

Chapter 6

Domestic Effluent

Water, which sustains life on earth, is an invaluable and limited natural resource. We made use of freshwater for domestic purpose, irrigation, agriculture, industries and transport. Tremendous increase in population and with our modern life style, stress on civic amenities is increasing. The condition worsens when developmental plans take long time to work out like adequate and proper sewerage system in cities. The old sewage system is not sufficient to bear the pressure of increases domestic effluent. As for as domestic effluent of Kanpur metropolis is concern the sewage system of the city was development in Britishers time. In these years domestic effluent disposal has tremendously increased in the city. Water consumption in the city is commonly high due to easy availability of underground water which is available at 90 ft and drinking water is available at 150 ft.. Approximately 400 litre water is used per person per day and hence disposed in large quantity about 107.80 crore litre per day. With increasing population a lot of stress is laid on city sewerage system. Old and inefficient drains are clogged and remain flooded. The sewage treatment capacity is also too less than the daily disposal in the city. As per the study in Kanpur metropolis, 27 lakh population dispose 107.80 crore litre per day while the sewage water treatment done daily as 31.7 crore litre by city sewage treatment plant in the city. Intentionally or unconsciously 150 L of water is wasted per person per day. Households are unofficially or illegally becoming commercial centers there are app. 500 services centre in the city which consume 30,000 L of water in vehicle washing. Similarly hostels, general stores, beauty parlors, coaching centers, nursing homes and hospital etc. have occupied residential area increasing water consumption much more than required by the family.

This Chapter deals with the water consumption and disposal of water which include water usage mainly Kitchen, Bathroom, Toilet, House cleaning, Cloth washing, Leakage and other uses which are generally used in every household and disposed. All these types of water disposal are analyzed separately along with the

facts and spatial disposal pattern in Kanpur Metropolis. Before discussing separately these types of disposals, it is worth mentioning to analyze waste water disposal comprehensively for the study area therefore this chapter is divided into eight sub-sections. The overall water consumption and disposal is dealt in section 6.1, whereas section 6.2, 6.3, 6.4, 6.5, 6.6, 6.7 and 6.8 represents the analytical description of disposal from Kitchen, Bathroom, Toilet, house cleaning, Cloth washing, Leakage and other usage and disposal of Kanpur Metropolis.

6.1 Water Consumption and Disposal :

In the present study water consumption and disposal for domestic reasons has been selected for detail study. According to a report published in Dainik Jagran which was given by Kanpur Jal Nigam 54 crore litre of water is required in Kanpur Metropolis, while 41 crore litre water is available only. According to another estimate of Jal Nigam, 150 L/person/day or 1000 L/family/day are required. As per our study approximately 400 litre water per person per day is required. The gap between the available water and required water is filled up by the underground water. There are 1 lakh 50 thousand submersible in the city as per the official information. But the actual position is something else and almost every household except very low income class and economically weaker section people have submersibles or boring. And the total numbers of submersible are more than 2.5 lakh instead of 1.50 lakh (as informed by Jal Nigam). Water consumption in Kanpur metropolis as per another Dainik Jagran report shows that 190 litre water gets wasted by dripping in households per week, 90 litre water runs of during brushing, per person 95 litre water is used for clothe washing, 60 litre of water is washed out in once by family of 4 person. Report shows that there are 20000 water purifiers in households of Kanpur Metropolis. All the households other than people belonging to very low income class and economically weaker section have purifier due to deteriorating water quality in the city and 90 litre of water is wasted during the purification of 30 litre of water. In summers water consumption increases many folds and even in households water is consumed more than double. As per the same Dainik Jagran report there are approximately 2 lakh coolers which consume 3 crore litre water in summers. As per another media report (given by Jal Nigam) more than

forty crore litre of underground water is being drawn out every day, which every year leads to a drop in its level by 45 cm. Immeasurable water has been exploited in the city on a regular basis which is actually responsible for the depletion of underground water level. If this unsystematic use of water soon does not fall under a system, scarcity of water is not a farfetched dream. There are legal provisions for the controlled extraction of underground water. According to underground water management department, Rain Water harvesting system is mandatory if 0.5 horse power on pump sets are used for extraction of underground water. If underground water is extracted without taking the official permission, the provision of penalty is also there like first time 5000/- would be fined and the second time, with six months imprisonment, 10000/- penalty would be charged. But we have not found genuine practices to control over use of water in the study area. The position presented by reports of various agencies is only on the basis of estimate but actual consumption and disposal of water is very far away from the estimation of aforesaid agencies. The data collected by researcher is based on door to door survey is more reliable to formulate planning and to estimate disposal problems recorded. We have also observed a wide range of uses which is not recorded till date and not regular also like leakage, washing vehicles, terrace washing etc. but these activities use water in large quantities. Hence there is big difference noticed in observations given by other agencies and researcher's, related to water consumption per person per day in Kanpur. Other than over use, underground water is also getting polluted by reverse drain system and sewage tanks of Bibipur, Nauriya Khera, Panki, Jajmau, Sharda Nagar, Geeta Nagar, Rawatpur village, Damoder Nagar, Pashupati Nagar.

In this sub-section it is tried to analysis total waste disposal from households during daily usage. Water disposal varies greatly from zone to zone and also from one socio-economic class to another socio-economic class. Keeping in view this phenomenon present section is divided into two sub-heads as given below:

6.1.1 Spatial Distribution of Domestic Effluent :

Water consumption is increasing relentlessly. Increase in population, fragmentation of families, desire of better living standard, changing lifestyle and above all socio-economic conditions are changing water consumption pattern

especially in urban areas. It has been recorded that almost 400 L water is required per person per day. Water consumption by individual in various activities consumed every day by different income groups in all the zones is not studied till date. Fig No 6.1 represents per person per day water consumption pattern in various activities performed daily in every household in the six administrative zones of the city. Water usage in kitchen, bathroom and toilet is observed per person but water usage in House cleaning, Clothe washing, leakage and others are divided as per house hold size since it is combined activity of the families. It has been observed from Table No. 6.1 that per person per day water consumption in kitchen varies between 32 L to 50 L, in bathroom it ranges between 67 L to 84 L, in toilet it ranges between 25 L to 43 L, in House cleaning it varies between 30 L to 48 L, in clothe washing consumption is between 35 L to 53 L, Leakage ranges from 10 L to 13 L and others usage is 129 L to 147 L. Total per person per day consumption ranges between 328 Litre to 436 Litre.

**Table No. 6.1
Zone-wise Domestic Water Disposal Types**

Types of Disposal	Per Person Per Day Disposal Amount of Water in L					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Kitchen	42	32	35	45	50	33
Bathroom	76	67	69	79	84	67
Toilet	35	25	28	38	43	26
House Cleaning	40	30	33	43	48	31
Clothe washing	45	35	38	48	53	36
Leakage	12	10	12	13	11	10
Others	139	129	132	142	147	130
Total Disposal	389	328	347	408	436	333

Unlike domestic waste and kitchen waste disposal, water consumption and disposal depends on the type of area, level of underground water and drainage

facility in the area. We have observed that high income class people having all the facilities are expected to dispose more water but if living in areas of poor drainage do not freely dispose water to avoid water logging. Many areas in Kanpur do not have drain facility at all or have clogged drains. This is commonly seen in areas of zone 2, zone 3 and zone 6. Areas in zone 1 and zone 4 are with the best in civic amenities followed by facilities available in zone 5. Specially extended and developing colonies are deprived of basic civic amenities. It is evident from the Table No 6.2 that Zone 4 and Zone 5 residents consume maximum water accompanied by consumption of zone 1 inhabitants. But zone 2, zone 3 and zone 6 people consume less water as shown in Fig No 6.2 A. Category of 'others' usage is observed as maximum although the type of usage and varieties are irregular and different. Per person per day water consumption and usage are 436 L by the people in zone 5, which is maximum and 328 L in zone 2, which is minimum. Average per person per day water consumption and disposal in the city is 373.5 L To analyze spatial water consumption and disposal pattern of Kanpur Metropolis on the basis of quantity three categories of spatial pattern are identified We have divided the consumption in three levels such as High water consumption (more than 400 L) level, Moderate water consumption (between 400 L to 340 L) level and Low water consumption and disposal (less than 340 L) level.

6.1.1.1 High Disposal Level :

High level of water consumption and disposal is observed in zone 4 and zone 5 which is more than the 400 L. On an average people in zone 4 use 436 L of water per day and 408 L of water in zone 5. Exclusively very high class people use maximum water and consumption decreases class wise with descending income of the families in all the zones.

6.1.1.2 Moderate Disposal Level :

According to consumption and disposal pattern zone 1 and zone 3 is kept under moderate level of water consumption and disposal where on an average people of zone 1 consume 391 L of water and per person per day 347 L of water in zone 3. Fall in consumption level is observed from exclusive high income to economical weaker section in zone 1 and zone 3 also.

Table No.6.2
Zone-wise Water Disposal by Socio-economic Groups

Socio-economic Groups	Per Person Per Day Disposal Amount in L					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Exclusively High Income Class	713.93	606.48	637.98	746.83	800.38	612.95
Very High Income Class	633.92	540.96	568.75	662.55	707.70	543.48
High Income Class	535.22	442.68	468.65	549.50	585.55	436.20
Moderate Income Class	422.45	351.47	374.92	444.91	474.67	341.39
Low Income Class	303.03	251.37	269.22	319.62	339.57	339.61
Very Low Income Class	091.70	075.95	080.43	096.53	104.58	077.21
Economically Weaker Section	033.95	027.09	029.03	036.05	039.55	027.65
Total	2734.20	2296.00	2428.98	2855.99	3052.00	2278.00
Average	390.60	328.00	346.99	407.99	436.00	339.78

6.1.1.3 Low Disposal Level :

Water consumption and disposal is lower than the zone1, zone 3, zone 4 & zone 5, in zone 2 and 6 where, on an average per person per day consumption is 340 L in zone 6 and 328 L in zone2. Descending consumption is observed in these zones also from exclusively high income to economically weaker section.

6.1.2 Water Consumption and Disposal by Socio-economic Classes :

It has been observed that water consumption and disposal not only depends on type of source available like supply of water by Jal Nigam or underground water, boring and also on drainage facility in houses but socio-economic status is also observed as a major factor because modern amenities in bathroom and kitchen are available as per the income of the families. Use of showers, bathtub, washing machine, water purifiers, coolers are the double hit on water consumption and electricity consumption. Table No. 6.2 show the consumption and disposal of water with per person per day consumption in all the zones by social classes represented in

Fig No 6.1 B. People belonging to the Economically Weaker Section of Kanpur Metropolis, who earn less than rupees four thousand or less in a month for their livelihood; such people are largely slum dwellers or living scattered under plastic shack-shelters in different pockets around the city. Their occupations vary from rag pickers to rickshaw pullers. Some work in roadside food joints as cleaners and servers, others, chiefly women work in homes in their vicinity. Petty scrap dealing is a common sight in the city. Miserably conditioned dwellers, who burn the candle's end for one square meal, for wasting water from the kitchen when there is no kitchen are not at all responsible where the danger of being evacuated indiscriminately, lurches round the corner of their lives from sunrise to sunset under temporary shelters. On scrutinizing the lifestyle of the people who earn between rupees five and ten thousand, living in congested homes erected on fifty square yards or even less, it was found that they were better off than most slum dwellers. They were found privileged with rented homes to live in. Though small yet secure. The people of such a group in Kanpur are found to have settled everywhere, and the major reason being, the merchandise of Kanpur. The city has markets in plenty and plenty sounds a word too small for the number of markets that we find here. Where there is a market, a settlement or a narrow-lane colony is to be found, teeming with people of the very low income class. Such dwellers are food vendors, shoe menders, open-air hair dressers. The categories of economically weaker section and the very low income class were found to be hardly responsible for water wastage. Water consumption is more in high income families living in bungalows, big houses or their own house. Water consumption and disposal by these socio-economic classes are described as under:

6.1.2.1 Disposal by Exclusively High Income Class (Group A) :

Highest consumption is observed in exclusively very high income class families in all the zones of the city. The consumption of water ranges from 600 L to 800 L per person per day. It is generally due to dependence on others for routine work like maids and servants.

6.1.2.2 Disposal by Very High Income Class (Group B) :

People belongs to very high income group consume more water and dispose more than the other income class. The consumption ranges between 340 L to 707 L per person per day.

6.1.2.3 Disposal by High Income Class (Group C) :

The daily water consumption decreases and the consumption and disposal by the people of high income class is observed between 443 L to 586 L per day in all administrative zones of the city.

6.1.2.4 Disposal by Moderate Income Class (Group D) :

People of moderate income generally take care of their monthly income, so judiciously restrict their expenditure on electricity and water bills therefore they consume relatively less water than the high, very high income group. Per person per day consumption is observed between 351 L to 475 L.

6.1.2.5 Disposal by Low Income Class (Group E) :

Like moderate income Group, people of low income Group also monitor their consumption so their water consumption is not so much and it is observed between 250 L to 350 L day by an individual.

6.1.2.6 Disposal by Very Low Income Class (Group F) :

We observed a sudden fall in consumption and disposal of water by very low income class and water consumption and disposal is observed fluctuating between 75.95 L to 104.58 L in the city. The reason of reducing consumption and disposal is due to the dependence on public water resources they do not have source of water at their homes. The water consumption by very low income is observed as reduced to one third (91.7 L) in comparison to low income class (303.031).

6.1.2.7 Disposal by Economically Weaker Section (Group G) :

Lowest water consumption is recorded in economically weaker section. The consumption decreases to one third further and becomes 33.95 L from 91.70 L and the consumption of water ranges from 27.09 L to 39.55 L by this income class.

6.1.3 Zone-wise Domestic Water Waste Disposal :

Waste water disposal vary greatly not only from our area to other but also from one house to other because a variety of sanitary fittings are available to dispose water. The new and variety of bathroom accessories and kitchen gadgets are now available in market on the name of comfort and health. There are some taps available in market, which work on touch sense. Such taps are supposed to stop working itself when someone forgets to put off. But it disposes more water than requirement because most of the times we need very little water like for washing our hands, face etc. Similarly the use of purifier in kitchen to make water potable three times more water is consumed as we discussed earlier. To study the water consumption & disposal pattern of whole city random sampling was done in all six zones covering different income groups on the basis of seven Socio-economic class of our study. It is noticed that all the zones are swelling in size and there is proliferation of urban areas in rural areas. As in case of solid waste and kitchen waste, water usage also depends on income of the family. It is observed that high income class people are more consumptive and consumption decreases with the decrease in income and very less in case of very low income class and economically weaker section. In our study spatial analysis of total consumption and disposal of water per person per month and per day by all Socio-economic classes in six zones has been analyzed.

6.1.3.1 Water Consumption and Disposal in Zone One :

As discussed in previous chapter, the areas of zone one are the very well established business centers and the best civic amenities are also available in these areas. Total population of the zone is 415038 in 18 wards. People of zone one belong to rich class but the water consumption and disposal depend upon the drainage facility available and the type of water resource. And we find that the areas are very well served by city water supply which is available in scheduled time. Hence we observe moderate water consumption and disposal in zone 1. Water consumption per person per day and per person per month in various daily activities like Kitchen, bathroom, toilet, House cleaning, cloth washing etc. by people of various income groups in zone one and the comparative consumption and disposal

by various social groups in all the six zones are shown in Fig No 6.3 A. Water consumption and disposal also varies from place to place and time to time. Table No. 6.3 indicates that water consumption exclusively high income class is 713.93 L per person per day which is recorded as maximum whereas minimum water consumption and disposal of 33.95 L is observed in case of economically weaker section. Hence we see that high income class people dispose more water and the consumption and disposal decreases gradually with decrease in income. Per person per day disposal by exclusively high income class is recorded as maximum in kitchen (64.68 L), bathroom (133 L), house cleaning (98 L), cloth washing (75.6 L) and in others (291.9 L) while water usage in toilet remains same (46.55 L) from exclusively high income class to low income class and then decrease in very low income class and economically weaker section. We observed a gradual decrease in consumption and disposal of water with decrease in monthly income from exclusively high income class to economically weaker section in kitchen, bathroom, toilet, house cleaning, clothe washing and others. But in case of leakage exclusively high income class show less (4.2 L) disposal of water and the leakage disposal increases with decrease in income of social classes due to usage of low quality sanitary wares. Therefore maximum leakage is recorded by low income class (27.3 L). Leakage includes dripping of taps. Other than very low income class and economically weaker section families, leakage is observed in almost all the households from exclusively high income class (4.2 L) to low income class (25.2 L). Out of all the usages on daily basis 'others' consumption is found from exclusively high income class (291.9 L) to very low income class (19.46 L). But in case of economically weaker section we have observed that they are not responsible for 'others' usage. It is important to mention that consumption and disposal of water is observed lowest by economically weaker section. Lowest water disposal is observed in zone two by all the socio economic classes in comparison to people of other zones due to poor civic facilities.

**Table No. 6.3
Water Consumption and Disposal in Zone 1**

Socio-economic Groups		Per Person Per Month and Per Day Disposal Amount in L							
		Kitchen	Bathroom	Toilet	House cleaning	Clothe washing	Leakage	Others	Total
A	M	1940.40	3990.00	1396.50	2940.00	2268.00	0126.0	8757.00	21417.90
	D	0064.68	0133.00	0046.55	0098.00	0075.60	0004.2	0291.90	00713.93
B	M	1852.20	3511.20	1396.50	1848.00	1984.50	0252.0	8173.20	19017.60
	D	0061.74	0117.04	0046.55	0061.60	0066.15	0008.4	0272.44	00633.92
C	M	1675.80	2872.80	1396.50	1848.00	1795.50	0630.0	5838.00	16056.60
	D	0055.86	0095.76	0046.55	0061.60	0059.85	0021.0	0194.60	00535.22
D	M	1587.60	2553.60	1396.50	1176.00	1701.00	0756.0	3502.80	12673.50
	D	0052.92	0085.12	0046.55	0039.20	0056.70	0025.2	0116.76	00422.45
E	M	0882.00	1915.20	1396.50	0672.00	1134.00	0756.0	2335.20	09090.90
	D	0029.40	0063.84	0046.55	0022.40	0037.80	0025.2	0077.84	00303.03
F	M	0529.20	0798.00	0294.00	0168.00	0378.00	-	0583.80	02751.00
	D	0017.64	0026.60	0009.80	0005.60	0012.60	-	0019.46	00091.70
G	M	0352.80	0319.20	0073.50	0084.00	0189.00	-	-	01018.50
	D	0011.76	0010.64	0002.45	0002.80	0006.30	-	-	00033.95
Total	M	882	15960	7350	8400	9450	2520.0	29190	73752.00
	D	29.40	532.00	245.00	280.00	315.00	84.0	973.00	02458.40

6.1.3.2 Water Consumption and Disposal in Zone Two :

Areas of zone two like Shyam Nagar, Gandhi Gram, Chakeri, Jajmau, Sanigwan etc. are under developmental process. The total population of the zone is 431821 in 18 wards. Sewerage system is not available in most of the areas and the living of people is miserable due to unavailability of sewerage system or choked one if available in the areas of zone two. Although water disposal is least by the people but because of High population over all disposal is two high which result in standing water in and around houses. Water consumption and disposal per person per day and per month in various daily activities by the people of various income classes are presented in Table No. 6.4 where total water consumption and disposal by exclusively high income class is recorded maximum (606.48 L) while minimum (27.09 L) is recorded by economically weaker section. The comparative disposal in

various activities of all social classes is evident from Fig No 6.3B. High level disposal by high income class is noticed in zone two also which decreases with decreasing income where per person day disposal is found maximum by exclusively high income class in kitchen (49.28 L), bathroom (117.25 L), house cleaning (73.5 L), clothe washing (58.8 L) and others (270.9 L) whereas water usage in toilet remains same (33.25 L) in zone two also from exclusively high income class to low income class and decrease to 7 L in case of very low income class and 1.75 L in case of economically weaker section. We observed that water disposal in leakage by very low income class people and economically weaker section is not found in zone two also but water disposal in others category is not reported by economically weaker section which is disposed maximum by exclusively high income class (270.9 L) and the decreasing consumption is observed till very low income class (72.24 L).

Table No. 6.4
Water Consumption and Disposal in Zone 2

Socio-economic Groups		Per Person Per Month and Per Day Disposal Amount in L							
		Kitchen	Bathroom	Toilet	House cleaning	Clothe washing	Leakage	Others	Total
A	M	1940.40	3990.00	1396.50	2940.00	2268.00	126.0	8757.00	21417.90
	D	0049.28	0017.25	0033.25	0073.50	0058.80	003.5	0270.90	00606.48
B	M	1852.20	3511.20	1396.50	1848.00	1984.50	252.0	8173.20	19017.60
	D	0047.04	0103.18	0033.25	0046.20	0051.45	007.0	0252.84	00540.96
C	M	1675.80	2872.80	1396.50	1848.00	1795.50	630.0	5838.00	16056.60
	D	0042.56	0084.42	0033.25	0037.80	0046.55	017.5	0180.60	00442.68
D	M	1587.60	2553.60	1396.50	1176.00	1701.00	756.0	3502.80	12673.50
	D	0040.32	0075.04	0033.25	0029.40	0044.10	021.0	0108.36	00351.47
E	M	0882.00	1915.20	1396.50	0672.00	1134.00	756.0	2335.20	09090.90
	D	0022.40	0056.28	0033.25	0016.80	0029.40	021.0	0072.24	00251.37
F	M	0529.20	0798.00	0294.00	0168.00	0378.00	-	0583.80	02751.00
	D	0013.44	0023.45	0007.00	0004.20	0009.80	-	0018.06	00075.95
G	M	0352.80	0319.20	0073.50	0084.00	0189.00	-	-	01018.50
	D	0008.96	009.38	0001.75	0002.10	0004.90	-	-	00027.09
Total	M	882	15960	7350	8400	9450	2520	29190	73752
	D	224	469	175	210	245	70	903	2296

Total consumption and disposal of water is reported maximum in exclusively high income class (606.48 L) and minimum in economically weaker section (27.09 L) and found decreasing gradually with decrease in income from exclusively high income class to economically weaker section.

6.1.3.3 Water Consumption and Disposal in Zone Three :

The areas in zone three are still in the developmental process and the areas are extending now in the interiors towards rural areas but the noticeable difference from zone two is that the facilities like sewerage systems are better than zone two areas. Zone three is positioned between zone two and zone five and is bordered by river Pandu in the south. The total population of zone three is 425401 in 18 wards. Some important places of this zone is Transport nagar, Kidwai nagar, Juhi, Barra, Naubasta west, Vasant Vihar etc. Monthly water consumption by various socio economic classes in kitchen, bathroom, toilet, house cleaning, cloth washing etc with daily consumption is presented in the Table No 6.5.

The comparative consumption by various social classes is represented in Fig No 6.3 C. We have observed that total water consumption and disposal by exclusively high income class is maximum (637.98 L), while by economically weaker section is minimum (29.05 L). High level disposal by high income class is noticed in zone three also which decreases with decreasing income where per person day disposal is found maximum by exclusively high income class in kitchen (53.9 L), bathroom (120.75 L), house cleaning (80.85 L), clothe washing (63.84 L) and others (277.2 L) whereas water usage in toilet remains same (37.24 L) in zone three also from exclusively high income class to low income class and decrease to 7.84 L in case of very low income class and 1.96 L in case of economically weaker section. We observed that water disposal in leakage by very low income class people and economically weaker section is not found in zone three also while water disposal in others category is not reported by economically weaker section which is disposed maximum (277 L) by exclusively high income class and the decreasing consumption is observed till very low income class (73.92 L). Total consumption and disposal of water is reported maximum in exclusively high income class (637 L) and minimum in economically weaker section (29.05 L) and found decreasing gradually with

decrease in income from exclusively high income class to economically weaker section.

**Table No. 6.5
Water Consumption and Disposal in Zone 3**

Socio-economic Groups		Per Person Per Month and Per Day Disposal Amount in L							
		Kitchen	Bathroom	Toilet	House cleaning	Clothe washing	Leakage	Others	Total
A	M	1617.00	3622.50	1117.20	2425.50	1915.20	126.0	8316.00	19139.40
	D	0053.90	0120.75	0037.24	0080.85	0063.84	004.2	0277.20	00637.98
B	M	1543.50	3187.80	1117.20	1524.60	1675.80	252.0	7761.60	17062.50
	D	0051.45	0106.26	0037.24	0050.82	0055.86	008.4	0258.72	00568.75
C	M	1396.50	2608.20	1117.20	1247.40	1516.20	630.0	5544.00	14059.50
	D	0046.55	0086.94	0037.24	0041.58	0050.54	021.0	0184.80	00468.65
D	M	1323.00	2318.40	1117.20	0970.20	1436.40	756.0	3326.40	11247.60
	D	0044.10	0077.28	0037.24	0032.34	0047.88	025.2	0110.88	00374.92
E	M	0735.00	1738.80	1117.20	0554.40	0957.60	756.0	2217.60	8076.60
	D	0024.50	0057.96	0037.24	0018.48	0031.92	025.2	0073.92	00269.22
F	M	0441.00	0724.50	0235.20	0138.60	0319.20	-	0554.40	02412.90
	D	0014.70	0024.15	0007.84	0004.62	0010.64	-	0018.48	00080.43
G	M	0294.00	0289.80	0058.80	0069.30	0159.60	-	-	00871.50
	D	0009.80	0009.66	0001.96	0002.31	0005.32	-	-	00029.05
Total	M	7350.00	14490.00	5880.00	6930.00	7980.00	2520.00	27720.0	72870.00
	D	0245.00	0483.00	0196.00	0231.00	0266.00	0084.00	0924.00	02429.00

6.1.3.4 Water Consumption and Disposal in Zone Four :

Zone four is also one of the densely populated zones which lie adjacent to zone one with total population of 390203 in 18 wards. Important areas of zone four includes Purana Kanpur, Gwaltoli, Khalasi line, Parmat, Benajhabar, Ashok nagar, Tilak nagar, Nehru nagar, Bekanjanj, Kaushalpuri, Lajpat nagar etc. People in this zone dispose high quantity of waste. Like zone one the areas of zone four are also well developed with some very posh areas and best civic amenities provided by city

administration. Even the rural environment of the zone enjoys best civic facilities of zone four. The Table No 6.6 also reflects daily and monthly water consumption by various socio economic groups in kitchen, bathroom, toilet, house cleaning, cloth washing etc. and comparative consumption is evident from Fig No 6.3D. Water consumption exclusively high income class is 746.83 L per person per day which is recorded as maximum whereas minimum water consumption and disposal of 36.05 L is observed in case of economically weaker section. Hence we see that high income class people dispose more water and the consumption and disposal decreases gradually with decrease in income. Per person per day disposal by exclusively high income class is recorded as maximum in kitchen (69.3 L), bathroom (138.25 L), house cleaning (105.35 L), clothe washing (80.64 L) and in others (298.2 L) while water usage in toilet remains same (50.54 L) from exclusively high income class to low income class and then decrease in very low income class (10.64 L) and economically weaker section (2.66 L). We observed a gradual decrease in consumption and disposal of water with decrease in monthly income from exclusively high income class to economically weaker section in kitchen, bathroom, toilet, house cleaning, clothe washing and others. But in case of leakage exclusively high income class show less (4.55 L) disposal of water and the leakage disposal increases with decrease in income of social classes due to usage of low quality sanitary wares. Therefore maximum leakage is recorded by low income class (27.3 L). Leakage includes dripping of taps. Other than very low income class and economically weaker section families, leakage is observed in almost all the households from exclusively high income class to low income class. Out of all the usages on daily basis 'others' consumption is observed from exclusively high income class (298.2 L) to very low income class (19.88 L). But in case of economically weaker section we have observed that they are not responsible for 'others' usage. It is important to mention that consumption and disposal of water is observed lowest by economically weaker section.

**Table No. 6.6
Water Consumption and Disposal in Zone 4**

Socio-economic Groups		Per Person Per Month and Per Day Disposal Amount in L							
		Kitchen	Bathroom	Toilet	House cleaning	Clothe washing	Leakage	Others	Total
A	M	2079.00	4147.50	1516.20	3160.50	2419.20	136.50	8946.00	22404.90
	D	0069.30	0138.25	0050.54	0105.35	0080.64	4.55	0298.20	00746.83
B	M	1984.50	3649.80	1516.20	1986.60	2116.80	273.00	8349.60	19876.50
	D	0066.15	0121.66	0050.54	0066.22	0070.56	9.10	0278.32	00662.55
C	M	1795.50	2986.20	1516.20	1625.40	1915.20	682.50	5964.00	16485.00
	D	0059.85	0099.54	0050.54	0054.18	0063.84	22.75	0198.80	00549.50
D	M	1701.00	2654.40	1516.20	1264.20	1814.25	819.00	3578.40	13347.45
	D	0056.70	0088.48	0050.54	0042.14	0060.47	27.30	0119.28	00444.91
E	M	0945.00	1990.80	1516.20	0722.40	1209.60	819.00	2385.60	09588.60
	D	0031.50	0066.36	0050.54	0024.08	0040.32	27.30	0079.52	00319.62
F	M	0567.00	0829.50	0319.20	0180.60	0403.20	-	0596.40	02895.90
	D	0018.90	0027.65	0010.64	0006.02	0013.44	-	0019.88	00096.53
G	M	0378.00	00331.80	0079.80	0090.30	0201.60	-	-	01081.50
	D	0012.60	0011.06	0002.66	0003.01	0006.72	-	-	00036.05
Total	M	9450.00	16590.00	7980.00	9030.00	10080.00	2730.00	29820.0	85680.00
	D	0315.00	0553.00	0266.00	0301.00	0336.00	0091.00	0994.00	02856.00

6.1.3.5 Water Consumption and Disposal in Zone Five :

Zone five lies in the south west part of the Kanpur metropolis bordered by river Pandu in the southern boundary. In zone five, there are 19 wards with a total population of 450373. Some important areas of zone five include Govind Nagar, Vijay Nagar, Panki, Ratanlal Nagar, Barra, Kakadev Sarojini Nagar etc. The areas of this zone are developing fast due to upcoming educational institutes and number of industrial setups. The Table No 6.7 reflects monthly and daily water consumption by various socio economic groups in kitchen, bathroom, toilet, house cleaning, clothe

washing etc Fig No 6.3E indicates comparative consumption and disposal of water by various social classes. Maximum disposal of water is observed in zone five areas because many areas have developed over the last few years in a planned, systematic manner under the supervision of Kanpur Nagar Nigam and Kanpur Development Authority where people have civic amenities also along with their own arrangement of water, proper drainage facility, roads and planned residential areas. But the water consumption and disposal pattern is observed same as in zone one, zone two, zone three and zone four. Total water consumption and disposal is observed maximum (800.38 L) by exclusively high income class while minimum (39.55 L) by economically weaker section. The total consumption and disposal from exclusively high class to economically weaker section, in zone five is comparatively high from consumption and disposal in other zones. We have also observed the gradual decrease in consumption and disposal with decrease in monthly income. The per person per day consumption and disposal by exclusively high income class in is 77 L, in bathroom is 147 L, in house cleaning is 117.60 L, in clothe washing is 89.04 L. Usage of water in toilet remains same (57.19 L) from exclusively high income class to low income class but reduces a lot in case of very low income class (12.04 L) and economically weaker section (3.01 L). Leakage is restricted and found very less in exclusively high income class (3.85 L) while leakage increases due to use of low quality sanitary wares and found maximum (23.1 L) by low income class. But it is not found in case of very low income class and economically weaker section. Water consumption and disposal in other usage is observed maximum (308.7 L) by exclusively high income class while minimum (20.58 L) by very low income class whereas it is not noticed in case of economically weaker section. Hence we found that exclusively high income class dispose maximum water and economically weaker section dispose minimum water.

Table No. 6.7
Water Consumption and Disposal in Zone 5

Socio-economic Groups		Per Person Per Month and Per Day Disposal Amount in L							
		Kitchen	Bathroom	Toilet	House cleaning	Clothe washing	Leakage	Others	Total
A	M	2310.00	4410.00	1715.70	3528.00	2671.20	0115.50	9261.00	24011.40
	D	0077.00	0147.00	0057.19	0117.60	0089.04	0003.85	0308.70	00800.38
B	M	2205.00	3880.80	1715.70	2217.60	2337.30	0231.00	8643.60	21231.00
	D	0073.50	0129.36	0057.19	0073.92	0077.91	0007.70	0288.12	00707.70
C	M	1995.00	3175.20	1715.70	1814.40	2114.70	0577.50	6174.00	17566.50
	D	0066.50	0105.84	0057.19	0060.48	0070.49	0019.25	0205.80	00585.55
D	M	1890.00	2822.40	1715.70	1411.20	2003.40	0693.00	3704.40	14240.10
	D	0063.00	0094.08	0057.19	0047.04	0066.78	0023.10	0123.48	00474.67
E	M	1050.00	2116.80	1715.70	0806.40	1335.60	0693.00	2469.60	10187.10
	D	0035.00	0070.56	0057.19	0026.88	0044.52	0023.10	0082.32	00339.57
F	M	0630.00	0882.00	0361.20	0201.60	0445.20	-	0617.40	03137.40
	D	0021.00	0029.40	0012.04	0006.72	0014.84	-	0020.58	00104.58
G	M	0420.00	0352.80	0090.30	0100.80	0222.60	-	-	01186.50
	D	0014.00	0011.76	0003.01	0003.36	0007.42	-	-	00039.55
Total	M	10500.0	17640.0	9030.00	10080.0	11130.0	2310.00	30870.0	91560.0
	D	0350.00	0588.00	0301.00	0336.00	0371.00	0077.00	1029.00	3052.00

6.1.3.6 Water Consumption and Disposal in Zone Six :

The area of zone six shows variation in development. Some areas are very well developed like Swaroop Nagar, Arya Nagar, Tilak Nagar where as some areas are still with rural impact and undergoing development. Some areas are very old so inefficient in carrying the load of present population & its life style. The western most part of Kanpur metropolis comprises zone 6. It consists of 19 wards with a total of 436499 inhabitants. Some important areas of zone 6 are Kalyanpur, Rawatpur, Tilak nagar, Nawabganj, Vishnu puri, Khyora, Vikas nagar, Geeta nagar,

Naramau, etc. The Table No. 6.8 represents per person per month and per person per day water consumption and disposal by various socio economic groups in kitchen, bathroom, toilet, house cleaning, clothe washing etc Fig. No 6.3F show group wise consumption pattern in all the zones. Low disposal of water is observed in zone six because some areas are still with rural impact although some posh areas have also developed and many areas are undergoing development in a planned, systematic manner under the supervision of Kanpur Nagar Nigam and Kanpur Development Authority. But the water consumption and disposal pattern Observed is same as in other zones. Total water consumption and disposal is observed maximum (612.95 L) by exclusively high income class while minimum (27.65 L) by economically weaker section. The per person per day consumption and disposal by exclusively high income class in is 50.82 L, in bathroom is 117 L, in house cleaning is 75.95 L, in clothe washing is 60.48 L. Usage of water in toilet remains same (34.58 L) from exclusively high income class to low income class but reduces a lot in case of very low income class (7.28 L) and economically weaker section (1.82 L). Leakage is restricted and found very less in exclusively high income class (0.87 L) while leakage increases due to use of low quality sanitary wares and found maximum (5.25 L) by low income class. But it is not found in case of very low income class and economically weaker section. Water consumption and disposal in other usage is observed maximum (273 L) by exclusively high income class while minimum (18.2 L) by very low income class whereas it is not noticed in case of economically weaker section. Hence we found that exclusively high income class dispose maximum water and economically weaker section dispose minimum water. The reason of comparatively less water consumption and disposal in zone six than in zone four, zone five zone one and zone three is the prevailing mixed culture of very rich and rural people.

Table No. 6.8
Water Consumption and Disposal in Zone 6

Socio-economic Groups		Per Person Per Month and Per Day Disposal Amount in L							
		Kitchen	Bathroom	Toilet	House cleaning	Clothe washing	Leakage	others	Total
A	M	1524.60	3517.50	1037.40	2278.50	1814.40	026.25	8190.00	18388.65
	D	0050.82	0117.25	0034.58	0075.95	0060.48	000.87	0273.00	00612.95
B	M	1455.30	3095.40	1037.40	1432.20	1587.60	052.50	7644.00	16304.40
	D	0048.51	0103.18	0034.58	0047.74	0052.92	001.75	0254.80	00543.48
C	M	1316.70	2532.60	1037.40	1171.80	1436.40	131.25	5460.00	13086.15
	D	0043.89	0084.42	0034.58	0039.06	0047.88	004.37	0182.00	00436.20
D	M	1247.40	2251.20	1037.40	0911.40	1360.80	157.50	3276.00	10241.70
	D	0041.58	0075.04	0034.58	0030.38	0045.36	005.25	0109.20	00341.39
E	M	0693.00	1688.40	1037.40	0520.80	0907.20	157.50	2184.00	07188.30
	D	0023.10	0056.28	0034.58	0017.36	0030.24	005.25	0072.80	00239.61
F	M	0415.80	0703.50	0218.40	0130.20	0302.40	-	0546.00	02316.30
	D	0013.86	0023.45	0007.28	0004.34	0010.08	-	0018.20	00077.21
G	M	0277.20	0281.40	0054.60	0065.10	0151.20	-	-	00829.50
	D	0009.24	0009.38	0001.82	0002.17	0005.04	-	-	00027.65
Total	M	6930.00	14070.00	5460.00	6510.00	7560.00	525.00	27300.0	68355.0
	D	0231.00	0469.00	0182.00	0217.00	0252.00	017.50	0910.00	02278.50

6.2 Water Consumption and Disposal in Kitchen :

Water consumption and Disposal in kitchen is on daily basis such as drinking, washing utensils, cleaning are the major activities in every household. Like other observations, consumption of water in kitchen by high income groups are maximum and reduces with descending income also. Very low income class people and economically weaker section either live in rented, temporary houses or roadside dwellers. This category depends on hand pumps of the roadside or in the gullies. Exclusively very high class people consume maximum water in all zones due to their lifestyle and high per capita income in comparison to other classes. Table No 6.9 shows per person per day water consumption pattern in all the zones by different

socio-economic classes. Water consumption and disposal in kitchen is studied under two sub headings and discussed as below.

Table No. 6.9
Zone-wise Kitchen Water Disposal by Social Groups

Socio-economic Groups	Per Person Per Day Disposal Amount in L					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
A	64.68	49.28	53.90	69.30	77.00	50.82
B	61.74	47.04	51.45	66.15	73.50	48.51
C	55.86	42.56	46.55	59.85	66.50	43.89
D	52.92	40.32	44.10	56.70	63.00	41.58
E	29.40	22.40	24.50	31.50	35.00	23.10
F	17.64	13.44	14.70	18.90	21.00	13.86
G	11.76	08.96	09.80	12.60	14.00	09.24
Total	323.40	224.00	245.00	315.00	350.00	231.00
Average	46.20	32.00	35.00	45.00	50.00	33.00
Per Day Disposal	19174755	13818272	14889035	17559135	22518650	14404467

6.2.1 Spatial Analysis of Kitchen Water Consumption and Disposal :

Consumption in zone 1 and zone 4 is found to be high due to the civic amenities but consumption in zone 5 mainly depends on underground boring. And hence water resources are reliable. Drainage facility also is better in these areas. While consumption in the areas of zone 2, zone 3 and zone 6 is comparatively less. Average water consumption and disposal ranges between 32 L to 50 L per person per day. Table No 6.9 represents kitchen water consumption and disposal by all social classes in the zones. Spatial analysis of water consumption in kitchen is shown in Fig No 6.4 A. The consumption and disposal of water is classified under three sub sections such as high disposal level (more than 45 L), moderate disposal level (between 35 L to 45 L) and low disposal level (less than 34 L).

6.2.1.1 High Disposal Level :

The area of high consumption and disposal are observed in zone 1 and 5. Average per person per day consumption and disposal is recorded as 46.2 L in zone

1 and 50 L in zone 5 while total water consumption and disposal in zone 1 is 13799247 L and zone 5 is 31317800 L. Total water consumption of zone 5 is highest among all the zones.

6.2.1.2 Moderate Disposal Level :

Moderate consumption and disposal is observed in zone 3 and 4. Average per person per day consumption and disposal is 35 L in zone 3 and 45 L in zone 4 and total water consumption and disposal in zone 3 is 1166238 L and zone 5 is 12706924 L

6.2.1.3 Low Disposal Level :

Low consumption and disposal is observed in zone 2 and zone 6. Average per person per day consumption and disposal is 32 L in zone 2 and 33 L. In zone 6 and total water consumption and disposal in zone 2 is 18684928 L and zone 6 is 14068148 L. Because of high population in zone 6 total water consumption of zone 2 and zone 6 is more even when per person consumption is lowest.

6.2.2 Kitchen Water Consumption and Disposal by Socio-economic Classes :

Water consumption and disposal vary according to economic status of the families. Water consumption and disposal by people belonging to different Socio-economic classes in kitchen is summarised in Table No 6.9 and over all representation is shown in Fig No 6.4B. Exclusively high class people use maximum water in all the zones due to their life style and people income. Most of houses in Kanpur have water purifier that consumes 3 times more water in purification of water. From Exclusive high income class to moderate income class gradually decrease in disposal is observed but then consumption reducing to half is noticed by low income class. In case of very low income class the consumption further reduces to half of the low income classes and economically weaker section dispose lowest water. The reason for the decrease in consumption is the low budget due to low income and therefore they take precautions in consumption of water as well as electricity used for running motors and submersibles. People of very low income class and economically weaker section depend on the roadside source of water, hand pump. Since they do not have proper drain, they dispose very less water. Total water consumption and disposal by different socio economic classes in each zone in per person per day basis is analyzed as below:

6.2.2.1 Disposal by Exclusively High Income Class (Group A) :

People of Exclusively very high income class dispose more water where consumption of water ranges from 40 L to 77 L per person per day. Constant decrease is observed in consumption from exclusively high income class to economically weaker section.

6.2.2.2 Disposal by Very High Income Class (Group B) :

People of very high income class consume less water than exclusive high income class. Consumption of water in kitchen by high income class varies between 47 L to 73 L in zone 5 per person per day.

6.2.2.3 Disposal by High Income Class (Group C) :

Kitchen water disposal by high income class is observed to lower down further where consumption of water is noticed between 43 L to 67 L per person per day.

6.2.2.4 Disposal by Moderate Income Class (Group D) :

Consumption and disposal by moderate income class is observed less than even by high income class where consumption is found between 40 L to 63 L per person per day.

6.2.2.5 Disposal by Low Income Class (Group E) :

Sudden fall in consumption and disposal of water in kitchen is observed by low income class which is approximately half of the moderate class. The consumption ranges between 22 L to 35 L per person per day. The reason for decrease in consumption is due to their low income so they take care of the bills to be paid by them.

6.2.2.6 Disposal by Very Low Income Class (Group F) :

Consumption and disposal of kitchen water by very low income class reduces to half of even low income class. Consumption and disposal of water by very low class range between 13 L to 21 L per person per day.

6.2.2.7 Disposal by Economically Weaker Section (Group G) :

Lowest consumption and disposal is observed in economically weaker section where consumption ranges between 9 L to 14 L per person per day as they neither have convenient source of water nearby nor proper drains.

6.3 Disposal of Bathroom Water :

Bathroom water disposal in the different zones of the city is studied under seven different socio-economic classes. Broadly observed that exclusively high income class and very high income class consumes high volume of water in bathroom. Although they use advance and variety of sanitary wares in bathroom, which is supposed to dispose less water but frequent use and casual approach results in high consumption. Then high income class, moderate income class and low income class use comparatively less water but they also depend on many accessories compromising with the quality of sanitary wares and hence have high consumption. Whereas very low income class and economically weaker section consume water strictly as per their needs as they fetch water from outside. Disposal of Bathroom water is studied zone wise and socio-economic class wise and presented in Table No 6.10 which explains per person per day consumption by various socio-economic classes of six zones in Kanpur city. The disposal of Bathroom water is studied under two sub headings:

Table No. 6.10
Zone-wise Bathroom Water Usage and Disposal by Social Groups

Socio-economic Groups	Per Person Per Day Disposal Amount in L					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
A	133.00	117.25	120.75	138.25	147.00	117.25
B	117.04	103.18	106.26	121.66	129.36	103.18
C	095.76	084.42	086.94	099.54	105.84	084.42
D	085.12	075.04	077.28	088.48	094.08	075.04
E	063.84	056.28	057.96	066.36	070.56	056.28
F	026.60	023.45	024.15	027.65	029.40	023.45
G	010.64	009.38	009.66	011.06	11.76	009.38
Total	532.00	469.00	483.00	553.00	588.00	469.00
Average	76.00	67.00	69.00	79.00	84.00	67.00
Per Day Disposal	31542888	28932007	29352669	30826037	37831332	29245433

6.3.1 Spatial Analysis of Bathroom Water Consumption and Disposal :

Spatial analysis of Bathroom water consumption and disposal is shown in Table No 6.10. Zone wise consumption and disposal of water in Bathroom is represented in Fig No 6.5 A. Zone 5, as developing part of the city enjoy both the facility in the vicinity, supply water as well as underground boring. Hence water for consumption is available around the clock. People of zone 1 and 4 depend on supply water only with few or negligible boring whereas people of zone 2 and 3 areas depend on underground water mainly. And zone 6 area have mixed facilities like zone 5 but the basic difference between areas of zone 5 and 6 is that area of zone 5 is developing with civic amenities and have proper drain facilities whereas areas in zone 6 rural impact and many area are still devoid of development. Since disposal varies from place to place the consumption and disposal is divided in three disposal levels such as High disposal level (more than 76 L), Moderate disposal (between 65 L to 76 L) and Low disposal level (less than 69 L) as given below:

6.3.1.1 High Disposal Level :

High water consumption and disposal observed in zone 5 and zone 4 where per person per day disposal is found to be 84 L and 79 L respectively. And total water consumption and disposal is 52613904 L and 22307704 L in zone 5 and zone 4 respectively.

6.3.1.2 Moderate Disposal Level :

Moderate water consumption and disposal is found in zone 1 and 3 where per person per day water consumption and disposal is found to be 76 L & 69 L in zone 1 zone 4 respectively. And total consumption is zone 1 is 22700660 L and in zone 3 is 22991559 L.

6.3.1.3 Low Disposal Level :

Low water consumption & disposal is seen in zone 2 and 6 where per person per day disposal is 67 L and total consumption in zone 2 is 39121568 L and in zone 6 is 28562636 L.

6.3.2 Bathroom Water Disposal by Socio-economic Classes :

The study shows that high income classes are responsible for high consumption which decreases gradually with decreasing income. High income class people use more water in bathroom due to facilities they have in bathroom like

shower, bath tub, sensor taps etc. and so per person usage is more from exclusively high income class till moderate income class. Low income class people choose fewer luxuries in bathroom and take lot of care in usage of electricity. So that their bills do not exceed their budget but very low income class and economically weaker section people fetch water from roadside hand pumps and so dispose judiciously in all the zones they usually do not have their own source of water. Class wise consumption is shown in Fig No 6.5 B as indicated by Table No 6.10 and discussed below:

6.3.2.1 Disposal by Exclusively High Income Class (Group A) :

Exclusively very high income class people are found to dispose highest. Per person per day total water consumption by the people of this class range between 47 L to 147 L in all the zones of Kanpur Metropolis.

6.3.2.2 Disposal by Very High Income Class (Group B) :

In case of very high income class people decrease in disposal is observed. It has been noticed that minimum water consumption is 103 L in zone two and zone six and maximum water consumption is 129 L in zone 5.

6.3.2.3 Disposal by High Income Class (Group C) :

The difference in water consumption and disposal varies between 84 L to 105 L in high income class and then gradual decrease in disposal is noticed.

6.3.2.4 Disposal by Moderate Income Class (Group D) :

Consumption and disposal by In Moderate income class range between 75 L to 94 L. Decrease in disposal continues.

6.3.2.5 Disposal by Low Income Class (Group E) :

Disposal in Low income class reduces to half of moderate income class where the difference in water consumption and disposal is observed between 56 L to 70 L

6.3.2.6 Disposal by Very Low Income Class (Group F) :

Bathroom water disposal by very low income class reduces to half of the low income class disposal. The difference in water consumption and disposal varies between 23 L to 29 L

6.3.2.7 Disposal by Economically Weaker Section (Group G) :

In Economically Weaker Section, the difference in water consumption and disposal varies between 9 L to 12 L and recorded as the lowest consumption of all the classes.

6.4 Water Disposal from Toilet :

In all the zones, from exclusively high income class to low income class, water usage in toilet is almost equal due to flush system usage whereas in very low income class and economically weaker section it is not so and water consumption is very less. It is difficult to monitor the consumption as they use open space and take water from hand pumps outside their houses. The reason for difference in flush disposal in different zone is due to the facility of sewer connection although the flush size is same. The area that do not have sewer facility restrict disposal from flush but the areas better sewer line facility do not bother and disposed more. The disposal pattern is evident from Table No 6.11. Water disposal in toilet is studied in two sub headings as given below:

Table No. 6.11
Zone-wise Toilet Water Disposal by Social Groups

Socio-economic Groups	Per Person Per Day Disposal Amount in L					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
A	46.55	33.25	37.24	50.54	57.19	34.58
B	46.55	33.25	37.24	50.54	57.19	34.58
C	46.55	33.25	37.24	50.54	57.19	34.58
D	46.55	33.25	37.24	50.54	57.19	34.58
E	46.55	33.25	37.24	50.54	57.19	34.58
F	09.80	07.00	07.84	10.64	12.04	07.28
G	02.45	01.75	01.96	02.66	03.01	01.82
Total	245.00	175.00	196.00	266.00	301.00	182.00
Average	35.00	25.00	28.00	38.00	43.00	26.00
Per Day Disposal	14526330	10795525	11911228	14827714	19366039	11348974

6.4.1 Spatial Analysis of Toilet Water Disposal :

Spatial analysis of water disposal in Toilet is done analyzed and observed that total water usage per day in zone 5 is highest while lowest is observed in zone 3 areas. Fig No 6.6 A represents zone wise water disposal from Toilet by various socio-economic classes and total water consumption in six zones of the city represented in Table No 6.11. The average usage and disposal range between 25 L to 43 L per person per day. The toilet water disposal is categorized in three levels of disposal High level (more than 35 L), Moderate level (between 25 L to 35 L) and Low level (less than 25 L).

6.4.1.1 High Disposal Level :

High consumption is observed in zone 5 and zone 4 where average per person per day disposal in zone 4 is 38 L and 43 L in zone 5. Total water consumption and disposal in zone 5 is 26933308 L which is highest and 10730288 L consumption is found in zone 4.

6.4.1.2 Moderate Disposal Level :

Moderate water consumption and disposal is found zone 1 and zone 3 where average per person per day consumption is 35 L in zone 1 and 28 L in zone 3. Total water disposal in toilet by zone 3 people are 9329908 L and 10453975 L by the people of zone 1.

6.4.1.3 Low disposal Level :

Low water consumption and disposal in Toilet is observed in zone 2 and zone 6 where average per person per day consumption is 25 L in zone 2 and 26 L in zone 6. Total water disposal in zone 2 is 14597600 L while in zone 6 total water disposal is 11084008 L.

6.4.2 Water Disposal of Toilet by Socio-economic Classes :

People of all the zones from exclusive high income class to low income class dispose almost equal water in flushing accept very low income class and economically weaker section people who do not have their own toilets and depends on community toilet or open space. Fig No 6.6B indicates a detail view of water

disposal in toilet. Per person per day disposal in all the zones of the city by various socio-economic class is represented in Table No 6.11 and discussed below:

6.4.2.1 Disposal by Exclusively High Income Class (Group A) :

Water disposal in Toilet is found to be same from Exclusive very high income class to low income class. The usage depends on the number of times flush used. The disposal range between 33 L to 57 L

6.4.2.2 Disposal by Very High Income Class (Group B) :

Water disposal in Toilet is found to be same as by exclusively high income class. The usage depends on the number of times flush used. The disposal range between 33 L to 57 L

6.4.2.3 Disposal by High Income Class (Group C) :

Water disposal in Toilet is found to be same in low income class also. The usage depends on the number of times flush used. The disposal ranges between 33 L to 57 L.

6.4.2.4 Disposal by Moderate Income class (Group D) :

Water disposal in Toilet is found to be same from Exclusive very high income class to low income class. The usage depends on the number of times flush used. The disposal ranges between 33 L to 57 L.

6.4.2.5 Disposal by Low Income Class (Group E) :

Water disposal in Toilet is found to be same from Exclusive very high income class to low income class. The usage depends on the number of times flush used. The disposal ranges between 33 L to 57 L.

6.4.2.6 Disposal by Very Low Income Class (Group F) :

Low income class people are excluded from water disposal in Toilet. Meager amount of water is observed to be used which is found to range between 7 L to 12 L.

6.4.2.7 Disposal by Economically Weaker Section (Group G) :

As low income class, economically weaker section is also excluded from flush usage. The water used is even less than low income class people and found to range between 1.75 L to 3 L.

6.5 Water Disposal in House Cleaning :

House cleaning is also a daily activity practiced in houses and lot of water is used in cleaning of houses. Total water used in households is divided by five members as average house hold size is considered as 5. Mopping is common practice in houses but washing verandas, court yards and other open spaces is also done regularly. The usage depends on the size of the house, cleaning method and general habit of families along with availability of water use of water in house is maximum in high earning class and it decreases is decreasing income of various income groups selected for studied. Water consumption in house cleaning varies time to time, place to place and water usage ranges between 30 L to 48 L. Water disposal in house cleaning is studied zone wise as well as on the basis of economic conditions of the social classes and the analytical presentation of disposal is given in Table No 6.12 and discussed in two sub headings:

Table No. 6.12
Zone-wise Water Disposal in House Cleaning by Social Groups

Socio-economic Groups	Per Person Per Day Disposal Amount in L					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
A	98.00	73.50	80.85	105.35	117.6	75.95
B	61.60	46.20	50.82	66.22	73.92	47.74
C	61.60	37.80	41.58	54.18	60.48	39.06
D	39.20	29.40	32.34	42.14	47.04	30.38
E	22.40	16.80	18.48	24.08	26.88	17.36
F	05.60	04.20	04.62	06.02	06.72	04.34
G	02.80	02.10	02.31	03.01	03.36	02.17
Total	280.00	210.00	231.00	301.00	336.00	217.00
Average	40.00	30.00	33.00	43.00	48.00	31.00
Per Day Disposal	166015220	12954630	14038233	16778729	21617904	13531469

6.5.1 Spatial Analysis of House Cleaning Water Disposal :

The water used in mopping the house and washing the outer open spaces of the house like compound, verandah, porch etc. is categorized used in home cleaning.

It is evident from Fig No 6.7 A that disposal of water vary from place to place depending upon the need and the resource availability. The study shows that households of zone 4 and zone 5 shows maximum use of water in house cleaning due to large size of houses with lot of open space followed by comparatively little less consumption by the households in zone 1 and 3. But the in the areas of zone 2 and zone 6 usage is observed as minimum. Per person per day consumption range between 210 L To 336 L Per person per day water disposal is highest in zone 5 along with total consumption of 21617904 L in the zone while the per person consumption least in zone 2 and total consumption in zone is lowest in zone 2. We have divided the water disposal in house cleaning in three categories such as high disposal level (more than 40 L per person per day), moderate disposal level (between 30 L to 40 L per person per day) and low disposal level (less 30 L per person per day) as represented in Table No 6.12 and discussed as below:

6.5.1.1 High Disposal Level :

High water usage and disposal in House cleaning is observed in zone 4 and zone 5 where per person per day disposal in zone 4 is 43 L and in zone 5 disposal is 48 L. Total water disposal is 16778729 L and 21617904 L Zone 4 and zone 5 respectively.

6.5.1.2 Moderate Disposal Level :

The water usage and disposal in house cleaning is observed as moderate in zone 1 and zone 3. The per person per day disposal in zone 1 is 40 L while in zone 3 it is 33 L and total water disposal in house cleaning is found 16601520 L in zone 1 and 14038233 L in zone 3.

6.5.1.3 Low Disposal Level :

Consumption in zone 2 and zone 6 is observed as lowest where per person per day water disposal in house cleaning is 30 L and total water disposal is 12954630 L in zone 2 while in zone 6 per person per day disposal is recorded as 31 L with total disposal 13531469 L.

6.5.2 Water Disposal in House Cleaning by Socio-economic Classes :

Water disposal in house cleaning also depends upon the socio economic status where size of the house, working needs and person working are the major factors. Maximum water disposal is observed in high income class people and it is noticed as decreasing with decreasing income. The variations in usage are mainly due to the size of the house and cleaning method. Rich class people take help of maids and servants and their outside parts of houses are washed whereas very low income classes and economically weaker section people have either small house or live on road side and bring water from other place for use. Despite that usage varies time to time, place to place due to frequent use of various cleaning devices like euro-clean. Water used in House cleaning is maximum in high income class people and decreases with decreasing income in the society as presented in Fig No 6.7 B with reference to the Table No 6.12 and discussed below:

6.5.2.1 Disposal by Exclusively High Income Class (Group A) :

Among all income classes, disposal by exclusively very high income class people are found to be the highest where per person per day disposal range between 73 L in zone 2 and 117 L in zone 5.

6.5.2.2 Disposal by Very High Income Class (Group B) :

Disposal by very high income class people is less than exclusively high income people. Per person per day disposal range between 46.2 L in zone 2 and 73.92 L in zone 5.

6.5.2.3 Disposal by High Income Class (Group C) :

Disposal by high income class reduces further where per person per day disposal range between 37.8 L in zone 2 and 60.48 L in zone 5.

6.5.2.4 Disposal by Moderate Income Class (Group D) :

We have observed continuous decrease in disposal by moderate income class with per person per day disposal that range between 29.4 L in zone 2 and 47.04 L in zone 5.

6.5.2.5 Disposal by Low Income Class (Group E) :

The disposal by low income class is less than even moderate which range between 16.8 L in zone 2 and 26.88 L in zone 5 per person per day.

6.5.2.6 Disposal by Very Low Income Class (Group F) :

Very low income class dispose less water than low income class found to be the highest in disposal and per person per day disposal is observed between 16.8 L in zone 2 and 26.88 L in zone 5.

6.5.2.7 Disposal by Economically Weaker Section (Group G) :

Disposal by economically weaker section is recorded as lowest where per person per day disposal range between 2.1 L in zone 2 and 3.36 L in zone 5.

6.6 Water Disposal in Clothe Washing :

Washing the clothes is an essential activity of households which is carried out almost daily. Most of the houses, now a days have washing machines and so water usage is much more than when it is cleaned manually. Because of use of washing machine frequency of washing clothe reduces as clothes are washed when it gets collected. The clothes are washed together and so the water consumption is divided by average house hold size. Although it is supposed to use less water but as washing becomes mechanical process and there is no manual efforts of family members in washing so washing is done painlessly and frequently. Water used in fully automatic machines is much more than semi-automatic machines. On the other hand where clothe washing is done manually, water disposal is automatically restricted. The water disposal in clothe washing is analyzed under two sub headings i.e. spatial distribution and on the basis of socio-economic condition and shown in Table No 6.13 as given below:

Table No. 6.13
Zone-wise Water Disposal in Cloth Washing by Social Groups

Socio-economic Groups	Per Person Per Day Disposal Amount in L					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
A	75.60	58.80	63.84	80.64	89.04	60.48
B	66.15	51.45	55.86	70.56	77.91	52.92
C	59.85	46.55	50.54	63.84	70.49	47.88
D	56.70	44.10	47.88	60.47	66.78	45.36
E	37.80	29.40	31.92	40.32	44.52	30.24
F	12.60	09.80	10.64	13.44	14.84	10.08
G	06.30	04.90	05.32	06.72	07.42	05.04
Total	315.00	245.00	266.00	336.00	371.00	252.00
Average	45.00	35.00	38.00	48.00	53.00	36.00
Per Day Disposal	10676710	15113735	16165238	18729744	23869769	15713964

6.6.1 Spatial Analysis of Cloth Washing Water Disposal :

A lot of variations are observed and no specific reasons could be seen as disposal in cloth washing varies time to time as per the need. But the study shows maximum water disposal by the house holds of zone 5 followed by zone 4 and minimum disposal is observed in zone 2 which proves that other than the washing facilities, drains facilities also play very important role in variations of disposal in cloth washing. Hence the observation of water disposal in cloth washing is divided in three level – High disposal level (more than 45 L), Moderate disposal level (between 36 to 45 L) and Low disposal level (below 36 L) as shown in Fig No 6.8 A and represented in Table No 6.13 and discussed as below:

6.6.1.1 High Disposal Level :

High water usage and disposal in cloth washing seen in areas of zone 5 and zone 4. Average per person per day disposal in zone 5 is 53 L which is maximum of

all the zones and in zone 4 is 48 L Total water disposal in zone 5 and 4 is 23869769 L and 18729744 L respectively.

6.6.1.2 Moderate Disposal Level :

Moderate water usage and disposal in cloth washing is observed in zone 1 and zone 3. Average per person per day disposal in zone 1 is 45 L and in zone 3 is 38 L Total water disposal in cloth washing is 18676710 L and 16165238 L in zone 1 and zone 3 respectively.

6.6.1.3 Low Disposal Level :

Low water usage and disposal in cloth washing is observed in zone 2 and zone 6. Average per person per day disposal in zone 2 is 35 L and in zone 6 is 36 L Total water disposal in cloth washing is 15113735 L and 15713964 L in zone 2 and zone 6 respectively.

6.6.2 Water Disposal of Clothe Washing by Socio-economic Classes :

Social and economic factors were observed as major factors affecting the clothe usage. Rich class and high society people frequently change clothe as per need but we observed comparatively genuine use of clothe in moderate income class people while low income class people try to avoid changing clothe and do it as per need so as to avoid even washing. People of exclusively very high income class, followed by very high income class dispose maximum water in clothe washing due to the amenities like automatic machine and many helpers in their families. This is observed in all the zones. They are indulged in frequent cloth washing but people of high income class and moderate income class operate washing machine themselves and use semi automatic machine. They do several washings in the same detergent hence found comparatively using less water than high income class. Usage decreases with decreasing income and become minimum in case of economic weaker section people. Fig No 6.8 B shows the detailed disposal pattern in the zones by different social classes as discussed below:

6.6.2.1 Disposal by Exclusively High Income Class (Group A) :

Disposal of water in clothe washing is found to be highest in exclusively very high income class people. The disposal ranges between 59 L to 89 L per person per day. The disposals show a decreasing trend with decreasing income.

6.6.2.2 Disposal by Very High Income Class (Group B) :

Disposal of water in clothe washing by very high income class is less than exclusively very high income class people. The disposal ranges between 51.15 L to 78 L per person per day.

6.6.2.3 Disposal by High Income Class (Group C) :

Disposal of water in clothe washing by very high income class is less than even very high income class people. The disposal ranges between 46.55 L to 70.49 L per person per day.

6.6.2.4 Disposal by Moderate Income Class (Group D) :

We observed continuous decline in disposal of water in clothe washing by moderate income class where disposal is found less than high income class people and the disposal range between 44.1 L to 66.78 L per person per day.

6.6.2.5 Disposal by Low Income Class (Group E) :

Disposal of water in clothe washing by low income class is even less than moderate income class people. We observed that the disposal ranges between 29.4 L to 44.52 L per person per day.

6.6.2.6 Disposal by Very Low Income Class (Group F) :

Disposal of water in cloth washing by very low income class reduces further and recorded less than low income class people. The disposal is observed to range between 9.8 L to 14.84 L per person per day.

6.6.2.7 Disposal by Economically Weaker Section (Group G)

Disposal of water in clothe washing by economically weaker section is lowest than all of the social classes. The disposal ranges between 6.3 L to 7.42 L per person per day.

6.7 Water Disposal by Leakage :

Knowingly or unknowingly lot of water drips down or over flow daily. The reason for such a disposal is the use of low quality sanitary wares used in houses along with the carelessness during doing different works. Table No 6.14 represents total leakage of water in house hold and total leaked water is divided by 5 to get per person per day leakage, because the average house hold size is considered as 5. Leakage of households of high income group is too less as good quality sanitary wares are used and leakage increases in the households with decreasing income so in high income class, moderate income class and low income class families the leakage is found more whereas in case of very low income class and economically weaker section there is no point of leakage as most of the house hold do not have their own source of water and depend on public resources. Total water disposal in leakage is classified in two sub headings:

Table No. 6.14
Zone-wise Water Disposal in Leakage by Social Groups

Socio-economic Groups	Per Person Per Day Disposal Amount in L					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
A	04.20	03.50	04.20	04.55	03.85	00.87
B	08.40	07.00	08.40	09.10	07.70	01.75
C	21.00	17.50	21.00	22.75	19.25	04.37
D	25.20	21.00	25.20	27.30	23.10	05.25
E	25.20	21.00	25.20	27.30	23.1	05.25
F	-	-	-	-	-	-
G	-	-	-	-	-	-
Total	84.00	70.00	84.00	91.00	77.00	17.50
Average	12.00	10.00	12.00	13.00	11.00	02.50
Per Day Disposal	4980456	4318210	5104812	5072639	4954103	1091247.5

6.7.1 Spatial Analysis of Water in Leakage :

In addition to common house hold water wastage through leaking taps and over flowing of water due to carelessness is a common phenomenon in every house hold. In every house hold all around the city leakage water disposal is more or less same. Along with the civic amenities available one's attitude is primarily important for disposal of water in leakage. Still, in the study, it has been observed that like other water uses leakage is also maximum in zone 4 and 5 while in zone 1 and 3 households leakage disposal is also very close to zone 4 and 5 as given in Table No 6.14. Leakage water disposal is divided in three levels such as High disposal level (more than 12 L), Moderate disposal level (between 3 L to 12 L) and Low disposal level (below 3 L) that are shown in Fig No 6.9A and discussed as below:

6.7.1.1 High Disposal Level :

In our studies high leakage is observed in zone 1, 3 and 4 in the form of dripping of water. Per person per day leakage in these areas are found to be 12 L and above total water disposal through leakage is 4980456 L, 5104812 L and 5072639 L in zone 1, 3 and 4 respectively.

6.7.1.2 Moderate Disposal Level :

Moderate water leakage is observed in zone 2 and 5. Leakage water disposal ranges between 10 L to 11 L per person per day. Total leakage water in zone 2 is 4318210 L and 4954103 L in zone 5.

6.7.1.3 Low Disposal Level :

Water leakage is observed lowest in zone 6 and it is found to be 2.5 L per person per day with total disposal of 1091247.5 L in the zone 6.

6.7.2 Water Disposal in Leakage by Socio-economic Classes :

Water leakage in high income class families is very less due to usage of high quality sanitary wares. And so in exclusively very high income class families and in high income class, leakage observed is very less. It increases with decrease in income. The reason behind that is the compromise in the quality of sanitary wares used where frequent repairs may be required. We observed in our study that high

income class families, moderate income families and low income families knowingly or unknowingly are more responsible for water leakage in their houses due to compromise in the quality of sanitary wares used in their houses. Very low income class and economically weaker section class families are excluded from water leakage disposal since they do not have their own source of water and live in the areas of either no drainage facility or poor drainage facility. Table No 6.14 presents per person per day disposal by various socio-economic classes. The disposal pattern is shown in Fig. 6.9B.

6.7.2.1 Disposal by Exclusively High Income Class (Group A) :

Disposal of water through leakage is least by the Exclusive very high income class people. The disposal per person per day range between 0.871 L to 4.5 L As discussed, earlier due to high quality sanitary wares disposal is least.

6.7.2.2 Disposal by Very High Income Class (Group B) :

Leakage is slightly more in very high income class people. Disposal of water through leakage is least by the Exclusive very high income class people. The disposal per person per day range between 1.75 L to 9.10 L As discussed, earlier use of high quality sanitary wares restricts disposal.

6.7.2.3 Disposal by High Income Class (Group C) :

We have observed increase in disposal and so disposal by high income class is found to be more than very high income class. The disposal per person per day range between 4.37 L to 22.75 L. High incomes and careless attitude is responsible for increasing disposal.

6.7.2.4 Disposal by Moderate Income Class (Group D) :

Leakage disposal by moderate income class is observed as highest. The disposal per person per day range between 5.25 L to 27.3 L. Due to compromise in quality of sanitary wares and careless attitude disposal is observed as highest.

6.7.2.5 Disposal by Low Income Class (Group E) :

Disposal of water through leakage by the low income class people is same as moderate income class people and the disposal per person per day range between

5.25 L to 27.3 L. The reason of high disposal is noticed as same as in case of moderate income class.

6.7.2.6 Disposal by Very Low Income Class (Group F) :

No disposal is observed by very low income class people.

6.7.2.7 Economically Weaker Section (Group G) :

No disposal is observed by economically weaker section.

6.8 Other Water Disposal :

There are number of activities like gardening, vehicle washing, cleaning of verandas etc for which large quantity of water is used. Such activities are either not regular or not done by every member of family. As per now it clearly understood that water usage mainly depends on three factors- water source, drainage type and income size. Income size decides the number and the type of vehicle in the family. Washing and cleaning depends upon its usage and the number of chauffeurs or helpers. A lot of water is used daily in garden, green belt and pots which are more popular now a days. Table No 6.15 represents the analysis of zone wise disposal and on the basis of socio-economic classes and is studied in two sub headings:

**Table No. 6.15
Zone-Wise Other Water Usage and Disposal by Social Groups**

Socio economic Group	Per Person Per Day Disposal Amount in L					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
A	291.90	270.90	277.20	298.20	308.70	273.00
B	272.44	252.84	258.72	278.32	288.12	254.80
C	194.60	180.60	184.80	198.80	205.80	182.00
D	116.76	108.36	110.88	119.28	123.48	109.20
E	077.84	072.24	073.92	079.52	082.32	072.80
F	019.46	018.06	018.48	019.88	020.58	018.20
G	-	-	-	-	-	-
Total	973.00	903.00	924.00	994.00	1029.00	910.00
Average	139.00	129.00	132.00	142.00	147.00	130.00
Per Day Disposal	57690282	55704909	55152932	55408826	66204831	56744870

6.8.1 Spatial Analysis of Other Water Usage and Disposal :

Zone wise other water usage and disposal is shown in Table No 6.15 and the disposal pattern is presented by Fig No 6.10 A. High income group people living in zone 4 and new developing posh areas in zone 5 dispose maximum water and categorized under high level disposal, zone 1 which is very close of high level disposal is kept under moderate level with zone 3 which also developing fast like zone 5 areas. And people in zone 2 and zone 6 disposes minimum water so come under low level disposal. Per person per day disposal in zone 5 is 140 L which is maximum and in zone 2 is 129 L which is minimum. The three categories of disposal are described as given below:

6.8.1.1 High Disposal Level :

High water usage and disposal in 'Others' category is observed in zone 4 and zone 5 as in case of other house hold activities dispose water more than 140 L. Per person per day water usage and disposal is 142 L by zone 4 people and 147 L by zone 5 people. Total water consumption is found to be 55408826 L and 66204831 L in zone 4 & zone 5 respectively.

6.8.1.2 Moderate Disposal Level :

Water usage and disposal in moderate category dispose water between 130 L to 140 L is observed in zone 1 and zone 3 where disposal is 139 L and 132 L in zone 1 and zone 3 respectively. Similarly total water consumption in the city is found to be 57690282 L and 56152932 L in zone 1 and zone 3 respectively.

6.8.1.3 Low and Disposal Level :

Low water usage and disposal show disposal below 130 L which is observed in zone 2 and zone 6. Per person per day disposal in zone 2 is 129 L and in zone 6 is it is 130 L while total water disposal in zone 2 is 55704909 L and in zone 6 is 56744870 L.

6.8.2 Other Water Usage and Disposal by Socio-economic Classes:

As we have observed that other water usage and disposal is mainly done by high income class is very high which reduces with decreasing income and becomes negligible in very low income class families and economically weaker section. Table No 6.15 represents the analysis of other usage in all the zones. Other water usage and disposal by seven socio-economic classes is shown in Fig No 6.10B.

6.8.2.1 Disposal by Exclusive High Income Class (Group A) :

Water used in others category by exclusively very high income class people is found to be maximum in all the zones and decrease with decreasing income. The usage and disposal range between 270 L to 308 L High consumption is due to big lawns, open spaces and number of vehicles and also that usually they are the residents of posh areas.

6.8.2.2 Disposal by Very High Income Class (Group B) :

Very high income class people use little less water than exclusively very high income class people, following the decreasing trend. The usage and disposal range between 252.84 L to 278 L. They also have green belts, gardens and pots in their houses.

6.8.2.3 Disposal by High Income Class (Group C) :

High income class usage and disposal comes next in the series where usage and disposal range between 180 L to 205 L The decrease in usage is due to less number of vehicles in one hand and small garden and less pots on other hand.

6.8.2.4 Disposal by Moderate Income Class (Group D) :

Disposal shows decreasing trend further by moderate income class. People are found to be vigilant for water disposal as they specially keep control on the water bills so the usage disposal range between 108 L to 123 L per person per day.

6.8.2.5 Disposal by Low Income Class (Group E) :

There is as sharp decline observed in water usage and disposal in low income class people which range between 72 L to 82 L. The reason of decreasing usage is small houses and less accessories.

6.8.2.6 Disposal by Very Low Income Class (Group F) :

Very low income class is excluded from this type of water usage. People living in small houses, rented houses may have some plants so show low disposal which range between 18 L to 20 L per person per day.

6.8.2.7 Disposal by Economically Weaker Section (Group G) :

Economically weaker section people do not show any disposal in this category. As people living in very small houses (just one room), rented houses, slums, roadside dwellers belong to this class of society.