Respondents in Daniahnagar and Shivajinagar slums complained about inadequate water supply. Most of the dwellers here complained to the board about the quality of water supplied. Many people including the Metro line man in this division perceive that quality of water is not good and many had fallen sick since Krishna water supply started.

Division III: Residents of Sabzi Mandi and Feelkhana Slums were generally satisfied with the quality of the water supplied by the board. PS Nagar residents complained about excessive chlorination and pungent odour of water. Respondents in Ravindranagar had complaints about the inadequate and irregular timings of water supply and very low pressure of water. They said that despite numerous complaints no action was taken. Close proximity of pipe lines with sewerage lines were a worrying factor for residents of First Lancer in Syed Nagar slum

Division IV: Residents of Jinsi Chowra slum depend almost entirely on HMWSSB water for their drinking purposes. They say that the water they get does not need any prior treatment as it was clear and fine. Patel Nagar slum respondents informed that they get cloudy water with heavy odour of chlorine and that the water is not at all safe for drinking purposes. Residents of Osmangunj complained of inadequate water supply which forces them to depend on borewell water. They said that the water supplied here is dirty and muddy and causes serious health problems. The residents of the Affzal Sagar slum also complained about insufficient and poor quality water. Though they had given complaints no action had yet been taken.

Division V: Residents of Pochamma Basthi and Krishna Nagar Slums felt that water is safe for drinking and no prior treatment was required. However they complained that the water supply was excessively chlorinated and unclear. Similarly the residents of the Nimboliadda slum had no problem with the water supply but complained of excessive chlorination. Anjayanagar slum residents complained of the inadequate and unclean water supply in August 2006. However in a repeat FGD in February residents informed that the water quality and supply had improved

Division VI: Residents of . Lakshminagar slum and Waddarabasthi slums were satisfied with quality and supply of water. In Panjagutta people complained that they were getting drainage water in the initial period of water supply. Residents of Nandinagar informed that they

had to depend on tanker water due to insufficient metro supply. Devarakondabasthi residents complained of very low pressure in the water supply.

Division VII: Residents of Ranga Nagar complained of excessive chlorination of water which causes burning of the throat and the intestine. At times, the water is dirty ,with foul smell. The people of the Sithaphalmandi complained that the water supplied was dirty and foamy with dirt settling upon storage. Residents of Jainagar colony also informed that the water they received was highly polluted and dirty.

Division IX: The residents of Siddique Nagar were satisfied with the quality of water but complained of the low pressure in the system. Residents of Anjaiah Nagar face similar problem. At times of inadequate water supply, people here rely on Bore well water and tankers for drinking water. The water is supplied only to some part of Hafeezpet area. The immediate source of water there is a newly laid hand pump. A large number of bore wells in this area are not in a working condition.

4. Other Factors that may have an Impact on Water Quality

Division II: Hygienic practices were observed to be poor especially in Medarwadi, Darushifa, Shivajinagar slums. Excessive reliance on Pit Taps especially in Gowlipura and SultanShahi. Many of the pit taps were observed to be filled with dirty water. Sewerage overflows were frequently observed in Sultan Shahi, Gowlipura, Medarwadi Dabeerpura and Moinbagh. Dairy farms in Medarwadi and rearing of pigs in Dabeerpura and Darushifa slums contribute to unsanitary conditions

Division III: Hygienic practices were observed to be poor especially in Feelkhana and Gollabasti. Excessive reliance on Pit Taps especially in Gollabasti, Syednagar and Devarakonda basthi. In PS Nagar many house tap connections has been converted to pit taps as water pressure is low. Sewerage overflows were occasionally observed in Syednagar and Gollabasti. Presence of dairy farms contributes to the unsanitary conditions in Gollabasti slum. Residents complain of foul smell due to cows and buffaloes. The streets of Gollabasti and PS Nagar are narrow and congested with water logging in the low lying houses. Electrical conductivity and total hardness of water in borewells in this area is more than maximum permissible limits.

Division IV: The sanitary conditions in the streets and also of the anganwadi in the Afzalsagar area was found to be very poor. Open defecation and MCH garbage was found in adjacent to the Anganwadi school. Excessive reliance on pit taps in Osmangunj. The people of the BJJR Nagar, though satisfied with quality of water supplied were worried of the open sewage lines which overflows during the rainy season. Some PSPs in Afzalsagar were found to be not in working condition. In Poolbagh Slum many residents depend on PSPs which is shared by more than 50 families

Division V: Sewerage overflows were noticed in Harispenta, New Premnagar, Medharbasti, Anjayanagar. Excessive reliance on pit taps were found in Bathakammakunta Nimboliadda, Bapujinagar and Rajmohalla. Bapunagar slum face a lot of problem with the open drainage system. The sanitary condition of the slum was very poor with household waste and garbage dumped all over. The garbage is not cleaned, causing major health problems especially during the rainy season. Anjaya nagar slum is located beside a railway track and a lot of waste material was dumped there, emitting out foul smell.

Division VI: Nandinagar has a mix of very old irregular and newly laid pipelines. The surroundings are unhygienic with garbage overflowing from open garbage bins in Nandinagar. Though the sewer lines in Panjagutta are laid properly sewerage over flows are common. Sanitary conditions are seen to significantly deteriorate during rainy seasons. Over reliance of pit taps in Nandinagar and Waddarabasthi

Division VII: In Bansilalpet garbage is not collected regularly and sanitary conditions are very poor. Over reliance of pit taps in Bansilalpet and Ranganagar. Sewerage overflows in rainy season is observed in these areas. The Alluri Sitharam Rajnagar slum is full of dirt and garbage with pools of stagnant water. The smell is unbearable

Division IX: The residents of Siddiquenagar and Anjaiah nagar have reasonably good knowledge about proper water use and hygiene practices compared to those of Hafeezpet. No Pit taps were found in this division. Hafeezpet does not have a properly laid drainage system and open defecation was observed.

5. Health Care Providers

Slum residents access a variety of providers for health care. These are predominantly private providers and include: RMPs, allopathic and AYUSH practitioners, private clinics and hospitals. A list of key private providers in these areas is given in Annex-7. Government facilities commonly accessed include: Fever Hospital, Gandhi Medical College, Osmania Medical College, Niloufer Hospital, Erragadda Hospital, Clinic in MLA Quarters and ESI Hospitals

Chapter Three. Analysis and Recommendations:

1. Water Quality in Reservoirs

1. There has been an overall improvement in levels of satisfactory chlorination in the reporting year. Some of the poorly performing reservoirs last year such as Alwal, Aliyabad, Chanchalguda, Jahanuma, Bhoiguda and Mishriganj which were highlighted for special focus have significantly improved their performance in the reporting year. In the reporting year, availability of operators have been ensured and no unsatisfactory sample was attributed to absence of operator. This indicates that the Board has been vigilant and some focussed attention has been paid in rectifying errors in many of the poorly performing reservoirs.
2. Reservoirs such as Saheb Nagar, Autonagar, Madhapur Chilakalguda, Balapur and Erragadda reservoirs performed worse than the previous years. These reservoirs requires increased attention based on the reasons identified for unsatisfactory levels of chlorination. The Saheb Nagar reservoir particularly showed high levels of unsatisfactory chlorination. Probably because Saheb Nagar is a service reservoir that feeds other reservoirs there appears to be a tendency of not paying much attention to chlorination.
3. Data from two years clearly indicate an increase in levels of unsatisfactory chlorination during April and May. This rise is mostly on account of improper chlorination and may be because of the effect of higher temperature on chlorine. More vigilance is required during this period to ensure that satisfactory chlorination is carried out.
4. Residual chlorine levels are required to be monitored on an hourly basis and results recorded in a log register. It was observed that not much attention was given to proper recording and maintenance of the log registers in any of the reservoirs. About three quarters of the unsatisfactorily chlorinated samples is likely to be on account of human factors. Even when operator was present and chlorination was done, the process was not implemented properly resulting in unsatisfactory levels of chlorination. Therefore there is a need for improving skills, motivation and accountability of operators and supervising staff.

5. Malfunctioning of chlorine machine, unavailability of chlorine gas and breakage of chlorine pipes also contribute to unsatisfactory levels of chlorination in reservoirs. There is need for: periodic maintenance, repairs and replacement of non-working machines and parts;and improvement of the system to ensure continuous supply of consumables and respond to emergencies.
6. Power failure continues to be a cause for disruption of the chlorination process, especially in Autonagar, Madhapur and sometimes in Adikmet. Better coordination with Electricity Department and/or alternative arrangements for power may be considered to ensure consistent supply of power.
7. Availability of liquid chlorine at reservoirs has to be ensured and necessary skills to use the same for chlorination at times of emergency due to technical failure, needs to be imparted to the operators.
8. For multiple reasons Saheb Nagar, Autonagar, Madhapur, Narayanguda and Erragadda are comparatively poorly performing reservoirs. Their performance has been consistently poor during the last two years and hence may require a special attention as about 60% of the total number of unsatisfactory samples from all the reservoirs are contributed by them.
9. While satisfactory levels of chlorination are generally maintained during community supply hours, the same is not the case outside this time. However, it has been observed that tanker supply and PSP's present in the reservoir premises were being supplied with water after the regular supply hours. It was observed that significant proportion of the samples having unsatisfactory chlorine levels were taken from the tankers. Chlorine levels need to be maintained throughout to service such requirements.
10. Cleaning of reservoirs are not regularly done. Actual date of last cleaning was available only for 9 of the 22 reservoirs. For the remaining 13, the year in which the reservoir was last cleaned was available. In rest of the seven reservoirs, no information on the dates of last cleaning was available. Only 2 of the 22 reservoirs were cleaned during the reporting period. Distribution networks are especially vulnerable to contamination when the pressure falls, particularly in the case of intermittent supply. Therefore it is recommended that the reservoirs are cleaned twice a year and actual dates of cleaning displayed at the reservoir.

II. Water Quality in Slums

1. Overall there has been a significant improvement in chlorination levels in slum areas in the reporting year, compared to the previous year. In the year 2005-06 about 6.72% of the samples collected from slums were found to be unsatisfactorily chlorinated, compared to 1.2% in the reporting year. The measures taken by the Board for quality control and monitoring including third party checks, appears to have played a role in ensuring improved chlorination in the reporting period.
2. While most slums received water supply with adequate chlorination, some slums consistently fared poorly in terms of satisfactory levels of chlorination. These include Baggi Khana, Amber Nagar, Madannapet Mandi and Mader basthi slums. These have been identified and reported to the Board. Special attention may be required at the concerned reservoir level and distribution system at the slum level to address this issue
3. It needs to be noted that there is variance in level of chlorination at different supply points of a slum, during the same period of supply. Unsatisfactory chlorine levels at some of the supply points may be because they are the distant or end endpoints of the distribution system. In some instances, this may be because of concurrent online supply of water, which was generally observed to be improperly chlorinated and in others due to local pollution on account of criss-crossing of the pipe lines or unhygienic practices of the house hold. Overt pollution of water has been reported by residents of slums such as Affzal Sagar, Panjagutta, Sithaphalmandi, Osmangunj, Anjayanagar and Patel Nagar. Other possible causes for unsatisfactory chlorination have been identified division-wise in Annexure- 4. Therefore, in addition to ensuring chlorination at the reservoir level, necessary steps need to be taken to ensure that adequate residual chlorine levels is maintained through out the entire distribution.
4. Some of the slums such as PS Nagar, Patel Nagar, Nimboliadda, Ranga Nagar reported very high levels of chlorination rendering water aesthetically unpleasant and not safe for consumption. Some of the residents attributed gastrointestinal symptoms in these areas to high levels of chlorination. While it is required that water is chlorinated it needs to be ensured that chlorine levels are within permissible limits throughout the distribution system.

5. Residents of slums such as Ravindranagar, Osmangunj, Affzal Sagar, Anjayanagar, Nandinagar, Devarakondabasthi, Siddique Nagar, Anjaiah Nagar, Hafeezpet, Sultanshahi, Moghalpura, Metharbasthi, Gowlipura, Hanumannagar, M.S.Maqtha, PS Nagar, Kumarwadi, Hashamabad, Chandrayangutta, Daniahnagar and Shivajinagar complained of inadequate water supply and low pressure in the water distribution system. Residents often resort to pit taps due to low water pressure in the distribution system. Excessive reliance on pit taps was seen in many of these areas particularly those falling under in Divisions III, IX, IV and II. The utilization of pit taps is a potential public health risk. Pit taps are more vulnerable to contamination than others, as the taps are not surrounded by cement compound and water stagnates around the taps. In many instances these taps are near to open defecation and drainage lines. Direct tapping of water from the metro water pipe line presents risk of contamination of local distribution system, especially during monsoons and epidemics. These pit taps have been identified and reported. The Board needs to address this issue on a priority basis. The pit taps need to be phased out by providing reliable alternate water supply.
6. Sewerage overflows from manholes, household drainage pipes, drainage pipes of the Metro Board, open sewerage drains, storm drains etc., were observed in slums. Sewerage overflows were reported in higher numbers from Divisions I, II, IV and V especially during monsoon season. More instances of sewerage overflows were identified in Gowlipura, Sultanshahi, and Yakutpura slums. These slums reported more number of overflows in the previous years also. Sewerage overflows in Medarwadi, Dabeerpura, Moinbagh, Syednagar, Gollabasti, BJJR Nagar, BJJR Nagar, Harispenta, New Premnagar, Medharbasti, Anjayanagar and Bapunagar slums also constitute a significant public health risk. The Board was notified of all such sewerage overflows, with exact address (Annex-6). In many instances, it was observed that sewerage overflows were rectified following communication to the Board. However in significant number of cases these measures are temporary and further instances of overflows are noted from same areas especially in monsoon season. Structural changes in the drainage system may be required to provide a more permanent solution.
7. The living conditions in the slums are generally poor. Factors such as garbage accumulation, presence of dairy farms, pig rearing and open defecation further worsen sanitary conditions

in slums such as Medarwadi, Darushifa, Shivajinagar, Feelkhana, Gollabasti, PS Nagar Afzalsagar, Anjaya nagar Nandinagar, Alluri Sitharam Rajnagar, Hafeezpet. Such unsanitary conditions contribute significantly to risk of water contamination. Coordinated action is required with the Municipal Corporation to ensure daily collection of garbage and better sanitary conditions.

8. About 43.71% of bore wells found to be bacteriologically contaminated and over three quarters of the borewells had at least one physicochemical parameter outside maximum permissible limits. The levels of Calcium and Magnesium which are the chief contributors to hardness of water was above the maximum permissible limits in 61% and 44% of borewell samples. 27% of the borewell samples had nitrate content in excess of the maximum permissible limits. High levels of nitrates in drinking water have been linked to methaemoglobinemia in infants. While about 50% of the borewell samples had sulfate levels in excess of 400 mg/litre, the maximum permissible limits prescribed by the WHO, all samples were within the maximum permissible limit for sulfates (1000mg/L) prescribed by the National Drinking Water Mission. About 11% of borewell samples had levels of fluorides in excess of the maximum prescribed levels. Presence of fluoride in excess of 1.5 mg/L is associated with dental and skeletal fluorosis. The contaminated bore-wells have been identified and reported. Where feasible, the Board may take steps to decontaminate such bore wells. In other cases, residents need to be informed of the potential health hazards of using water from such bore-wells and alternate water supply be provided.
9. About 22.96% of street vendor samples collected from hotels and other eateries were found to be contaminated with pathogenic bacteria, mostly E.Coli. In about one third of the samples, almost all of them from borewells, one or more physicochemical parameters exceeded the maximum permissible limits prescribed for drinking water. Nearly 30% of the household stored water samples tested, were found to be contaminated with fecal indicator E.Coli. This may be due to improper collection, handling and storage practices at the household level. Thus even when the water supplied by the Board is potable, risk of contamination exists due to lack of awareness regarding hygiene practices and use of alternate sources of water for drinking purposes within the household and in hotels. The

Board may consider involving local civil society organizations in spreading awareness regarding water use and hygiene practices.

10. Focus group discussions was found to be a useful mechanism to understand problems of slum dwellers related to water supply and sanitation which would not have been possible in the course of routine monitoring. Feedback received during these interactions have been communicated to the Board and in many cases action was taken by the Board to address these issues. Further the focus group discussions provide an opportunity to provide information on water use and hygiene practices and other health related information.
11. Support of 27 health care practitioners was enlisted during the reporting period. (See Annex-7 for details). The local health care practitioners are generally responsive and interested in participating in the awareness programs conducted by the NGO's. They are willing to distribute chlorine liquid or tablets to their patients if the necessary supplies are provided to them. The Board may consider involving them in its campaign to provide safe water. They are potentially useful resources that could augment the mechanisms for surveillance of waterborne diseases, health education and other preventive measures.

III. Conclusions and Suggested Future Steps

The above findings indicate that public-private partnerships has immense potential for:

1. Augmenting HMWSSBs's efforts to provide safe drinking water to urban slums.

The presence of external monitoring and direct reporting of findings to senior most level of Board management, has to a great extent ensured that lower level staff are more vigilant and prompt in carrying out their routine work. Data indicate that there has been an overall improvement in levels of chlorination of water supplied to the slums, during the reporting period. Further, communication of findings on a real time basis to the officers of Board, ensures prompt response in taking corrective measures.

2. Empowerment

Data indicate that water used by residents may be contaminated even when potable water is supplied by the Board. This may be due to improper collection, storage and handling practices and unsanitary surroundings at the household level. Therefore, there is need to empower

residents with the necessary knowledge about good hygiene practices and measures to prevent waterborne diseases. The monitoring provides opportunity for direct contact and interaction with the residents on these issues. Focus Group Discussions further helps to understand problems of slum dwellers related to water supply and sanitation, and provide information regarding prevention of waterborne diseases. It was found that the residents were generally very receptive towards such interactions and health related information. In addition to empowering slum residents with knowledge, the focus group discussions serve as a useful mechanism in communicating their feedback on water quality and sanitation to the Board.

3. Further Systematization and Expansion

The public-private partnerships have a number of components. There is need for further expansion in terms of coverage and resources deployed for a more systematic implementation of all key components. Additional resources are to be deployed for further (1) monitoring pit taps and sewerage over flows which are potentially at risk for contamination. (2) interaction with residents for improving awareness and communicating their feedback on water quality and sanitation (3) monitoring of quality of borewells (4) enlistment of local health care providers

Annexure-1: Reservoir wise details of RC Tests done from April 05- March 2007

Reservoir	Number of RC Samples				% Unsatisfactory	
	Apr05-Mar06	Apr06-Mar07	Apr05-Mar06	Apr06-Mar07	Apr05-Mar06	Apr06-Mar07
	Satisfactory	Satisfactory	Unsatisfactory	Unsatisfactory	%US	%US
Adikmet	632	193	21	7	3.32	3.63
Aliyabad	713	350	52	0	7.29	0.00
Alwal	619	146	54	0	8.72	0.00
Asifnagar	651	189	3	2	0.46	1.06
Asmangadh	656	322	9	0	1.37	0.00
Autonagar	648	268	16	22	2.47	8.21
Balapur	648	210	26	10	4.01	4.76
Banjarahills	0	105	0	3	0.00	2.86
Bhoiguda	653	186	22	3	3.37	1.61
Boggulakunta	651	312	18	0	2.76	0.00
Chanchalguda	657	305	23	2	3.50	0.66
Chilakalguda	694	269	5	5	0.72	1.86
Erragadda	664	310	34	15	5.12	4.84
Jahanuma	592	255	23	0	3.89	0.00
Madhapur	634	202	48	15	7.57	7.43
Marredpally	670	241	5	3	0.75	1.24
Miralamfilters	6	0	0	0	0.00	0.00
Mishrigunj	677	307	23	0	3.40	0.00
Narayanguda	655	338	32	13	4.89	3.85
Redhills	666	308	11	2	1.65	0.65
Saheb Nagar	313	121	10	42	3.19	34.71
Santoshnagar	668	239	11	1	1.65	0.42
Shivam	614	297	5	4	0.81	1.35
Total	13381	5473	453	149	3.39	2.72

Note: S- Satisfactory; US- Unsatisfactory

Annexure-2: Reservoir wise details of Bacteriological Tests from April 06 to March 2007

Reservoir	Bacteriological Contamination Test			% of Samples Unsatisfactory	Organism Isolated			
	Total	S	US		E.Coli	Klebsiella	Citrobacter	Irregular
Adikmet	20	20	0	0	0	0	0	0
Aliyabad	41	41	0	0	0	0	0	0
Alwal	23	23	0	0	0	0	0	0
Asifnagar	15	15	0	0	0	0	0	0
Asmangandh	32	31	1	3.125	0	1	0	0
Autonagar	28	25	3	10.714	0	1	0	2
Balapur	37	37	0	0	0	0	0	0
Banjarahills	12	12	0	0	0	0	0	0
Bhoiguda	21	21	0	0	0	0	0	0
Boggulakunt	26	25	1	3.846	0	1	0	0
Chanchalgud	30	30	0	0	0	0	0	0
Chilakalguda	37	37	0	0	0	0	0	0
Erragadda	43	42	1	2.325	0	1	0	0
Jahanuma	31	31	0	0	0	0	0	0
Madhapur	40	40	0	0	0	0	0	0
Marredpally	29	29	0	0	0	0	0	0
Mishrigung	28	28	1	3.448	0	0	0	1
Narayanagud	30	29	1	3.333	0	1	0	0
Redhills	26	26	0	0	0	0	0	0
Sahebnagar	28	28	0	0	0	0	0	0
Santhoshnag	31	31	0	0	0	0	0	0
Shivam	26	25	1	3.846	0	0	1	0
Taranagar	1	1	0	0	0	0	0	0
Chandanagar	1	1	0	0	0	0	0	0
Total	637	628	9	1.412873	0	5	1	3
<i>% of Total</i>	<i>100</i>	<i>98.587</i>	<i>1.412</i>		<i>0</i>	<i>55.55</i>	<i>11.11</i>	<i>33.33</i>

Note: S-Satisfactory, US-Unsatisfactory

Annexure 3: Month-wise Results of RC Tests in Selected Slums

Identified Slum	PSP		PT		HT		# of Samples		% of Samples		
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
March 2006											
Padmashalinagar	1	0	5	0	8	0	14	0	RC	100	0
Yakutpura	0	0	3	0	22	0	25	0	25	100	0
Venkateshwaranagar	1	0	3	0	10	0	14	0	14	100	0
Shakker ganj Kota	0	0	4	0	16	0	20	0	20	100	0
Cheputra	0	0	9	0	11	0	20	0	20	100	0
Bannaka	0	0	0	0	10	0	10	0	10	100	0
Charkamman	0	0	2	0	8	0	10	0	10	100	0
Musheerabad	1	0	3	0	10	0	14	0	14	100	0
Musheerabad	1	0	0	0	16	0	17	0	17	100	0
Zahera Nagar	1	0	0	0	16	0	17	0	17	100	0
Laxmi Nagar	0	0	11	0	0	0	11	0	11	100	0
Pool Bagh	0	0	1	0	14	0	15	0	15	100	0
Zamistanpur	4	0	1	0	9	0	14	0	14	100	0
Doodkhana Basti	1	0	0	0	16	0	17	0	17	100	0
Bholakpur	0	0	0	0	12	0	12	0	12	100	0
Ambedkar Nagar	0	0	0	0	15	0	15	0	15	100	0
Subji Mundi	1	0	1	0	13	0	15	0	15	100	0
Tadbun Khaja Pal	0	0	0	0	15	0	15	0	15	100	0
Saidabad	0	0	1	0	14	0	15	0	15	100	0
MotiGally	0	0	2	0	14	0	16	0	16	100	0
Bholakpur	4	0	5	0	6	0	15	0	15	100	0
Tadban	0	0	0	0	16	0	16	0	16	100	0
New Ganga Nagar	1	0	3	0	9	0	13	0	13	100	0
Noorkhan Bazar	0	0	3	0	12	0	15	0	15	100	0
Aliyabad	0	0	12	0	3	0	15	0	15	100	0
Lal Darwaza	0	0	1	0	14	0	15	0	15	100	0
Tajir Nagar	0	0	0	0	14	0	14	0	14	100	0
Zamistanpur	0	0	0	0	15	0	15	0	15	100	0
Noorkhan Bazar	0	0	0	0	16	0	16	0	16	100	0
Shalibanda	0	0	0	0	15	0	15	0	15	100	0
Alibagh	1	0	5	0	7	0	13	0	13	100	0
Total	17	0	75	0	376	0	468	0	468	100	0
April 2006											
Bakaram	6	0	1	0	10	0	17	0	17	100	0
Band Lines	3	0	0	0	18	0	21	0	21	100	0
Kamyat Pura	0	0	0	0	15	0	15	0	15	100	0
Tajir Nagar	3	0	0	0	17	0	20	0	20	100	0
Sabzimandi	0	0	9	0	11	0	20	0	20	100	0
Kishan Bagh	0	0	0	0	16	0	16	0	16	100	0
Karwan	3	0	0	0	18	0	21	0	21	100	0
Devarakonda Basti	2	0	0	0	14	0	16	0	16	100	0
Ambika Nagar	0	0	14	0	4	0	18	0	18	100	0

Identified Slum	PSP		PT		HT		# of Samples		% of Samples		
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
Motigally	0	0	13	0	2	0	15	0	15	100	0
Zira Road	0	0	5	0	10	0	15	0	15	100	0
Baggi Khana	0	1	0	0	0	20	0	21	21	0	100
Jahanuma	0	0	0	0	15	0	15	0	15	100	0
Noorkhan Bazar	1	0	7	0	12	0	20	0	20	100	0
Aliyabad X Road	0	0	7	0	20	0	27	0	27	100	0
Zira	0	0	1	0	17	0	18	0	18	100	0
Nagamayya Kunta	0	0	0	0	20	0	20	0	20	100	0
Motigally	0	0	3	0	11	0	14	0	14	100	0
New Aghapura	0	0	0	0	21	0	21	0	21	100	0
Tajir Nagar	0	0	0	0	8	2	8	2	10	80	20
Sabji Mandi	0	0	1	0	19	0	20	0	20	100	0
Om Nagar	0	0	2	0	18	0	20	0	20	100	0
Shibli Gunj	0	0	2	0	38	0	40	0	40	100	0
Shiva GangaNagar	0	0	0	0	18	0	18	0	18	100	0
Hafeez Baba Nagar	0	0	0	0	24	0	24	0	24	100	0
Ganga Nagar	1	0	0	0	18	0	19	0	19	100	0
Jiya Guda	0	0	2	0	18	0	20	0	20	100	0
Karwan	0	0	3	0	17	0	20	0	20	100	0
Old Mallepally	1	0	2	0	15	0	18	0	18	100	0
Kishan Bagh	0	0	0	0	20	0	20	0	20	100	0
Gulshan Nagar	0	0	6	0	12	2	18	2	20	90	10
Jiya Guda	1	0	18	0	1	0	20	0	20	100	0
Total	21	1	96	0	477	24	594	25	619	95.96	4.03
										2	87

May 2006

Moghalpura	0	0	0	0	20	0	20	0	20	100	0
Begam Bazar	0	0	0	0	20	0	20	0	20	100	0
Jhummarath Bazar	0	0	30	0	1	0	31	0	31	100	0
Bela&Mogalpura	2	0	29	0	0	0	31	0	31	100	0
Sabji Mandi	0	0	28	0	2	0	30	0	30	100	0
Mogalpura	0	0	30	0	0	0	30	0	30	100	0
Kamela	0	0	30	0	3	0	33	0	33	100	0
Puranapool	0	0	30	0	0	0	30	0	30	100	0
Jiya Guda	0	0	30	0	0	0	30	0	30	100	0
Sulthan Shahi	0	0	25	0	5	0	30	0	30	100	0
Bibi Bazar	0	0	26	0	4	0	30	0	30	100	0
Bahadur Pura	0	0	17	0	13	0	30	0	30	100	0
Narayanaguda	0	0	5	0	25	0	30	0	30	100	0
Karwan	0	0	31	0	2	0	33	0	33	100	0
Chandulal Baradari	0	0	30	0	0	0	30	0	30	100	0
Puranapool	0	0	21	0	10	0	31	0	31	100	0
Chatrinaka	0	0	12	0	18	0	30	0	30	100	0
Bholakpur	3	0	23	0	4	0	30	0	30	100	0
Zira	0	0	9	0	21	0	30	0	30	100	0
Jangamet	0	0	11	0	19	0	30	0	30	100	0

Identified Slum	PSP		PT		HT		# of Samples		% of Samples		
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
Moinbagh	2	0	12	0	3	0	17	0	17	100	0
Ambedkar Nagar	0	0	21	0	7	0	28	0	28	100	0
Total	7	0	450	0	177	0	634	0	634	100	0

June 2006

Gowlipura	2	0	26	0	12	0	40	0	40	100	0
Shiva Ganganagar	0	0	23	7	0	0	23	7	30	76.667	23.333
KrishnaReddy Nagar	0	0	12	0	3	0	15	0	15	100	0
Ranga Nagar,	0	0	13	0	2	0	15	0	15	100	0
Talabkatta	0	0	5	0	13	0	18	0	18	100	0
Chandulal Baradari	0	0	13	1	2	1	15	2	17	88.235	11.765
Sultan Shahi	0	0	16	0	0	0	16	0	16	100	0
Shali Banda	0	0	11	0	5	0	16	0	16	100	0
Sultan Shahi	1	0	14	0	0	0	15	0	15	100	0
Bibi Bazar	0	0	5	0	10	0	15	0	15	100	0
Sultan Shahi	0	0	12	0	1	0	13	0	13	100	0
Jiya Guda Basti	0	0	0	0	15	0	15	0	15	100	0
Talabkatta	0	0	9	0	6	0	15	0	15	100	0
Saibaba Nagar	1	0	3	0	6	0	10	0	10	100	0
Noor Khan Bazar	0	0	15	0	0	0	15	0	15	100	0
Nova Bela	0	0	14	0	4	0	18	0	18	100	0
Hashamabad	0	0	15	0	2	0	17	0	17	100	0
Sultan Shahi	0	0	15	0	0	0	15	0	15	100	0
Hari Bowli	0	0	15	0	0	0	15	0	15	100	0
Gowli Pura	1	0	11	0	1	0	13	0	13	100	0
Bholakpur	0	0	15	0	0	0	15	0	15	100	0
Moghalpura	2	0	12	0	0	0	14	0	14	100	0
Gowlipura	0	0	18	0	0	0	18	0	18	100	0
Ashok Nagar	0	0	23	0	0	0	23	0	23	100	0
Gowlipura	0	0	24	0	0	0	24	0	24	100	0
Doodhbowli	1	0	0	0	24	0	25	0	25	100	0
Nawabsabkunta	0	0	0	0	22	0	22	0	22	100	0
GudiDawakhana	0	0	0	0	22	0	22	0	22	100	0
DoodhBowli	0	0	0	0	22	0	22	0	22	100	0
DoodhBowli	0	0	19	1	1	0	20	1	21	95.238	4.7619
DoodhBowli	0	0	15	0	0	0	15	0	15	100	0
Bhagwangunj	1	0	48	1	0	0	49	1	50	98	2
Total	9	0	421	10	173	1	603	11	614	98.20	1.79
										8	15

July 2006

Kanchan Wadi	1	0	49	0	0	0	50	0	50	100	0
Panchamuki	0	0	32	0	0	0	32	0	32	100	0
Shali Banda	0	0	32	0	0	0	32	0	32	100	0
Motigally	0	0	27	0	0	0	27	0	27	100	0
Nawabsabkunta	0	0	24	0	3	0	27	0	27	100	0
Sultan Shahi	0	0	28	0	0	0	28	0	28	100	0
Sultan Shahi	0	0	33	0	0	0	33	0	33	100	0

Identified Slum	PSP		PT		HT		# of Samples		% of Samples		
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
RC Level →											
Yakat Pura	0	0	0	0	35	0	35	0	35	100	0
Bapuji Nagar	1	0	30	0	0	0	31	0	31	100	0
Errakunta	0	0	7	0	28	0	35	0	35	100	0
Bholakpur	7	0	17	0	3	0	27	0	27	100	0
Madanapet Mandi	0	0	0	35	0	0	0	35	35	0	100
Yakatpura	0	0	7	0	28	0	35	0	35	100	0
Shali Banda	0	0	40	0	0	0	40	0	40	100	0
Chamman Yakatpura	0	0	0	0	35	0	35	0	35	100	0
Bholakpur	6	0	6	0	2	0	14	0	14	100	0
Alija Kotla	0	0	2	0	33	0	35	0	35	100	0
Laldarwaza	0	0	36	0	0	0	36	0	36	100	0
Addagutta	8	0	11	0	0	0	19	0	19	100	0
Chanchalguda	37	0	0	0	0	0	37	0	37	100	0
Yakatpura	0	0	0	0	46	0	46	0	46	100	0
Yakatpura	0	0	0	0	40	0	40	0	40	100	0
Ms.Maqtha	1	0	33	0	0	0	34	0	34	100	0
Phishal Banda	0	0	0	0	40	0	40	0	40	100	0
Bibi bazar	0	0	35	0	0	0	35	0	35	100	0
BudugajugamBasti	0	0	15	0	13	0	28	0	28	100	0
Davarakonda basti	4	0	24	0	4	0	32	0	32	100	0
Yakatpura	0	0	2	0	38	0	40	0	40	100	0
Jangamet	0	0	0	0	35	2	35	2	37	94.595	5.405
Raj Nagar	1	0	24	0	2	0	27	0	27	100	0
Nandi Nagar	2	0	23	0	12	0	37	0	37	100	0
Kalapathar	0	0	23	0	2	0	25	0	25	100	0
Edibazar	0	0	35	0	0	0	35	0	35	100	0
Jahanuma	0	0	45	0	0	0	45	0	45	100	0
Bansilalpet	6	0	35	0	0	0	41	0	41	100	0
Addagutta	1	0	33	0	0	0	34	0	34	100	0
Bakshi Bazar	1	0	42	0	1	0	44	0	44	100	0
Bansillalpet	7	0	2	0	31	0	40	0	40	100	0
Imly Bazar	1	0	30	0	0	0	31	0	31	100	0
Ms.Maqtha	1	0	31	0	1	0	33	0	33	100	0
DevarakondaBasti	4	0	12	0	35	0	51	0	51	100	0
Nandi Nagar	2	0	17	0	9	0	28	0	28	100	0
TheegalKunta	0	0	0	0	35	0	35	0	35	100	0
Talabkatta	0	0	33	0	0	0	33	0	33	100	0
Moghalpura	1	0	0	0	35	0	36	0	36	100	0
Tadban	0	0	0	0	22	1	22	1	23	95.652	4.3478
Laldarwaza	0	0	35	0	0	0	35	0	35	100	0
Bibi bazar	0	0	0	0	34	1	34	1	35	97.222	2.777
Chandhanagar	0	0	0	0	36	0	36	0	36	100	0
Gowlipura	0	0	50	0	0	0	50	0	50	100	0
Nandi Nagar	0	0	15	4	2	0	17	4	21	80.952	19.048
Shakargunj Kota	0	0	25	0	0	0	25	0	25	100	0
New Maisaram	0	0	0	0	33	0	33	0	33	100	0
Ms.Maqtha	1	0	29	0	2	0	32	0	32	100	0

Identified Slum	PSP		PT		HT		# of Samples			% of Samples	
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
Falaknuma	0	0	31	0	0	0	31	0	31	100	0
DevarakondaBasti	5	0	22	0	0	0	27	0	27	100	0
Poolbagh	0	0	0	0	35	0	35	0	35	100	0
Lakadikapool	0	0	21	0	0	0	21	0	21	100	0
Kurmaguda	0	0	35	0	0	0	35	0	35	100	0
Chacha Nehrunagar	6	0	14	0	7	0	27	0	27	100	0
Ranga Nagar	6	0	20	0	0	0	26	0	26	100	0
Bansilalpet	5	0	11	0	1	0	17	0	17	100	0
Khairtabad	0	0	13	0	20	0	33	0	33	100	0
Bela Colony	0	0	35	0	0	0	35	0	35	100	0
Shali Banda	1	0	32	0	0	0	33	0	33	100	0
IndiraNagar	0	0	36	0	0	0	36	0	36	100	0
quarters											
Total	116	0	1299	39	738	4	2153	43	2196	98.04	1.95
										2	72

August 2006

Victory Gunj	4	0	17	0	2	0	23	0	23	100	0
Chintal Basti	0	0	0	0	40	0	40	0	40	100	0
Nawab Basti	0	0	0	0	45	0	45	0	45	100	0
Chandrayan Gutta	0	0	35	0	0	0	35	0	35	100	0
Amberpet	1	0	0	0	46	0	47	0	47	100	0
Shanti Nagar	2	0	62	1	1	0	65	1	66	98.485	1.515
Nehru Nagar	0	0	65	0	4	0	69	0	69	100	0
Nimboli Adda	0	0	24	0	9	0	33	0	33	100	0
Ashok Nagar	0	0	4	0	27	0	31	0	31	100	0
Amberpet	0	0	0	0	23	0	23	0	23	100	0
Kachiguda	0	0	0	0	36	0	36	0	36	100	0
BS.Muqtha	2	0	19	0	0	0	21	0	21	100	0
Victory Gunj	5	0	8	0	13	0	26	0	26	100	0
Chappalgalli	0	0	20	0	0	0	20	0	20	100	0
Sham Nagar	1	0	0	0	45	0	46	0	46	100	0
Uppar Guda	0	0	4	0	18	0	22	0	22	100	0
Yakathpura	0	0	38	0	0	0	38	0	38	100	0
Kumarguda	1	0	3	0	40	0	44	0	44	100	0
Bapu nagar	0	0	0	0	25	0	25	0	25	100	0
New Bhoiguda	1	0	0	0	9	0	10	0	10	100	0
Chachanehrunagar	4	0	11	0	2	0	17	0	17	100	0
Kurmaguda	0	0	0	0	50	0	50	0	50	100	0
BS.Muqtha	4	0	16	0	0	0	20	0	20	100	0
Bannaka	0	0	5	0	45	0	50	0	50	100	0
Ambika Nagar	1	0	72	0	0	0	73	0	73	100	0
New Bhoiguda	7	1	5	1	7	2	19	4	23	82.609	17.391
Moti Market	1	0	3	0	18	0	22	0	22	100	0
Nimboli Adda	2	0	2	0	40	0	44	0	44	100	0
Amberpet	2	0	0	0	48	0	50	0	50	100	0
Shanti Nagar	1	0	0	0	50	0	51	0	51	100	0

Identified Slum	PSP		PT		HT		# of Samples		% of Samples		
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
RC Level →											
Esamiya Bazar	2	0	8	0	36	0	46	0	46	100	0
Theegal Kunta	1	0	0	0	54	0	55	0	55	100	0
Kurmaguda	1	0	0	0	43	0	44	0	44	100	0
Bholakpur	1	0	2	0	0	0	3	0	3	100	0
Jai Nagar colony	6	0	5	0	0	0	11	0	11	100	0
Kumarwadi Basti	0	0	47	0	0	0	47	0	47	100	0
Arundhathi Nagar	6	0	23	0	6	0	35	0	35	100	0
Goshamahahal	1	0	0	0	26	0	27	0	27	100	0
Shamnagar	2	0	0	0	20	0	22	0	22	100	0
Harespenta	1	0	0	0	21	0	22	0	22	100	0
Jai Nagar colony	2	1	8	1	0	1	10	3	13	76.923	23.077
Haribowli	1	0	43	0	0	0	44	0	44	100	0
Nimboli Adda	0	0	45	0	0	0	45	0	45	100	0
DrAmbedkarnagar	2	0	7	0	9	0	18	0	18	100	0
Bapuji Nagar	1	0	20	0	1	0	22	0	22	100	0
Ramnaspura	2	0	41	0	1	0	44	0	44	100	0
Amberpet	0	0	42	0	0	0	42	0	42	100	0
Azad nagar	0	0	0	0	45	0	45	0	45	100	0
Durga Nagar	2	0	0	0	53	0	55	0	55	100	0
Sundar nagar	0	0	0	0	44	0	44	0	44	100	0
Poolbagh	1	0	49	0	0	0	50	0	50	100	0
Boggulakunta	0	0	0	0	31	0	31	0	31	100	0
Total	71	2	753	3	103	3	1857	8	1865	99.57	0.42
					3						9

September 2006

Prem Nagar	0	0	55	0	0	0	55	0	55	100	0
Edi Bazar	0	0	34	0	0	0	34	0	34	100	0
D.Sangi bai nagar	0	0	40	0	0	0	40	0	40	100	0
Riyasat Nagar	2	0	0	0	46	0	48	0	48	100	0
Karwan	1	0	43	0	0	0	44	0	44	100	0
Idha Nagar	0	0	0	0	32	0	32	0	32	100	0
Sabji Mandi	1	0	33	0	10	0	44	0	44	100	0
Balaganze	0	0	33	0	0	0	33	0	33	100	0
Jiyaguda	0	0	30	1	0	0	30	1	31	96.774	3.225
Sithapal Mandi	0	0	29	0	15	0	44	0	44	100	0
Warasi Guda	2	0	33	0	0	0	35	0	35	100	0
Chappal Bazar	1	0	26	0	17	0	44	0	44	100	0
Indra Nagar	0	0	21	0	0	0	21	0	21	100	0
Resddy Basti	2	0	36	0	6	0	44	0	44	100	0
Dhobighat	0	0	40	0	0	0	40	0	40	100	0
Bhanu Nagar	0	0	0	0	41	3	41	3	44	93.182	6.818
Old Malakpet	0	0	1	0	34	0	35	0	35	100	0
Mekala Banda	2	0	41	0	1	0	44	0	44	100	0
Jamal Nagar	0	0	44	0	0	0	44	0	44	100	0
Ali Nagar	2	0	0	0	42	0	44	0	44	100	0
Yasab Nagar	0	0	0	0	44	0	44	0	44	100	0
Dabeerpura	0	0	2	0	27	1	29	1	30	96.667	3.3333

Identified Slum	PSP		PT		HT		# of Samples		% of Samples		
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
RC Level →											
R N colony	0	0	2	0	40	0	42	0	42	100	0
Jangamet	0	0	23	0	0	0	23	0	23	100	0
Banzaree Darwaza	1	0	0	0	44	0	45	0	45	100	0
Errakunta	1	0	0	0	34	0	35	0	35	100	0
Dabeerpura	0	0	2	0	33	0	35	0	35	100	0
Tadban	0	0	0	0	25	0	25	0	25	100	0
Malakpet	0	0	30	0	12	0	42	0	42	100	0
Ali Nagar	0	0	0	0	22	0	22	00	22	100	0
D.Sangi Bai nagar	0	0	43	0	0	0	43	0	43	100	0
Barkash Salala	0	0	0	0	22	0	22	0	22	100	0
D.Sangi Bai Nagar	0	0	40	0	0	0	40	0	40	100	0
Dabeerpura	1	0	0	0	29	0	30	0	30	100	0
Gandhi Nagar	0	0	40	0	0	0	40	0	40	100	0
Rein Bazar	0	0	0	0	22	0	22	0	22	100	0
Pathergatti	1	0	0	0	35	0	36	0	36	100	0
Warasiguda	1	0	0	0	21	0	22	0	22	100	0
Azampura	0	0	0	0	22	0	22	0	22	100	0
Chapalagalli	1	0	0	0	43	0	44	0	44	100	0
Pathergatti	1	0	1	0	20	0	22	0	22	100	0
Kamalnagar	7	0	53	1	9	0	69	1	70	98.571	1.428
Hari Bowli	1	0	15	0	6	0	22	0	22	100	0
Nagulchinta	0	0	22	0	0	0	22	0	22	100	0
Shivaganga nagar	0	0	22	0	0	0	22	0	22	100	0
Hari Bowli	1	0	21	0	0	0	22	0	22	100	0
Umdha Nagar	1	0	39	0	4	0	44	0	44	100	0
Potti Sriramulu Nagar	3	1	10	0	2	0	15	1	16	93.750	6.250
Hanuman Nagar	0	0	54	0	0	0	54	0	54	100	0
Sri Ram Nagar	1	0	21	0	0	0	22	0	22	100	0
Maqdampura	0	0	22	0	0	0	22	0	22	100	0
Shivaji Nagar	0	0	33	0	0	0	33	0	33	100	0
Rajannbavi, Paddi	1	0	7	0	2	0	10	0	10	100	0
Anjuman Nagar	1	0	14	0	0	0	15	0	15	100	0
Total	36	1	1055	2	762	4	1853	7	1860	99.62	0.376

October 2006

Ambika Nagar	0	0	22	0	0	0	22	0	22	100	0
Anjuman	1	0	14	0	0	0	15	0	15	100	0
Chowdale Cheputra	1	0	28	0	0	0	29	0	29	100	0
Potti Sriramulu Nagar	7	0	15	1	1	0	23	1	24	95.833	4.166
Mangalhat	1	0	0	0	34	0	35	0	35	100	0
Barkas Sala	0	0	1	0	21	0	22	0	22	100	0
M S Muqtha	1	0	20	0	0	0	21	0	21	100	0
Edi Bazar	0	0	35	0	9	0	44	0	44	100	0
DevarakondaBasti	4	0	10	0	8	0	22	0	22	100	0
Allabanda	2	0	0	0	42	0	44	0	44	100	0
Moinpura	1	0	40	0	0	0	41	0	41	100	0
Ghode ki kabir	1	0	0	0	21	0	22	0	22	100	0

Identified Slum	PSP		PT		HT		# of Samples		% of Samples		
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
Jangamet	0	0	25	0	0	0	25	0	25	100	0
Gulzar House	1	0	2	0	19	0	22	0	22	100	0
Shamnagar	3	0	2	0	39	0	44	0	44	100	0
Maruthi colony	1	0	40	0	3	0	44	0	44	100	0
Shamnagar	0	0	0	0	30	0	30	0	30	100	0
Moghalpura	2	0	20	0	0	0	22	0	22	100	0
Kamal Nagar	0	0	22	0	0	0	22	0	22	100	0
Chanchalguda	2	0	0	0	20	0	22	0	22	100	0
Patel Nagar	1	0	4	0	31	0	36	0	36	100	0
Asif Nagar	0	0	30	0	0	0	30	0	30	100	0
Tadban	2	0	0	0	42	0	44	0	44	100	0
Barkas Sala	4	0	0	0	40	0	44	0	44	100	0
Moinpur	1	0	18	0	3	0	22	0	22	100	0
Dood Bowli	0	0	42	0	0	0	42	0	42	100	0
Mogalpura	2	0	42	0	0	0	44	0	44	100	0
Manghalhat	3	0	1	0	40	0	44	0	44	100	0
Hanuman Nagar	1	0	21	0	0	0	22	0	22	100	0
Tadban	0	0	35	0	3	0	38	0	38	100	0
Shakkar Gunj kota	2	0	1	0	41	0	44	0	44	100	0
Kamela Kamatipura	0	0	39	0	5	0	44	0	44	100	0
Ravindra Nagar	5	0	16	0	1	0	22	0	22	100	0
Medhar Basti	2	0	0	0	42	0	44	0	44	100	0
Syed Nagar	1	0	32	0	0	0	33	0	33	100	0
Datha Nagar	4	0	0	0	28	0	32	0	32	100	0
Datha Nagar	3	0	0	0	19	0	22	0	22	100	0
Asif Nagar	1	0	32	0	2	0	35	0	35	100	0
Ratna Nagar	2	0	0	0	20	0	22	0	22	100	0
Bazar Ghat	0	0	33	0	0	0	33	0	33	100	0
Vijay Nagarcolony	0	0	35	0	0	0	35	0	35	100	0
Sathya Nagar	2	0	0	0	20	0	22	0	22	100	0
Golnaka	1	0	0	0	21	0	22	0	22	100	0
Chinthal Basti	1	0	34	0	0	0	35	0	35	100	0
Nehru Nagar	2	0	0	0	31	0	33	0	33	100	0
Devender Sanghi	0	0	35	0	0	0	35	0	35	100	0
bai nagar											
Chanchalguda	0	0	29	0	6	0	35	0	35	100	0
Kamgar Nagar	2	0	0	0	20	0	22	0	22	100	0
Shanthy Nagar	2	0	0	0	20	0	22	0	22	100	0
Ravindra Nagar	1	0	29	0	5	0	35	0	35	100	0
Chappal Bazar	3	0	0	0	30	0	33	0	33	100	0
Kamal Nagar	1	0	34	0	0	0	35	0	35	100	0
Santhi Nagar	1	0	30	0	4	0	35	0	35	100	0
Baglingampally	2	0	0	0	29	0	31	0	31	100	0
Medhar Basti	2	0	30	0	1	0	33	0	33	100	0
Syed Nagar	0	0	35	0	0	0	35	0	35	100	0
Pottisiramulunagar	1	0	31	0	1	0	33	0	33	100	0
Total	83	0	964	1	752	0	1799	1	1800	99.94	0.05

Identified Slum	PSP		PT		HT		# of Samples			% of Samples	
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
RC Level →											5
November 2006											
Gande kunta	2	0	0	0	31	0	33	0	33	100	0
Narayanguda	0	0	0	0	20	0	20	0	20	100	0
Ravendra Nagar	0	0	33	0	0	0	33	0	33	100	0
Shanti Nagar	0	0	33	0	0	0	33	0	33	100	0
Balkampet	3	0	0	0	30	0	33	0	33	100	0
Kamal Nagar	0	0	25	0	5	0	30	0	30	100	0
Indra Nagar	2	0	0	0	31	0	33	0	33	100	0
DevendraSanginagar	1	0	29	0	3	0	33	0	33	100	0
Siddartha Nagar	3	0	0	0	52	0	55	0	55	100	0
Madhura Nagar	4	0	0	0	40	0	44	0	44	100	0
Jafer Ali Bagh	0	0	3	0	2	0	5	0	5	100	0
Somajiguda	1	0	7	0	2	0	10	0	10	100	0
M S Muqtha	0	0	27	0	0	0	27	0	27	100	0
Bansilalpet	3	0	40	1	3	0	46	1	47	97.872	2.127
Nandhi Nagar	1	0	5	0	5	0	11	0	11	100	0
Maruthi Nagar	2	0	8	1	2	0	12	1	13	92.308	7.692
BJJR Nagar	0	0	21	0	0	0	21	0	21	100	0
Srinivas Nagar	0	0	5	0	0	0	5	0	5	100	0
Bapuji Nagar	1	0	24	0	15	0	40	0	40	100	0
DaverakondaBasti	1	0	0	0	30	0	31	0	31	100	0
Poolbagh	1	0	30	0	4	0	35	0	35	100	0
Indra Nagar	0	0	0	0	32	0	32	0	32	100	0
Rahmat Nagar	0	0	0	0	20	0	20	0	20	100	0
Shokath Nagar	0	0	10	0	9	0	19	0	19	100	0
Budagum Jagam	0	0	6	0	2	0	8	0	8	100	0
Pochamma Basti	3	0	12	0	7	0	22	0	22	100	0
Jawahar Nagar	0	0	30	0	3	0	33	0	33	100	0
Tawakal Nagar	1	0	0	0	17	0	18	0	18	100	0
Ambadkar Nagar	0	0	0	0	3	0	3	0	3	100	0
Jawahar Nagar	0	0	0	0	31	0	31	0	31	100	0
Laxmi Narsimma	1	0	0	0	34	0	35	0	35	100	0
Housing Board Q	0	0	2	0	3	0	5	0	5	100	0
Gandhi Nagar	1	0	22	0	1	0	24	0	24	100	0
DaverakondaBasti	2	0	5	0	23	0	30	0	30	100	0
Indra Nagar	0	0	0	0	15	0	15	0	15	100	0
ChachaNehru agar	3	0	13	0	2	0	18	0	18	100	0
Amdebkar Nagar	0	0	0	0	19	0	19	0	19	100	0
Kamal Nagar	2	0	32	0	0	0	34	0	34	100	0
Jawahar Nagar	2	0	0	0	29	0	31	0	31	100	0
MS Muqtha	1	0	19	0	0	0	20	0	20	100	0
Habeeb Nagar	2	0	0	0	18	0	20	0	20	100	0
Ravindra Nagar	0	0	20	0	0	0	20	0	20	100	0
Moin Pura	1	0	22	0	7	0	30	0	30	100	0
BJJR Nagar	0	0	20	0	0	0	20	0	20	100	0

Identified Slum	PSP		PT		HT		# of Samples		% of Samples		
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
RC Level →											
Rahamat Nagar	1	0	0	0	19	0	20	0	20	100	0
Ambedkar Nagar	0	0	14	0	6	0	20	0	20	100	0
Indira Nagar	0	0	13	0	7	0	20	0	20	100	0
Devendra Sanghi bai Nagar	2	0	25	0	5	0	32	0	32	100	0
Raja Narasimha colony	1	0	0	0	29	0	30	0	30	100	0
MS Maqtha	1	0	15	0	30	0	46	0	46	100	0
Shanthi Nagar	1	0	31	0	3	0	35	0	35	100	0
ChachaNehru Nagar	2	0	27	0	1	0	20	0	20	100	0
Kamal Nagar	1	0	15	0	4	0	20	0	20	100	0
RajaNarasimha colony	0	0	23	0	5	0	28	0	28	100	0
Asif Nagar	1	0	23	0	6	0	30	0	30	100	0
Laxmi Narasimha nagar	0	0	0	0	21	0	21	0	21	100	0
Ambedkar Nagar	0	0	12	0	18	0	30	0	30	100	0
Rahamet Nagar	0	0	0	0	20	0	20	0	20	100	0
Jangamet Falaknuma	1	0	23	0	0	0	24	0	24	100	0
Tawakal Nagar	1	0	17	0	0	0	18	0	18	100	0
Bharat Nagar	0	0	14	0	16	0	30	0	30	100	0
Jawahar Nagar	1	0	0	0	55	0	56	0	56	100	0
Chacha Nehru Nagar	0	0	0	0	22	0	22	0	22	100	0
Bansilapet	2	0	0	0	42	0	44	0	44	100	0
RajNarasimma Nagar	2	0	46	0	18	0	66	0	66	100	0
Bharat Nagar	0	0	18	0	7	0	25	0	25	100	0
Bholakpur	3	0	17	0	0	0	20	0	20	100	0
Ram Nagar	1	0	20	0	1	0	22	0	22	100	0
MS Maqtha	2	0	1	0	49	0	52	0	52	100	0
Total	67	0	857	2	934	0	1858	2	1860	99.89	0.10
										2	75

December 2006

Ravindra Nagar	2	0	57	0	7	0	66	0	66	100	0
DevenderSanghi bai Nagar	0	0	46	0	14	0	60	0	60	100	0
Shanti Nagar	1	0	28	0	3	0	32	0	32	100	0
DevenderSanghi bai Nagar	0	0	25	0	0	0	25	0	25	100	0
Rahamet Nagar	1	0	0	0	43	0	44	0	44	100	0
Kalikaber	0	0	27	0	5	0	32	0	32	100	0
Tawakal Nagar	1	0	0	0	20	0	21	0	21	100	0
Rahamet Nagar	0	0	0	0	22	0	22	0	22	100	0
Ambedkar Nagar	0	0	5	0	17	0	22	0	22	100	0
Chachanehrunagar	1	0	0	0	19	0	20	0	20	100	0
Tadban	2	0	0	0	27	0	29	0	29	100	0
Pochamma Basti	4	0	15	0	6	0	25	0	25	100	0
Siddique Nagar	2	0	10	0	8	0	20	0	20	100	0
Syed Nagar	1	0	26	0	5	0	32	0	32	100	0

Identified Slum	PSP		PT		HT		# of Samples			% of Samples	
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
RC Level →											
Bholakpur	1	0	24	0	2	0	27	0	27	100	0
RangaNagar	1	0	34	0	0	0	35	0	35	100	0
Asif Nagar	1	0	34	0	0	0	35	0	35	100	0
BJJR Nagar	0	0	9	0	9	0	18	0	18	100	0
Laxmi Narsimha nagar	2	0	0	0	28	0	30	0	30	100	0
Bapuji Nagar	1	0	39	0	0	0	40	0	40	100	0
BhaghatSing Nagar	1	0	0	0	21	0	22	0	22	100	0
Waddara Basthi	1	0	0	0	21	0	22	0	22	100	0
Rahamat Nagar	2	0	4	0	12	0	18	0	18	100	0
R N Colony	1	0	35	0	9	0	45	0	45	100	0
Ranga Nagar	1	0	21	0	5	0	27	0	27	100	0
Ambedkar Nagar	0	0	3	0	23	0	26	0	26	100	0
Devender Sanghi bai Nagar	0	0	26	0	9	0	35	0	35	100	0
Maruthi Colony	0	0	24	0	14	0	38	0	38	100	0
LaxmiNarsimha nagar	1	0	0	0	19	0	20	0	20	100	0
BJJR Nagar	0	0	17	2	0	0	17	2	19	89.474	10.526
Pochamma Basti	2	0	13	0	0	0	15	0	15	100	0
G M Nagar	1	0	19	0	20	0	40	0	40	100	0
M S Maqtha	1	0	25	0	2	0	28	0	28	100	0
Nehru Nagar	0	0	20	0	0	0	20	0	20	100	0
Ravindra Nagar	1	0	31	0	6	0	38	0	38	100	0
Reddy Basti	1	0	29	0	0	0	30	0	30	100	0
Sulthan Shahi	2	0	25	0	0	0	27	0	27	100	0
Jangamet	1	0	34	0	0	0	35	0	35	100	0
Bansilalpet	2	0	0	0	25	0	27	0	27	100	0
R N Colony	1	0	22	0	17	0	40	0	40	100	0
Karwan	1	0	26	0	0	0	27	0	27	100	0
D S Nagar	0	0	37	0	6	0	43	0	43	100	0
BJJR Nagar	1	0	19	0	0	0	20	0	20	100	0
Wadera Basthi	3	0	0	0	27	0	30	0	30	100	0
DevarakondaBasti	3	0	5	0	10	0	18	0	18	100	0
M S Muqtha	0	0	0	0	28	0	28	0	28	100	0
New Bhoiguda	4	0	10	0	1	0	15	0	15	100	0
BJJR Nagar	2	0	15	0	1	0	18	0	18	100	0
Mahabharat Nagar	0	0	17	0	0	0	17	0	17	100	0
Nandhi Nagar	2	0	43	0	0	0	45	0	45	100	0
Bibi bazar	0	0	7	0	23	0	30	0	30	100	0
Ravindra Nagar	3	0	39	0	0	0	42	0	42	100	0
Indira Nagar	0	0	26	0	7	0	33	0	33	100	0
Ambedkar Nagar	1	0	20	0	5	0	26	0	26	100	0
M S Maqtha	1	0	14	0	12	0	27	0	27	100	0
Jiya Guda	2	0	34	0	10	0	46	0	46	100	0
BJJR Nagar	0	0	27	0	0	0	27	0	27	100	0
Hari Bowli	0	0	13	0	32	0	45	0	45	100	0

Identified Slum	PSP		PT		HT		# of Samples		% of Samples		
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
RC Level →											
Asif Nagar	2	0	38	0	0	0	40	0	40	100	0
Bhagath singh Nagar	1	0	21	0	0	0	22	0	22	100	0
Total	66	0	1138	2	600	0	1804	2	1806	99.88	0.11

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January 2007

Gazibanda	0	0	0	0	35	0	35	0	35	100	0
New Bhoiguda	3	0	11	0	0	0	14	0	14	100	0
R N Colony	1	0	34	0	0	0	35	0	35	100	0
Hamal Basti	2	0	7	0	7	0	16	0	16	100	0
Bapuji Nagar	1	0	39	0	0	0	40	0	40	100	0
Karwan	0	0	0	0	16	0	16	0	16	100	0
Ravindra Nagar	1	0	34	0	0	0	35	0	35	100	0
Syed Nagar	1	0	33	0	11	0	45	0	45	100	0
Bansilalpet	0	0	0	0	20	0	20	0	20	100	0
Ravindra Nagar	2	0	33	0	0	0	35	0	35	100	0
Haridas Pura	5	0	8	0	1	0	14	0	14	100	0
Bapuji Nagar	2	0	38	0	0	0	40	0	40	100	0
Laxi Narsimha Nagar	3	0	0	0	27	0	30	0	30	100	0
Panjagutta	2	0	38	0	0	0	40	0	40	100	0
Moinbagh	2	0	0	0	33	0	35	0	35	100	0
Mettuguda	12	0	1	0	1	0	14	0	14	100	0
Hakimpet	0	0	24	0	0	0	24	0	24	100	0
M S Muqtha	1	0	33	0	4	0	38	0	38	100	0
Ravindra Nagar	1	0	30	0	0	0	31	0	31	100	0
Waddar Basti	0	0	0	0	27	0	27	0	27	100	0
Jiya Guda	1	0	29	0	0	0	30	0	30	100	0
Ambedkar Nagar	0	0	0	0	25	0	25	0	25	100	0
Panjagutta	2	0	36	0	0	0	38	0	38	100	0
Manghalhat	3	0	0	0	24	0	27	0	27	100	0
Tawakal Nagar	0	0	0	0	20	0	20	0	20	100	0
Ranga Nagar	2	0	25	0	0	0	27	0	27	100	0
Karwan	0	0	27	0	0	0	27	0	27	100	0
Waddar Basti	1	0	27	0	10	0	38	0	38	100	0
G M Chowni	2	0	28	0	0	0	30	0	30	100	0
Pension Pura	3	0	22	0	0	0	25	0	25	100	0
Bapuji Nagar	2	0	38	0	0	0	40	0	40	100	0
Chowdhali Cheputra	2	0	28	0	0	0	30	0	30	100	0
Golla Basti	2	0	21	0	0	0	23	0	23	100	0
Ravindra Nagar	1	0	34	0	0	0	35	0	35	100	0
Ranga Nagar	3	0	28	0	0	0	31	0	31	100	0
Ambedkar Nagar	1	0	25	0	0	0	26	0	26	100	0
R N Colony	3	0	27	0	0	0	30	0	30	100	0
Edi Bazar	1	0	34	0	0	0	35	0	35	100	0
Jiya Guda	2	0	33	0	0	0	35	0	35	100	0
Kumar Wadi	0	0	31	0	0	0	31	0	31	100	0
Kandikal Gate	1	0	38	0	1	0	40	0	40	100	0
Indhira Nagar	2	0	0	0	23	0	25	0	25	100	0

Identified Slum	PSP		PT		HT		# of Samples		% of Samples		
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
RC Level →											
Kumar Wadi	2	0	3	0	15	0	20	0	20	100	0
I D H Colony	3	0	1	0	5	0	9	0	9	100	0
BJJR Nagar	1	0	9	0	0	0	10	0	10	100	0
Kumar Wadi	3	0	54	0	0	0	57	0	57	100	0
M S Maqtha	0	0	19	0	2	0	21	0	21	100	0
Kumar Wadi	1	0	10	0	19	0	30	0	30	100	0
Panjagutta	4	0	18	1	3	0	25	1	26	96.154	3.846
Bapuji Nagar	3	0	37	0	0	0	40	0	40	100	0
Shaikpet	0	0	31	0	0	0	31	0	31	100	0
Gazemeleli colony	2	0	26	0	22	0	50	0	50	100	0
Moin Bagh	3	0	3	0	56	0	62	0	62	100	0
Ranga Nagar	1	0	22	0	7	0	30	0	30	100	0
Kali Khabar	0	0	24	0	16	0	40	0	40	100	0
Jahanuma	3	0	9	0	50	0	62	0	62	100	0
New Khilwat	1	0	0	0	27	0	28	0	28	100	0
Syed Nagar	3	0	30	0	0	0	33	0	33	100	0
R N Colony	1	0	27	0	0	0	28	0	28	100	0
Total	104	0	1217	1	507	0	1828	1	1829	99.94	0.05
										5	47

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Bapuji Nagar	2	0	31	0	0	0	33	0	33	100	0
Bholakpur	2	0	31	0	0	0	33	0	33	100	0
Ambika Nagar	2	0	38	0	0	0	40	0	40	100	0
Bujji Galli	2	0	10	0	15	0	27	0	27	100	0
Maruthi Colony	1	0	26	0	6	0	33	0	33	100	0
Gowlipura	2	0	26	0	3	0	31	0	31	100	0
Chadharght	2	0	36	0	0	0	38	0	38	100	0
Riyasat Nagar	4	0	31	0	0	0	35	0	35	100	0
Moin Bagh	1	0	28	0	2	0	31	0	31	100	0
Maisaram	1	0	30	0	0	0	31	0	31	100	0
Indhira Nagar	0	0	22	0	0	0	22	0	22	100	0
Mahatma Gandhi Nagar	0	0	31	0	0	0	31	0	31	100	0
Raksha Puram	0	0	25	0	15	0	40	0	40	100	0
BathakammaKunta	2	0	0	0	19	0	21	0	21	100	0
Kumar Wadi	1	0	9	0	15	0	25	0	25	100	0
Ravindra Nagar	3	0	35	0	0	0	38	0	38	100	0
Ranga Nagar	4	0	31	0	0	0	35	0	35	100	0
Indhira Nagar	0	0	34	0	1	0	35	0	35	100	0
Riyasat Nagar	3	0	32	0	0	0	35	0	35	100	0
Bapuji Nagar	2	0	38	0	0	0	40	0	40	100	0
Burjji Galli	2	0	0	0	10	0	12	0	12	100	0
Waddar Basti	1	0	0	0	25	0	26	0	26	100	0
Addagutta	11	0	12	0	1	0	24	0	24	100	0
Habib Nagar	0	0	37	0	7	0	44	0	44	100	0
Fathesh Nagar	0	0	16	0	15	0	31	0	31	100	0
Indhira Nagar	0	0	51	0	0	0	51	0	51	100	0

Identified Slum	PSP		PT		HT		# of Samples		% of Samples		
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
RC Level →											
Bholakpur	3	0	7	0	2	0	12	0	12	100	0
Laxmi Narsimha Nagar	1	0	0	0	27	0	28	0	28	100	0
Fathesh Nagar	0	0	16	0	4	0	20	0	20	100	0
Bhoiguda	3	0	14	0	1	0	18	0	18	100	0
Amber Nagar	0	0	0	24	0	2	0	26	26	0	100
Shivaji Nagar	3	0	32	0	0	0	35	0	35	100	0
Thalla Basti	3	0	14	0	0	0	17	0	17	100	0
Jiyaguda	3	0	0	0	47	0	50	0	50	100	0
Arundathi Nagar	2	0	29	0	4	0	35	0	35	100	0
Amber Nagar	1	0	32	0	0	0	33	0	33	100	0
Jiyaguda	1	0	0		29	0	30	0	30	100	0
Medhar Basti	3	0	23	3	2	0	28	3	31	90.323	9.677
Bholakpur	3	0	9	0	0	0	12	0	12	100	0
Indra Nagar	0	0	0	0	20	0	20	0	20	100	0
Amber Nagar	0	0	0	37	0	0	0	37	37	0	100
Shivaji Nagar	0	0	3	0	24	4	27	4	31	87.097	12.903
Shamsher Gunj	0	0	0	0	15	0	15	0	15	100	0
Arundathi Nagar	0	0	29	0	8	0	37	0	37	100	0
Indra Nagar	0	0	0	0	31	0	31	0	31	100	0
Amber Nagar	0	0	18	0	2	0	20	0	20	100	0
M G Nagar	1	0	34	0	0	0	35	0	35	100	0
Ranga Nagar	6	1	28	1	2	0	36	2	38	94.737	5.263
PottiSriramulu Nagar	4	1	25	0	1	0	30	1	31	96.774	3.225
Shivaji Nagar	1	0	0	0	37	2	38	2	40	95	5
BathukammaKunta	3	0	5	0	12	0	20	0	20	100	0
Amber Nagar	1	0	41	0	0	0	42	0	42	100	0
Reddy Basthi	1	0	21	0	18	0	40	0	40	100	0
Nagula Chintha	1	0	49	0	0	0	50	0	50	100	0
Ambika Nagar	1	0	56	0	3	0	60	0	60	100	0
Mader basthi	0	5	0	32	0	0	0	37	37	0	100
Shivaji Nagar	0	0	0	0	31	0	31	0	31	100	0
Total	93	7	1145	97	454	8	1692	112	1804	93.79	6.20
										2	84

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Balajinagar	1	0	28	0	02	0	31	0	31	100	0
Kumarbasthi	0	0	36	0	0	0	36	0	36	100	0
Madherbasthi	03	0	17	0	01	0	21	0	21	100	0
Shivaji nagar	01	0	30	0	0	0	31	0	31	100	0
G K Colony	14	0	04	0	02	0	20	0	20	100	0
Nagulachinta	01	0	30	0	0	0	31	0	31	100	0
Hamalbasthi	03	0	17	0	0	0	20	0	20	100	0
G K Colony	14	0	16	0	03	0	33	0	33	100	0
Gansi bazar	0	0	0	0	31	0	31	0	31	100	0
Balajinagar	01	0	30	0	0	0	31	0	31	100	0
Ambar nagar	02	0	26	0	0	0	28	0	28	100	0
Daniahnagar	0	0	31	0	0	0	31	0	31	100	0

Identified Slum	PSP		PT		HT		# of Samples		% of Samples		
	WNL	NIL	WNL	NIL	WNL	NIL	WNL	NIL	Total	WNL	NIL
Ambarnagar	0	0	10	0	0	0	10	0	10	100	0
Gansi bazar	1	0	18	0	31	0	50	0	50	100	0
Nagamayakunta	2	0	51	0	01	0	54	0	54	100	0
Darushifa	2	0	29	0	0	0	31	0	31	100	0
Mirchowk	1	0	0	0	30	0	31	0	31	100	0
Cheputra	0	0	09	0	72		81	0	81	100	0
Jaiprakashnagar	15	0	16	0	06	0	37	0	37	100	0
Kishanbagh	1	0	30	0	0	0	31	0	31	100	0
Sunam bhatti	4	0	06	0	15	0	25	0	25	100	0
Balajinagar	1	0	25	0	05	0	31	0	31	100	0
Ambarnagar	0	0	35	0	01	0	36	0	36	100	0
Jahanuma	1	0	30	0	0	0	31	0	31	100	0
Kumargadda	2	0	48	0	0	0	50	0	50	100	0
New bhoiguda	8	0	08	0	07	0	23	0	23	100	0
Harinagar	5	0	09	0	01	0	15	0	15	100	0
Madharbasthi	2	0	28	0	01	0	31	0	31	100	0
Arundhatinagar	2	01	22	0	07	0	31	1	32	96.875	3.125
Kumarwadi	1	0	44	0	07	0	52	0	52	100	0
Rajmohalla	1	0	61	0	0	0	62	0	62	100	0
Bhoiguda	9	0	07	0	04	0	20	0	20	100	0
Krishnanagar	3	0	17	0	0	0	20	0	20	100	0
Yakutpura	1	0	0	0	38	0	39	0	39	100	0
Hamalbasthi	3	0	20	0	09	0	32	0	32	100	0
I D H Colony	14	01	15	0	07	0	36	1	37	97.297	2.702
Yakutpura	1	0	0	0	37	0	38	0	38	100	0
Medharbasthi	4	0	11	0	03	0	18	0	18	100	0
Mirchowk	1	0	36	0	0	0	37	0	37	100	0
Shalibanda	1	0	30	0	0	0	31	0	31	100	0
Darushifa	1	0	0	0	30	0	31	0	31	100	0
Noorkhanbazar	3	0	28	0	0	0	31	0	31	100	0
Yakutpura	2	0	0	0	29	0	31	0	31	100	0
Rakshapuram	2	0	0	0	20	0	22	0	22	100	0
Fatheshnagar	1	0	0	0	21	0	22	0	22	100	0
Haribowli	1	0	10	0	32	0	43	0	43	100	0
Yakutpura	2	0	01	0	41	0	44	0	44	100	0
Shalibanda	0	0	09	0	35	0	44	0	44	100	0
Fatheshahnagar	1	0	18	0	43	0	62	0	62	100	0
Mangalhaat	1	0	30	0	0	0	31	0	31	100	0
Mekala mandhi	2	0	23	0	37	0	62	0	62	100	0
Dabeerpura	2	0	0	0	60	0	62	0	62	100	0
Total	144	02	999	0	669	0	1811	2	1813	99.88	0.11
									9		02
Grand Total	834	13	10469	157	7652	44	18955	214	19169	98.883	1.1163

Annexure-4: Possible Causes of Unsatisfactory Chlorination in the Distribution System of Slums

Division	Identified Slum	Possible Cause of Pollution
I	Chandulal Baradari	Pollution at Pit Taps in H.No#. 19-2-248/33, 19-2-248/36/B
I	Gulshan Nagar	Many people here complained of the quality of water supplied and illnesses they had. When RC was checked after 20 minutes of supply two points were found to unsatisfactory
I	Potti Sriramulu Nagar	There is a PSP which is not showing chlorine whenever informed that the tap will be changed very soon
I	DoodhBowli	The water supplied here is turbid with bad smell. The house number 19-1-591/A/2 has a pit tap which may be
		very high number of sewerage overflows. During the supply hours the water flows on to the roads causing inconvenience to the pedestrians
I	Tadban	The supply is from miralam filters 19-2-220. There is great fall of chlorine level during the end of supply
I	Potti Sriramulu Nagar	the section manager
I	PottiSriramulu Nagar	the second time to the section manager
I	Dabeerpura	chlorine was found in H.No#.17-4-264, Trace RC with turbid water in H.No#.17-4-268,17-4-288
I	Bibi bazar	Pollution at Pit Tap in H.No#23-2-350/A
I	Bhagwangunj	Pit tap H.No#5-7-80/1. The initially supplied water is turbid with no chlorine, subsequently monitored houses had satisfactory chlorine levels
I	Kamalnagar	Pollution at H.No#15-6-670 Pit tap
II	Madannapet Mandi	Improper chlorination, informed at Asifnagar Filter Beds and has been rectified
II	Shiva Ganganagar	There is intermittent supply in this area, The water
		There are two houses with door no's 18-3-146/A and
		water from home
II	Tajir Nagar	H.No# 1-4-554/8/A, 1-4-551/27. There is very low
		houses get the water after other households which use

Division	Identified Slum	Possible Cause of Pollution
		motor connected to the taps have completed the water collection
II	Jangamet	Located near fish market and rythu bazar. There is lot of garbage dumped in the Nala. Drainage and sewerage
		can be a cause for the pollution in house number #18-2-440, 18-2-426/1/A
II	Ranga Nagar	PSP and Pit tap were found with Nil RC. The PSP is located beside the MCH toilets with accumulation of dirty water near the stand
II	Arundhatinagar	There pipeline connected to PSP is old and passes through a Nala. This has informed at the Domalaguda section
III	BJJR Nagar	The drainage water comes into the house and overflows into the sump. Complaint was given, but no action has been taken.
III	Shanti Nagar, Golnaka	Pit tap H.No# 2-3-4/32, There is an open nala, behind house which is located behind Nimboliadda and shantinagar. As they do not have drainage facility the passage of water from toilet is into the nala. It is very
		due to overflow of water from toilet
IV	New Bhoiguda	Pollution at #H.No. 6-5-117/A/1
IV	Jiyaguda, Kamela	This is a slaughter area surrounded by sheeps and goats and this could probably affect the quality of water H.No# 13-3-612
V	Baggi Khana	No chlorine in complete supply. Improper chlorination, informed at Asifnagar Filter Beds and has been rectified
V	Amber Nagar	Improper chlorination at the reservoir informed to supervisor of Tarnaka (Srinivasa Nagar Section)
V	Amber Nagar	chlorine again. Improper chlorination continued at the reservoir. No action was taken even after informing to supervisor of Tarnaka (Srinivasa Nagar Section)
VI	Mader basthi	Chilakalguda Reservoir and rectified in the next supply
VI	Jai Nagar colony	# H.No. 6-3-14/1, The problem is with pipeline, there may be some crossing with sewerage lines in the nala nearby
VI	Panjagutta	Informed to Banjara hills and Somajiguda section as it was not clear from which reservoir the supply was from
VI	I D H Colony	There is a Nala near to the pipeline connected to the PSP. The supply initially for about 30min is completely dirty

Division Identified Slum	Possible Cause of Pollution
VII Bansilalpet	with bad smell. Informed at Bhoiguda section and Marredpally reservoir, but no action has been taken so far. Pit tap H.No# 6-7-43/55, There is a contaminated non working borewell which is just beside the tap. The water pipeline is passing through an old septic tank into the house.

Annexure-5: Slum wise and Source wise Results of Bacteriological Analysis

Slum	Samples for Bacteriological Testing			% Samples Unsatisfactory	Organism Isolated			
	Total	Satisfactory	Unsatisfactory		E. Coli	Klebsiella	Citrobacter	Irregular
1. Direct Source Samples								
April 2006								
Tajirnagar	2	1	1	50	1	0	0	0
Natrajnagar	1	0	1	100	0	1	0	0
Baggikhanna	2	1	1	50	1	0	0	0
Chandhanagar	1	0	1	100	1	0	0	0
June								
Sulthanshahi	14	13	1	7.14	1	0	0	0
July								
Maddanapet	1	0	1	100	1	0	0	0
August								
Maddanapet	4	0	4	100	4	0	0	0
Moghalpura	1	0	1	100	1	0	0	0
Ranigunj	3	2	1	33.33	1	0	0	0
New Bhoiguda	4	2	2	50	2	0	0	0
September								
Azadnagar	2	0	2	100	2	0	0	0
Jiyaguda	1	0	1	100	1	0	0	0
Bhanu nagar	5	3	2	40	2	0	0	0
October								
P S Nagar	6	5	1	16.66	1	0	0	0
December								
B J R Nagar	2	1	1	50	1	0	0	0
January 2007								
Shaikpet	1	0	1	100	1	0	0	0
February								
Panjagutta	2	1	1	50	1	0	0	0
Ambarnagar	7	5	2	28.57	2	0	0	0
Shivajinagar	4	2	2	50	2	0	0	0
March								
Bhoiguda	9	7	2	22.22	2	0	0	0
Madharbasthi	2	0	2	100	2	0	0	0
Fatheshanagar	7	7	3	42.85	3	0	0	0
2. Stored Water Samples								
May 2006								
Goshmahal	1	0	1	100	1	0	0	0
Rasoolpura	2	1	1	50	1	0	0	0
June								
Sulthan Shaiah	15	9	6	40.0	6	0	0	0
July								
Gowlipura	14	10	4	28.57	4	0	0	0
SulthanShaih	9	7	2	22.22	2	0	0	0
DoodBowli	7	5	2	28.57	2	0	0	0

Slum	Samples for Bacteriological Testing			% Samples Unsatisfactory	Organism Isolated			
	Total	Satisfactory	Unsatisfactory		E. Coli	Klebsiella	Citrobacter	Irregular
Nawasabkunta	2	1	1	50	1	0	0	0
Maharajgunj	2	0	2	100	2	0	0	0
August								
Sulthan shahi	2	1	1	50	1	0	0	0
3. Borewell Samples								
April 2006								
Sulthan shahi	1	0	1	100	1	0	0	0
Laldarwaza	2	1	1	50	1	0	0	0
Maddannapet	9	1	8	88.88	5	0	2	1
Saidabad	1	0	1	100	0	0	1	0
Gowlipura	2	0	2	100	1	0	0	1
Bapujinagar	1	0	1	100	0	0	0	1
Jhangirnagar	3	0	3	100	2	0	0	1
Goshmahal	1	0	1	100	0	0	0	1
Chandhanagar	4	1	3	75.0	2	0	0	1
May								
Jimratbazar	1	0	1	100	0	0	0	1
Goshmahal	2	0	2	100	1	0	0	1
Moghalpura	6	5	1	16.6	1	0	0	0
July								
Maddannapet	4	0	4	100	1	1	1	1
Saidabad	1	0	1	100	0	0	0	1
Gowlipura	2	0	2	100	1	0	0	1
Jahangirnagar	2	0	2	100	1	0	0	1
August								
Fathe Maidhan	3	1	2	66.66	2	0	0	0
Moghalpura	1	0	1	100	1	0	0	0
Zaheranagar	1	0	1	100	1	0	0	0
B S Mqtha	2	0	2	100	1	1	0	0
Ambedkarnagar	2	1	1	50	1	0	0	0
Bramanwadi	2	1	1	50	1	0	0	0
Mathajinagar	1	0	1	100	1	0	0	0
September								
Begumpet	1	0	1	100	1	0	0	0
Mallepally	2	1	1	50	1	0	0	0
Indranagar	4	0	4	100	4	0	0	0
October								
Pochammabast	5	1	4	80.0	4	0	0	0
Nehrunagar	1	0	1	100	1	0	0	0
Ahmednagar	3	0	3	100	3	0	0	0
January 2007								
Mettuguda	4	3	1	25	1	0	0	0
Bapujinagar	4	4	0	0	0	0	0	0
Lakshmi	3	3	0	0	0	0	0	0
Ravindranagar	4	4	0	0	0	0	0	0
February								

Slum	Samples for Bacteriological			% Samples Unsatis factory	Organism Isolated			
	Testing				E. Coli	Klebsiella	Citrobacter	Irregular
	Total	Satisfactory	Unsatisfactory					
Bagh Amberpet	7	0	7	100	7	0	0	0
Pochammabast	2	0	2	100	0	2	0	0
Pamulabasthi	1	0	1	100	0	1	0	0
Kumarwadibast	2	1	1	100	1	0	0	0
March								
Parsigutta	4	3	1	25	1	0	0	0
Kattelamandhi	8	1	7	87.5	7	0	0	0
Dhanaih Nagar	3	0	3	100	1	2	0	0

4. Street Vendor Samples

March 2006

Laldarwaza	4	3	1	100	1	0	0	0
Uppuguda	1	0	1	100	0	0	0	1
Bela	1	0	1	100	0	0	0	1
Chinthal basthi	2	1	1	50	1	0	0	0
Musherabad	3	1	2	66.66	0	1	0	1
Hafezbabanag	2	0	2	100	0	0	0	2
Alibagh	1	0	1	100	1	0	0	0
April								
I S Sadan	3	0	3	100	2	1	0	0
Aliyabad	6	5	1	16.66	0	0	0	1
saidabad	2	1	1	50	1	0	0	0
Laldarwaza	1	0	1	100	1	0	0	0
Afzalgunj	4	1	3	25	3	0	0	0
M J Market	1	0	1	100	0	1	0	0
Talabkatta	1	0	1	50	1	0	0	0
Gudimalkpur	1	0	1	50	0	0	0	1
Mehdipatnam	2	1	1	50	0	0	0	1
Nampally	5	3	2	40	0	0	0	2
Gowlipura	1	0	1	100	0	0	0	1
Yakutpura	1	0	1	100	1	0	0	0
Goshmahal	1	0	1	100	0	0	0	1
Jiyaguda	2	1	1	50	0	0	0	1
Khairthabad	4	0	4	100	2	1	0	1
M S Maqtha	3	0	3	100	1	1	0	1
Chandrayangutt	2	0	2	100	1	0	0	1
Chandhanagar	2	1	1	50	0	1	0	0
May								
Falaknuma	4	2	2	50	0	0	0	2
Chandrayangutt	5	4	1	20	0	0	0	1
Jiyaguda	8	4	4	50	1	0	0	3
Karmanghat	3	1	2	66.66	0	1	0	1
Lakdikapool	1	0	1	100	0	1	0	0
Khairthabad	3	1	2	66.66	1	0	0	1
Osmangunj	1	0	1	100	0	1	0	0
Darusalam	2	0	2	100	0	2	0	0
Biramalguda	1	0	1	100	0	1	0	0

Slum	Samples for Bacteriological Testing			% Samples Unsatisfactory	Organism Isolated			
	Total	Satisfactory	Unsatisfactory		E. Coli	Klebsiella	Citrobacter	Irregular
Champapet	1	0	1	100	0	1	0	0
Maisaram	1	0	1	100	0	0	0	1
Basherbagh	4	2	2	50	2	0	0	0
Laldarwaza	1	0	1	100	1	0	0	0
Chatrinaka	4	3	1	25	1	0	0	0
Goshmahal	5	4	1	20	1	0	0	0
Chadharghat	2	1	1	50	0	1	0	0
Afzalgunj	4	1	3	75	0	0	0	3
Uppuguda	2	1	1	50	1	0	0	0
Narayanguda	3	0	3	100	3	0	0	0
Shalibandha	1	0	1	100	0	0	0	1
Balapur	3	2	1	33.33	1	0	0	0
Syednagar	3	2	1	33.33	1	0	0	0
July								
Narayanaguda	3	0	3	100	3	0	0	0
Shalibandha	1	0	1	100	0	0	0	1
Moosabowli	1	0	1	100	0	0	0	1
August								
B S maqtha	2	0	2	100	2	0	0	0
September								
Ramkothi	4	2	2	50	2	0	0	0
Kachiguda	2	1	1	50	1	0	0	0
Bapunagar	7	2	5	71.4	5	0	0	0
Chappalroad	1	0	1	100	0	0	0	0
October								
Abids	2	1	1	50	1	0	0	0
Asifnagar	7	2	5	71.4	2	3	0	0
Rezimetal	4	3	1	25	3	0	0	0
November								
Secunderabad	1	0	1	100	1	0	0	0
December								
B JJ R Nagar	1	0	1	100	0	0	0	0
February 2007								
Baghamberpet	5	1	4	80	3	0	0	0
March								
Shamshergunj	3	2	1	33.33	1	0	0	0
ImlibunBusStat	2	1	1	50	1	0	0	0

Annexure-6 : List of Sewerage Overflows Identified

Month	Division	Slum	Address	No of Sewerage Overflows
March-06	I	Jahanuma	#19-2-21/53/2	1
	I	Kajapahad	#19-2-81/E/1/1	1
	II	Chanchalguda	NearAPSEB	1
	VII	Bholakpur	#1-4-35/A/310	1
	XII	Lothkunta Bus Stop	Opp.Bustop	1
April	II	Ngl.X Road Bus Stop	Opp.Bustop	1
	IV	Poolbagh	SunnyGarden(Opp)	1
	III	Karwan	#14-1-187/1,NrHanuman Temple,13-1-749/1, Hanuman Temple	2
	V	Tajirnagar	1-4-554/441B(Opp)	1
	IV	Kothi	-531	1
	I	Jahanuma	BesideNewSaharaDrivingSch ool (Opp), BesideBoystownSchool	2
	May	III	Jiyaguda	13-4-274,13-4-312/1
VII		Bholakpur	NewReservoir(Opp)	1
I		ChandulalBaradari	23-6-904,23-6-655	2
June	I	Sultanshahi	23-4-195, ,20-5-26,23-4-12,23-4-27/A,2 3-1-852,23-1-846,23-4-65,23- 4-173,23-4-49,23-4-237,23-4- 449/450,23-4-178,23-4-162,2 3-4-724,23-4-165,23-3-459/1, 23-4-1/1/37,23-4-229,234-229	20
	II	Sultanshahi	8-4-310/A,18-4-322,18-9-54	3
	II	Gowlipura	18-9--9/49,18-7-181/22,18-7- 173,18-7-181/34,18-7-78,18-7- -82,18-7-656/12/A,18-6-1119/ 1,18-6-1122/1,18-6-1122/A,1 8-6-1115,18-6-1119/1/A	13
	I	Gowlipura	#23-6-132/1,23-6-130,20-5-10 9,20-5-36/A/1,23-6-543/A,23- 4-305/1,23-4-296,23-4-281,23- -3-563,23-3-499,	12
	I	Shalibanda	#23-6-852/13,23-6-877,23-4-9 40/a,	3
	II	Ambedkar nagar	#18-2-60/83/1,18-2-60/81,20- 7-700/A,	3
	I	Doodhbowli	19-1-801,19-1-759.	2
	II	Chatrinaka	#18-7-640,18-7-656/15,18-7- 65613.	3
	I	Doodbowli	#19-4-280,20-7-573	2
	I	Nawabsabkuntta	#19-4-270/B/48	1
	I	Moghalpura	-388	1

Month	Division	Slum	Address	No of Sewerage Overflows
	IV	Jhume- rath- Bazar	14-9712/B,14-10-710,14-10-746	3
July	II	Yakutpura	#17-3B/332,17-3/219,17-3-235/1,17-3-253,17-3-336,17-3-665,17-3-688/A	7
	VI	M.S.Maqtha	#6-3-1243/34	1
	VI	Devarakonda basti	#8-2-365/2	1
	VI	Ranga nagar	#1-4-27/72/G/1	1
August	VI	M.S.Maqtha	#6-3-1185/36	1
	V	Amberpet	#3-2-493	1
	IV	EsamiaBazar	#4-6-231	1
	VII	Jainagar,IDH Colony	Opp.Black8 Near Church	1
	V	Shamnagar, Kabela	#2-3-740/1	1
	V	Harispenta	#2-4-755/9, 2-4-753	2
September	II	Mekalamandi	#18-5-112	1
	II	DevenderSanghiBainagar.Santoshnagar	Opp.HafizbabanagarMainRoad,I.S.Sadhan.X.Road	2
	II	Dabeerpura	#17-4-629	1
	III	P.S.Nagar	#10-3-444/52	1
October	V	Ambikanagar	#18-8-640,18-8-669	2
	III	PotiSriramulunagar	#10-3-313/21	1
	IV	Mangalhat	#14-7-546	1
	II	Barkas	#18-9-316,18-9-323	2
	II	EdiBazar	FromFalaknumamainroadtowardsJangamet	1
November	V	Gandikunta	#3-5-608,3-5-637/6	2
	VI	Indiranagar	#8-2-82/41,8-2-166/11	2
	VII	Bansilalpet	#6-7-43130/1	1
	VI	Panjagutta	Near .X. Road	1
	V	Jawaharnagar	#8-3-2880/131	1
December	VI	B.J.J.R.Nagar	#6-1-522/A	1
	III	First Lancer	#10-5-391/96/A, 10-5-391/96/A	2
January-07	II	Moinbagh	#18-8-245/6/B,18-8-236/20/19,18-8-239/18/8	4
	III	Gollabasti Pensionpura	#9-2-143	1
	II	Kummarwadi	#18-7-417,18-7-516/2	2
	II	Kandikalgate	#18-3-271,18-3-349/2	2
	II	Indiranagar	#18-8-170/A/519,18-8-163/20/4/C,18-8-143/2/A	4
	IV	Gazi-mettlah colony	#18-2-116,18-2-140/22	2
	II	Jahanuma	#19-3-536/9/A,19-2-29/26/1	2
	II	Aliyabad	On the main road chowodhalicheputra	1
February	V	Ambikanagar	#18-7-247	1

Month	Division	Slum	Address	No of Sewerage Overflows
	II	Gowlipura	#23-4-319/A,23-4-397/A	2
	I	Misriganj	#18-9-9154	1
	IV	Indirangar	#10-4-588/3	1
	II	Shivajinagar	#18-1-466/17,18-1-513,18-1-527/A	3
	II	Reddybasti	#18-1-445	1
	I	Shalibanda	On the main road(Opp)VolvoHotel	1
March	VII	Sunambatthi	# 6-2-160/63/4	1
	II	Yakutpura	#17-7-622/A,	1
	II	Rakshapuram	#18-8-278/20,#18-8-254/67	2
	II	Near Zeeshan Hotel	#Beside Zeeshan Hotel	1
April	II	Yakutpura	#17-3-750, #17-3-744	2
	II	Moharat Mahal, Gowlipura	#18-6-941	1
	V	Sundarnagar	#3-2-176/A	1
	V	Sundarnagar	#2-4-665/30	1
	I	SultanShahi	#23-4-498/11, 23-4-533	2
	II	Hashamabad	18-9-9168/3, 18-9-9170/4	2
	V	AmbikaNagar	Near Hanuman Temple	1
	I	Tadban	Near Bus Stop	1
	II	Jahanuma	Near Shamma Theatre	1
May	V	Narayanguda	#H.No. 3-5-569/A (Fancy Store), Nr. Narayanguda Reservoir	1
	II	Yakutpura	#17-3-419, 17-3-429/6 Near Suraj Theatre	2
	II	Mirchowk	Opp. Hanuman temple	1
	V	Ambarnagar	#12-11-1869, #12-11-1854	2
	IV	BJJR Nagar	#6-1-523/A	1
			Total	175

Annexure-7 :List of Health Care Providers Identified

S.No	Hospital Name	Name of Medical Practitioner	Address	Qualification
1	Lakshmi Nursing Home	Doctor / Staff	Jiyaguda	M.B.B.S
2	Shifa Clinic	Dr. Saajid	Hafeezpet	PMP
3	Asia Clinic	Dr. Asia	Hafeezpet	PMP
4	Mani Clinic	Dr. C.Vidhyanathan	Nallakunta	M.B.B.S
5	Mani Clinic	Dr. M.Raghava Chary	Nallakunta	M.B.B.S ,DCH
6	Gandhi Hospital	Dr. K.Sachi Chander	Osmangunj	M.A ,M.S
7	Local Doctor	Dr.MD.Rahamtullah ,Dr. M. Syam , Dr. Venkateswarlu	Bestiwada	B.O. M.S, B.Sc D.P.T MCs, B.Sc M.B.B.S.
8	LOD Hospital	Doctor & Staff	Sithaphal Mandi	M.B.B.S
9	Medwin Clinic	Dr. M.Khaleel,Dr. Athwer Rashida	Bapunagar	B.Sc DMS, B.H.M.S, M.D.
10	Max-Care Hospital	Docctor	Prem Nagar	M.B.B.S
11	Clinic Beside Adikmet Police Station.	Dr. Sathish Kumar	Anjayah Nagar	M.B.B.S
12	Vidhyanadh Clinic	Dr. Vidhyanadh	Anjayah Nagar	M.B.B.S
13	Alfa Clinic	Dr. C. Indira	Kachiguda	M.D ,DGO.
14	Family Clinic	Dr. Mohd. Imtiaz Ali	Sunder Nagar	M.B.B.S
15	Karhikeya Clinic	Dr. M.S.Bhuvaneshwar	Nimboli Adda	B.A ,M.S
16	Ammba Clinic	Dr. Reeta	P.S.Nagar	M.B.B.S
17	Zam Zam Clinic	Dr. Saleem, Dr. Yunnisa	P.S.Nagar	M.B.B.S
18	Ayurvedic Clinic	Dr. N.V.Rao	Alluri Seetha Rama Raju Nagar	B.A .
19	Sri Ram Clinic	Dr. Gnaneshwar Rao	BJJR Nagar	
20	Sai Srinivas Clinic	Dr. M.S.Reddy	Siddique Nagar	B.A ,M.S
21	Popular Clinic	Dr. Geetha Udayan	Siddique Nagar	PMP
22	Karuna Clinic	Dr. Sri Ramu	Anjayah Nagar	M.B.B.S
23	Srinivas Clinic	Dr. Ramesh	Ranga Nagar	M.B.B.S
24	Venkateswara Clinic	Dr. G. Krishna Murthy, Dr. B.Naresh Kumar	Bathakamma Kunta	M.B.B.S
25	Azeez Clinic	Dr. Gani, Dr. Gazal Anjum Sulthana	Moin Bagh	
26	Atmonawar Health Center	Dr. M.S.Baigh	Moin Bagh	
27	Shah Maternity & Nursing Home	Dr. Ayesha	Moin Bagh	M.B.B.S, DGO.

Annexure-8: Month-wise Pit Taps identified in Slums

Month	Division	Identified Slum	PIT Taps Identified	
March- 06	V	Padmashalinagar	5	
	II	Yakutpura	3	
	II	Vankateshwaranagar	3	
	I	ShakkerGANJI Kota	4	
	I	Cheputra	9	
	I	Charkamman	2	
	VII	Musherabad	3	
	II	Laxmi Nagar	11	
	II	Pool Bagh	1	
	V	Zamistanpur	1	
	IV	Sabji Mundi	1	
	II	Saidabad	1	
	II	MotiGaally	2	
	VII	Bholakpur	5	
	V	New Ganga Nagar	3	
	I	Noorkhan Bazar	3	
	II	Aliyabad	12	
	I	Lal Darwaza	1	
	I	Alibagh	5	
			Total	75
April	V	Bakaram	1	
	IV	Sabzimandi	9	
	I	Ambika Nagar	14	
	II	Motigally	13	
	III	Zira Road	5	
	I	Noorkhan Bazar	7	
	I	Aliyabad X Road	7	
	III	Zira	1	
	I	Motigally	3	
	IV	Sabji Mandi	1	
	III	Om Nagar	2	
	I	Cibli Gunj	2	
	IV	Jiya Guda	2	
	IV	Karwan	3	
	III	Old Mallepally	2	
	I	Gulshan Nagar	6	
	IV	Jiya Guda	18	
			Total	96
	May	II	Jhummarath Bazar	30
		I	Bela&Mogalpura	29
IV		Sabji Mandi	28	
I		Mogalpura	30	
IV		Kamela	30	
IV		Puranapool	30	
IV		Jiya Guda	30	
I		Sulthan Shahi	25	
I		Bibi Bazar	26	
I		Bahadur Pura	17	
V	Narayanaguda	5		
IV	Karwan	31		

Month	Division	Identified Slum	PIT Taps Identified	
June	I	Chandulal Baradal	30	
	IV	Puranapool	21	
	I	Chatrinaka	12	
	VII	Bholakpur	23	
	III	Zira	9	
	II	Jangamet	11	
	II	Moinbagh	12	
	III	Ambedkar Nagar	21	
			Total	450
		II	Gowlipura	26
		II	Shiva Ganganagar	30
		I	KrishnaReddy Nagar	12
		IV	Ranga Nagar,	13
		II	Talabkatta	5
		I	Chandulal Baradari	14
		I	Sultan Shahi	16
		I	Shali Banda	11
		I	Sultan Shahi	14
		I	Bibi Bazar	5
		I	Sultan Shahi	12
		II	Talabkatta	9
		II	Saibaba Nagar	3
		I	Noor Khan Bazar	15
		I	Kova Bela	14
		II	Hashamabad	15
		I	Sultan Shahi	15
		I	Hari Bowli	15
		II	Gowli Pura	11
		V	Bholakpur	15
		I	Mogalpura	12
		II	Gowlipura	18
		V	Ashok Nagar	23
		II	Gowlipura	24
	I	DoodhBowli	20	
	I	DoodhBowli	15	
	I	Bhagwangunj	49	
		Total	431	
July		Kanchan Wadi	49	
	IV	Panchamuki	32	
	I	Shali Banda	32	
	I	Motigally	27	
	I	Nawabsabkunta	24	
	I	Sultan Shahi	28	
	I	Sultan Shahi	33	
	I	Bapuji Nagar	30	
	II	Errakunta	7	
	V	Bholakpur	17	
	II	Madanapet Mandi	35	
	II	Yakatpura	7	
	I	Shali Banda	40	
V	Bholakpur	6		
I	Alija Kotla	2		
II	Laldarwaza	36		

Month	Division	Identified Slum	PIT Taps Identified
	VII	Addagutta	11
	VI	Ms.Muqtha	33
	I	Bibi Bazar	35
	IV	BudugajugamBasti	15
	IV	Devarakonda basti	24
	II	Yakatpura	2
	VI	Raj Nagar	24
	VI	Nandi Nagar	23
	I	Kalapathar	23
	I	Edibazar	35
	I	Jahanuma	45
	VII	Bansilalpet Basti	35
	VII	Addagutta	33
	VI	Balche Bazar	42
	VII	Bansillalpet	2
	II	Imly Bazar	30
	VI	Ms.Muqtha	31
	IV	DevarakondaBasti	12
	VI	Nandi Nagar	17
	II	Talabkatta	33
	II	Laldarwaza	35
	II	Gowlipura	50
	VI	Nandi Nagar	19
	I	Shalkargunj Kota	25
	VI	Ms.Muqtha	29
	II	Fulknumma	31
	IV	DevarakondaBasti	22
	IV	Lakadikapool	21
	II	Kurmaguda	35
	III	Chancha Nahrun	14
	IV	Ranga Nagar	20
	VII	Bansilalpet	11
	VI	Kharitabad	13
	I	Bela Colony	35
	I	Shali Banda	32
	IV	InderaNagarquarters	36
		Total	1495
August	IV	Victory Gunj	17
	II	Chandrayan Gutta	35
	III	Shanti Nagar	63
	III	Nehru Nagar	65
	V	Nimboli Adda	24
	V	Ashok Nagar	4
	VI	BS.Muqtha	19
	IV	Victory Gunj	8
	V	Chappalgalli	20
	II	Uppar Guda	4
	II	Yakathpura	38
	II	Kumarguda	3
	III	ChachaNehrunagar	11
	VI	BS.Muqtha	16
	II	Bannaka	5
	II	Ambika Nagar	72

Month	Division	Identified Slum	PIT Taps Identified	
September	VI	New Bhoiguda	6	
	IV	Moti Market	3	
	V	Nimboli Adda	2	
	II	Esamiya Bazar	8	
	VII	Bholakpur	2	
	II	Jai Nagar colony	5	
	III	Kumarwadi Basti	47	
	II	Arundhathi Nagar	23	
	II	Jai Nagar colony	9	
	I	Haribowli	43	
	V	Nimboli Adda	45	
	VI	Dr.Ambedkarnagar	7	
	VI	Bapuji Nagar	20	
	II	Ramnarsapuram	41	
	V	Amberpet	42	
	II	Poolbagh	49	
			Total	756
	II	Prem Nagar	55	
	II	Edi Bazar	34	
	II	D.Sangi bai nagar	40	
	IV	Karwan	43	
	IV	Sabji Mandi	33	
	I	Balaganze	33	
	IV	Jiyaguda	31	
	VII	Sithapal Mandi	29	
	VII	Varasi Guda	33	
	V	Chappal Bazar	26	
	IV	Indra Nagar	21	
	I	Reddy Basti	36	
	II	Dhobighat	40	
	II	Old Malakpet	1	
	II	Makala Banda	41	
	II	Jamal Nagar	44	
	II	Dabeerpura	2	
	II	R N colony	2	
	II	Jangamet	23	
	II	Dabeerpura	2	
	II	Malakpet	30	
	II	D.Sangi Bai nagar	43	
	II	D.Sangi Bai Nagar	40	
	V	Gandhi Nagar	40	
I	Pathargatti	1		
I	Kamal Nagar	54		
I	Hari Bowli	15		
II	Nagulchinta	22		
I	Shivaganga nagar	22		
I	Hari Bowli	21		
I	Umdha Nagar	39		
III	Potti Sriramulu Nagar	10		
IV	Hanuman Nagar	54		
VI	Sri Ram Nagar	21		
IV	Maqdampura	22		
II	Shivaji Nagar	33		

Month	Division	Identified Slum	PIT Taps Identified
October	II	Rajannbavi, Paddi	7
	V	Anjuman Nagar	14
		Total	1057
	II	Ambika Nagar	22
	V	Anjuman	14
	I	Chwdale Chapo	28
	III	Potti Sriramulu Nagar	16
	II	Barkas Sala	1
	VI	M S Muqtha	20
	II	Edi Bazar	35
	VI	DevarakondaBasti	10
	II	Moinpura	40
	II	Jangamet	25
	I	Gulzar House	2
	II	Shamnagar	2
	II	Maruthi colony	40
	I	Moghalpura	20
	II	Kamal Nagar	22
	IV	Patel Nagar	4
	III	Asif Nagar	30
	II	Moinpur	18
	I	Dood Bowli	42
	I	Mogalpura	42
	IV	Magghalhart	1
	IV	Hanuman Nagar	21
	II	Tadban	35
	I	Shakkar Gunj	1
	I	Kamela Kamatipura	39
	III	Ravindra Nagar	16
	III	Syed Nagar	32
	III	Asif Nagar	32
	IV	Bazar Ghat	33
	III	Vijay Nagarcolony	35
	IV	Chinthal Basti	34
	IV	Devender Sanghi bai nagar	35
	II	Chanchalguda	29
	III	Ravendra Nagar	29
	II	Kamal Nagar	34
	III	Santhi Nagar	30
	I	Methar Basti	30
III	Syed Nagar	35	
III	P S Nagar	31	
		Total	965
November	III	Ravendra Nagar	33
	III	Shanti Nagar	33
	II	Kamal Nagar	25
	IV	DavendraSanginagar	29
	III	Jafer Ali Bagh	3
	IV	Somajiguda	7
	IV	M S Muqtha	27
	VII	Bansilalpet	41
	VI	Nandhi Nagar	5
	II	Maruthi Nagar	9

Month	Division	Identified Slum	PIT Taps Identified
	VII	BJJR Nagar	21
	VI	Srinivas Nagar	5
	VI	Bapuji Nagar	24
	II	Poolbagh	30
	V	Shokath Nagar	10
	IV	Budagum Jagam	6
	V	Pochamma Basti	12
	V	Jawahar Nagar	30
	VI	Housing Board, Mehdeipatnam	2
	II	Gandhi Nagar	22
	VI	DaverakondaBasti	5
	VII	ChachaNehru agar	13
	IV	Kamal Nagar	32
	IV	MS Muqtha	19
	VI	Habeeb Nagar	0
	III	Ravindra Nagar	20
	I	Moin Pura	22
	VII	BJJR Nagar	20
	IV	Ambedkar Nagar	14
	IV	Indira Nagar	13
	IV	Devendra Sanghi bai Nagar	25
	IV	MS Maqtha	15
	III	Shanthi Nagar	31
	VII	ChachaNehru Nagar	27
	IV	Kamal Nagar	15
	II	RajaNarasimha colony	23
	III	Asif Nagar	23
	IV	Ambedkar Nagar	12
	II	Jangamet Falaknuma	23
	I	Tawakal Nagar	17
	IX	Bharat Nagar	14
	II	Raj Narasimha Nagar	46
	IX	Bharat Nagar	18
	VIII	Bholakpur	17
	V	Ram Nagar	20
	IV	MS Maqtha	1
		Total	859
December	III	Ravindra Nagar	57
	IV	DevenderSanghi bai Nagar	46
	III	Shanti Nagar	28
	IV	DevenderSanghi bai Nagar	25
	I	Kalikaber	27
	IV	Ambedkar Nagar	5
	III	Pochamma Basti	15
	III	Siddique Nagar	10
	III	Syed Nagar	26
	VIII	Bholakpur	24
	II	RangaNagar	34
	III	Asif Nagar	34
	VI	BJJR Nagar	9
	VI	Bapuji Nagar	39
	VI	Rahamat Nagar	4
	III	R N Colony	35

Month	Division	Identified Slum	PIT Taps Identified
	II	Ranga Nagar	21
	III	Ambedkar Nagar	3
	IV	DevenderSanghi bai Nagar	26
	II	Maruthi Colony	24
	VI	BJJR Nagar	19
	V	Pochamma Basti	13
	II	G M Nagar	19
	IV	M S Maqtha	25
	III	Nehru Nagar	20
	III	Ravindra Nagar	31
	I	Reddy Basti	29
	I	Sulthan Shahi	25
	II	Jangamet	34
	VII	R N Colony	22
	IV	Karwan	26
	IV	D S Nagar	37
	VI	BJJR Nagar	19
	III	DevarakondaBasti	5
	VII	New Bhoiguda	10
	VI	BJJR Nagar	15
	VII	Mahabharat Nagar	17
	VI	Nandhi Nagar	43
	II	Bibi Bazar	7
	III	Ravindra Nagar	39
	I	Indira Nagar	26
	IV	Ambedkar Nagar	20
	IV	M S Maqtha	14
	IV	Jiya Guda	34
	VI	BJJR Nagar	27
	I	Hari Bowli	13
	III	Asif Nagar	38
	VI	Bhagath singh Nagar	21
		Total	1140
January	VII	New Bhoiguda	11
2007	VII	R N Colony	34
	IV	Hamal Basti	7
	III	Bapuji Nagar	39
	III	Ravindra Nagar	34
	III	Syed Nagar	33
	III	Ravindra Nagar	33
	VII	Haridas Pura	8
	III	Bapuji Nagar	38
	VI	Panjagutta	38
	VII	Mettuguda	1
	IX	Hakimpet	24
	IV	M S Maqtha	33
	III	Ravindra Nagar	30
	IV	Jiya Guda	29
	VI	Panjagutta	36
	II	Ranga Nagar	25
	IV	Karwan	27
	VI	Waddar Basti	27
	II	G M Chowni	28

Month	Division	Identified Slum	PIT Taps Identified
	III	Pension Pura	22
	III	Bapuji Nagar	38
	I	Chowdhali Cheputra	28
	II	Golla Basti	21
	II	Ravindra Nagar	34
	II	Ranga Nagar	28
	IV	Ambedkar Nagar	25
	III	R N Colony	27
	II	Edi Bazar	34
	IV	Jiya Guda	33
	II	Kumar Wadi	31
	II	Kandikal Gate	38
	II	Kumar Wadi	3
	VII	I D H Colony	1
	VI	BJJR Nagar	9
	II	Kumar Wadi	54
	IV	M S Maqtha	19
	II	Kumar Wadi	10
	VI	Panjagutta	19
	IV	Bapuji Nagar	37
	III	Shaikpet	31
	II	Gazemeleli colony	26
	II	Moin Bagh	3
	II	Ranga Nagar	22
	I	Kali Khabar	24
	II	Jahanuma	9
	III	Syed Nagar	30
	III	Rajanarsimha Colony	27
		Total	1218
February	IV	Bapuji Nagar	31
	VI	Bholakpur	31
	II	Ambika Nagar	38
	V	Burja Galli	10
	V	Maruthi Colony	26
	II	Gowlipura	26
	IV	Chadherghat	36
	II	Riyasat Nagar	31
	II	Moin Bagh	28
	II	Maisaram	30
	II	Indhira Nagar	22
	II	Mahathma Gandhi Nagar	31
	II	Raksha Puram	25
	II	Kumar Wadi	9
	II	Ravindra Nagar	35
	II	Ranga Nagar	31
	II	Indhira Nagar	34
	II	Riyasat Nagar	32
	II	Bapuji Nagar	38
	VII	Addagutta	12
	IV	Habib Nagar	37
	II	Fathesh Nagar	16
	II	Indhira Nagar	51
	VII	Bholakpur	7

Month	Division	Identified Slum	PIT Taps Identified
	II	Fathesh Nagar	16
	VII	Bhoiguda	14
	V	Amber Nagar	24
	V	Shivaji Nagar	32
	V	Thalla Basti	14
	II	Arundathi Nagar	29
	V	Amber Nagar	32
	I	Medhar Basti	26
	VII	Bholakpur	9
	V	Amber Nagar	37
	IV	Shivaji Nagar	3
	II	Arundathi Nagar	29
	V	Amber Nagar	18
	III	M G Nagar	34
	II	Ranga Nagar	29
	IV	PottiSriramulu Nagar	25
	V	BathkammaKunta	5
	V	Amber Nagar	41
	II	Reddy Basthi	21
	II	Nagula Chintha	49
	II	Ambika Nagar	56
	XI	Mader basthi	32
		Total	1242
March-2007	II	Balajinagar	28
	II	Kumarbasthi	36
	I	Madharbasthi	17
	IV	Shivaji nagar	30
	VII	G K Colony	04
	II	Nagulachinta	30
	VII	Hamalbasthi	17
	VII	G K Colony	16
	II	Balajinagar	30
	II	Ambar nagar	26
	II	Daniahnagar	31
	V	Ambarnagar	10
	I	Gansi bazar	18
	VII	Nagamayakunta	51
	I	Darushifa	29
	I	Cheputra	09
	IV	Jaiprakashnagar	16
	I	Kishanbagh	30
	VII	Sunam bhatti	06
	II	Balajinagar	25
	V	Ambarnagar	35
	II	Jahanuma	30
	II	Kumargadda	48
	VII	New bhoiguda	08
	VII	Harinagar	09
	I	Madharbasthi	28
	II	Arundhatinagar	22
	II	Kumarwadi	44
	V	Rajmohalla	61

Month	Division	Identified Slum	PIT Taps Identified
	VII	Bhoiguda	07
	VII	Krishnanagar	17
	VII	Hamalbasthi	20
	VII	I D H Colony	15
	I	Medharbasthi	11
	I	Mirchowk	36
	I	Shalibanda	30
	I	Noorkhanbazar	28
	I	Haribowli	10
	II	Yakutpura	01
	I	Shalibanda	09
	II	Fatheshahnagar	18
	IV	Mangalhaat	30
	II	Mekala mandhi	23
		Total	999
Grand Total			10626

Annexure-9: Visit Summary for Focus Group Discussions

Id	Identified Slum	Date	Visit Id	Visitor ID	Time of Visit	
					Start Time	End Time
1	Serilingampally Municipality	21/04/06	VS01	SAR, SRI, PRP, MLJ	12:30pm	06:00pm
2	Sultan Shahi	15/05/06	VS01	RGV, SRI	10:10am	01:30pm
3	Jiya Guda	15/05/06	VS01	RGV, SRI	01:30pm	05:00pm
4	Rasoolpura	21/05/06	VS01	PRP, RGV, MLJ	11:30am	01:30pm
5	Hafeezpet	25/05/06	VS01	RGV, MLJ	02:30pm	05:00pm
6	Mehetharwadi	20/06/06	VS01	RGV, MLJ, MSH	12:10pm	02:00pm
7	Nagamayya kunta	21/06/06	VS01	MLJ, RGV	10:10am	01:30pm
8	Osmangunj	27/06/06	VS01	RGV, RVI	03:00am	06:50pm
9	Bestewada	28/06/06	VS01	RGV, RVI	02:30pm	05:30pm
10	Sitaphalmandi	29/06/06	VS01	RGV, RVI	12:15pm	01:15pm
11	Bapu Nagar, Amberpet	28/07/06	VS01	RGV,MSH	12:00 pm	02:30 pm
12	Prem Nagar, Amberpet	28/07/06	VS01	RGV, MSH	03:00 pm	05:30 pm
13	Poolbagh Basheerbagh	30/07/06	VS01	RGV, MSH	01:15 pm	03:00 pm
14	Bhoiguda, Bansilalpet	31/07/06	VS01	PRP, MLJ	12:00 pm	01:30 pm
15	Chachanehrunagar	31/07/06	VS02	PRP, MLJ	01:45 pm	03:15 pm
16	Anjaya Nagar	10/08/06	VS01	RGV,RAV	11:30am	01:00pm
17	Poochamma Basti	10/08/06	VS01	RGV,RAV	01:00pm	02.30pm
18	Sanjay Gandhi Nagar	10/08/06	VS02	RGV,RAV	03:00pm	04:45pm
19	Jainagar Colony New Bhoiguda Section	22/08/06	VS1	SAR, MLJ	02:30pm	04:40pm
20	Harispenta	23/08/06	VS1	SAR, SRI	02:45pm	03:45pm
21	Sundar Nagar	16/09/06	VS01	RGV,SRK	3:30pm	6:00pm
22	Nimboliadda	19/09/06	VS01	RGV,SRK	8:00am	9:00am
23	Krishnanagar	19/09/06	VS01	RGV,SRK	9:00am	:10:30am
24	Jinsi Chowra	21/09/06	VS01	RGV,RAV	8:00am	10:00am
25	Dabeerpura.	24/09/06	VS01	RGV, SRK	02:00pm	04:00pm
26	Patel Nagar	09/10/06	VS01	SRK, NAR	09:00am	11:00am
27	Affzal Sagar	12/10/06	VS01	RGV,RAV	11:00am	02:30pm
28	Philkhana	12/10/06	VS01	RGV,MAH	03:15pm	05:30pm
29	Potti Sriramulu Nagar	18/10/06	VS01	RGV -MLJ	11:00am	01:00pm
30	Sitha Ram colony	18/10/06	VS01	RAM- ARL	01:30pm	03:00pm
31	Raj Mohalla	02/11/06	VS01	RAM, SRK	11:00am	12:45pm
32	Medhar Basti	02/11/06	VS01	RAM, SRK	01:15pm	03:20pm
33	Devarkonda basti	11/11/06	VS01	RAM, MSH	02:30pm	04:30pm
34	Nandi Nagar	12/11/06	VS01	RAM, MSH	02:15pm	04:15pm

Id	Identified Slum	Date	Visit Id	Visitor ID	Time of Visit	
					Start Time	End Time
35	BJJR Nagar	16/11/06	VS01	RGV, MLJ	02:30pm	04:30pm
36	Siddique Nagar	13/12/06	VS01	RGV, MSH	12:00pm	02:30pm
37	Anjaiah Nagar	13/12/06	VS01	RGV, MSH	02:45pm	03:15pm
38	Ranga Nagar	17/12/06	VS01	RGV, SRK	03:30pm	04:30pm
39	ChaCha Nehru Nagar	10/12/06	VS03	RAM, SRK	12:30pm	02:00pm
40	Syed Nagar	13/12/06	VS02	RAM, MLJ	11:30am	01:00pm
41	Ravindra Nagar	11/01/07	VS01	RGV, NAR	12:30pm	02:30pm
42	Lakshmi Narasimha Nagr	12/01/07	VS01	RGV, RAV	11:30am	02:30pm
43	Waddari Basti	12/01/07	VS01	RGV,,RAV	03:30pm	05:30pm
44	Gollabasti	30/01/07	VS01	MSH, RAV	11:30am	02:30pm
45	Panjagutta	31/01/07	VS01	SRK	:04:00pm	05:00pm
46	Anjaya Nagar	08/02/07	VS02	RGV,RAV	12:30pm	02:30pm
47	Bathakammakunta Basti	08/02/07	VS01	RGV,RAV	03:00pm	05:30pm
48	Moinbagh	12/02/07	VS03	RGV, MLJ	01:30pm	04:30pm
49	Burajagalli	13/02/07	VS01	RGV,MSH,PSR	12:30pm	02:00pm
50	Kummarawadi	13/02/07	VS01	RGV,MSH,PSR	02:30pm	04:30pm
51	Danaiah Nagar	06/03/07	VS01	APR, SRI	3:30pm	05:00pm
52	Shivaji Nagr	06/03/07	VS01	APR, SRI	05:30am	06:30pm
53	Nagamaiah Kunta	07/03/07	VS02	APR, RAV	11:30am	01:00pm
54	Sai Saran Colony	07/03/07	VS01	APR, RAV	01:30am	02:45pm
55	Darushifa	31/03/07	VS01	APR, SRK,SWY	04:10pm	05:45pm