CHAPTER 5 -
HAZARD, RISK & VULNERABILITY PROFILE
OF EAST DELHI DISTRICT

MAP 5.1
MAP OF EAST DELHI DISTRICT
5.1 INTRODUCTION -

EAST Delhi district is one of the eleven districts of the NCT of Delhi. It came into existence in January 1997, when Delhi was divided into eleven Revenue Districts. Prior to that, there used to be only one district for the whole of Delhi, with its district head quarter at Tis-Hazari. East district is spread in an area of 64 square kilometre, which forms 4.31% of the total area of Delhi. There are 21 villages in the district Most of which are now urban villages. Total population of the district is 14, 48,770, out of which the male population crosses 7, 85,440 and 6, 63,330 are females. The population density is 22637 being third highest in Delhi. The literacy rate of the district is 85.10, which is highest in Delhi. It occupies 2nd position in terms of sex ratio, which are 845. (DM Plan East Delhi District - 2011).

5.2 GEOGRAPHY AND BOUNDARIES -

Delhi is situated about 100 miles (160 km) south of the Himalayas and stands on the East bank of Yamuna River, a tributary of the Ganga. The national capital territory lies at an elevation of between 700 and 1,000 feet (213 and 305 meters) and covers an area of 573 square miles (1,483 square km) between latitude 28 degree 24’ 15” to 28 degree 53’ 00” and longitudes 76 degree 50’ 24” to 77 degree 20’ 30”. Of this area, Old Delhi occupies 360 square miles (932 square km) and New Delhi 169 square miles. Delhi shares it boundaries with Uttar Pradesh on the East and Haryana on the East and towards South. With respect to the East District, it shares its borders with Ghaziabad district of U.P towards the East. Within Delhi, the East District shares its boundaries with the North East district towards the North, Central district on the Western side, New Delhi district towards the South Western border and South District on the Southern side. It generally has been presumed that the city was named for Raja Dhilu, a king who reigned in the first century BC, and that the various names by which it has been known (Delhi, Dehli, Dilli, and Dhilli) have been corruptions of present name Delhi.

5.3 REVENUE ORGANIZATIONAL STRUCTURE -

The Deputy Commissioner (DC-E) followed by an Additional District Magistrate (ADM-E) as second-in-command heads the revenue district. The district is divided into 3 subdivisions and a Sub Divisional Magistrate (SDM) is the head of each subdivision. Each sub division is having revenue and clerical staff for its 18 various functions. For revenue functions each sub division has Tehsildar, Naib-Tehsildar, Kanungo and Patwaris in that order. For other functions, there is clerical staff. Office of the
Block Development Officer (BDO-E) is also a part of the office of Deputy Commissioner. Headed by the Block Development Officer, this office is responsible for custody of Gram Sabha land and promotion of agriculture, horticulture and developmental activities in the area of responsibility.

Office of the Sub Registrar is also part of the office of Deputy Commissioner. This office is responsible for the registration of sale deeds of the land. There is also a centre of National Information Centre (NIC) in the district officiated by the District Information Officer, which facilitates computerization and links the district with outside world, through world wide websites (www). A new department known as Disaster Risk Management (DRM), has been created for dealing with disaster related issues. An Emergency Operation Centre (EOC-E) has also been set up, which is working in a 24x7 mode, and is the hub for managing all types of emergencies and disasters.

(A) Preet Vihar Sub Division - This is the biggest sub division in the district. The office of the Sub Divisional Magistrate (SDM) Preet Vihar is located in L.M. Bund Office Complex, Shastri Nagar. The main area in the sub division are Vasundhara Enclave, Mayur Vihar, Trilokpuri, Kondli-Gharoli, Patparganj, New Ashok Nagar, Khichripur, Laxminagar, Madhuban, Khureji Khas which are a mixture of villages, Community Group Housing Societies, Resettlement colonies, marketing centres and residential areas etc.

(B) Vivek Vihar Sub Division - Office of the Sub Divisional Magistrate (SDM) Vivek Vihar is located in Left Marginal .Bund Office Complex, Shastri Nagar. The area consists of Vivek Vihar and Surajmal Vihar.

(C) Gandhi Nagar Sub Division - The office of the (SDM) Gandhi Nagar is located in Left Marginal. Bund Office Complex, Shastri Nagar. This covers the area of Gandhi Nagar, Geeta Colony and Krishna Nagar.

5.4 VEGETATION
The natural plant cover in East Delhi varies according to the physical features with which it is associated. During the monsoon season, herbaceous species grow in profusion. Riverine vegetation consisting of weeds and grass occurs on the banks of River Yamuna. It is also known for numerous
flowering plants, which provide a splash of colour during the winters. The transition from winter to spring is very gradual, and only the flowers can testify to changing conditions, with chrysanthemums in December yielding space to roses in February. During summers the district blooms with the flowers of gulmohur, amaltas and bougainvillea. Besides other tropical and arid shrubs, green bushes and various types of trees are found all over the district.

5.5 CLIMATE, RAINFALL AND GEOLOGY -

The climate of whole Delhi including East Delhi region is semiarid type, with three well-defined seasons. The cold season begins at the end of November, and extends to early March. The hot summer extends from the end of March to the end of June. The rainy season starts from July and continues upto September. The temperature is usually between 21.1°C to 40.5°C during these months. Winters are usually cold and night temperatures often fall to 6.5°C during the period between December and February. The average annual temperature recorded in Delhi is 31.5°C based on the records over the period of 70 years maintained by India Meteorological Department. Summers are dry and very hot with dry winds blowing, culminating at times in dust storms. The South East monsoon brings rains to Delhi during the monsoon season, i.e., July onwards. The southeast monsoon has a milder impact. Delhi experiences a moderately wet monsoon. About 87% of the annual rainfall is received during the monsoon months, end June to mid September. On an average, rain of 2.5 mm or more falls on 27 days in a year. Of these, 21.4 days are during monsoon months.

**TABLE - 5.1 RAINFALL (IN MM)**

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<tbody>
<tr>
<td>July</td>
<td>211.1</td>
<td>348.9</td>
<td>482.1</td>
<td>46.0</td>
<td>180.9</td>
<td>57.8</td>
<td>223.1</td>
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<tr>
<td>August</td>
<td>172.9</td>
<td>169.2</td>
<td>259.1</td>
<td>578.9</td>
<td>328.8</td>
<td>189.9</td>
<td>305.1</td>
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<tr>
<td>September</td>
<td>149.7</td>
<td>250.2</td>
<td>1.6</td>
<td>51.6</td>
<td>151.8</td>
<td>84.3</td>
<td>107.9</td>
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Source: Draft DM Plan of DDMA - 2011

Note: Normal rainfall refers to norms of the Metrological Deptt.

Delhi consists of flat and level plains interspersed with cluster of sand dunes and a long continuous chain of rocky ridges. The sand dunes are of varying dimensions and in general lie (North East – South
East). Most of the geology of the State comprises of Yamuna flood plains, alluvial plains and quartzite ridge. The soils of the Delhi area are mostly light with subordinate amount of medium texture soils.

The light texture soils are represented by sandy, loamy, sand and sandy loam; whereas medium texture soils are represented by loam silty loam. The air in the District is dry for most of the year with very low relative humidity from April to June and markedly higher humidity in July and August, when weather conditions are oppressive. The entire State’s mean daily temperature is highest in May; and the monthly mean temperature is highest in June, which is also the month when the night temperature is at its maximum. The mean daily temperature may rise as high as 110 °F (43 °C). The coldest month is January, when both the mean maximum temperature and the mean minimum temperature are at their lowest — 70 °F (21 °C) and 45 °F (7 °C), respectively.

**Rivers & Drains in the District** - East District is one of the flood prone districts in Delhi due to overflow of River Yamuna in monsoon season. During the rainy season the water level of River Yamuna rises. Constant monitoring of water level of River Yamuna is carried out and precautionary measures are taken. There are 11 drains in the Trans Yamuna region, which are under the control of Irrigation & Flood Control Department.

**5.6 LAND USE PATTERN** -

The pattern of land use in East District was influenced considerably by the implementation (albeit partial) of the Delhi Development Authority's 20-year (1962–82) Master Plan. The district has demarcated Industrial areas in Patparganj and Jhilmil. A large number of small scale manufacturing establishments have entrenched themselves in almost every part of the District. A number of local DDA shopping centres have also developed in various localities; District Shopping Centres have also come out in Laxmi Nagar and another one is coming out in Mayur Vihar. The district has a big cloth market in Gandhinagar. The district has various kinds of residential areas, like the high rise apartments in Vasundhara Enclave, Mayur Vihar, Patparganj, Vivek Vihar, Surajmal Vihar and I.P. Extension. Resettlement colonies like Trilokpuri, 69 unauthorized colonies, and 70-80 Jhuggi clusters along the Pushta and other parts of the district are existing. There are 21 villages in the district, which are mostly urbanized. The district has two sports complexes, several entertainment centres in the form of cine-plexes, theatres, banquet halls and restaurants. The district has several parks and green areas.
The Sanjay Park is the biggest green area, adjoining Mayur Vihar. It also consists of Sanjay Lake, which is the largest land water body in the district. Cultural “islands” have been formed in certain areas; for example, Bihari, Bengali, South Indian and Punjabi cultures, although cultural distinctiveness is being eroded as other city residents move in. The district recently got a Cultural Centre named Poorvi Sanskritik Kendra.

**DDA Master Plan 2021** - Delhi Development Authority (DDA) acquires land for the planned development of Delhi. It develops these lands and properties by implementation of the Master Plan and Zonal Plans. DDA also disposes land and properties for residential, commercial, industrial and institutional uses.

"A Master Plan is the long term perspective plan for guiding the sustainable planned development of the city. This document lays down the planning guidelines, policies, and development code and space requirements for various socio economic activities supporting the city population during the plan period. It is also basis for all infrastructure requirements."

**5.7 ECONOMY**
In the economy of East Delhi, the service sector comes first in importance and is the largest employer. The industrial sector is second and the commercial sector occupies only the third place. Agriculture once contributed significantly to the economy but now is of little importance. A substantial proportion of working population is engaged in various services, including public administration, different professions, liberal arts and various personal, domestic, and unskilled-labor services.

**5.8 POPULATION**
Out of a total population (2001 census) of 13,782,976 of NCT of Delhi, East Delhi district has 1,448,770 people, over 10% of the total. Out of this males are 785,440 and females 663,330. The east district, however, covers nearly 4% (64 kms) of the State’s area. The sex ratio of Delhi as a whole has been recorded as 821 females to 1000 men as per 2001 census. It may therefore be noted that East district (845) has sex ratio above the NCT sex ratio as a whole. Although the East district ranks 6th in population and has just 4% of the State’s area under its jurisdiction, but has the 3rd highest density in the State (22,637) as against the State density of 9294 persons per sq. km. As far percentage decadal
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population growth (1991-2001) is concerned, Delhi’s population recorded 46.31% as against the national population growth of 21.34% for the same period.

5.8.1 EDUCATION - District east enjoys the highest literacy rate in Delhi; female literacy in the district is also the highest in Delhi. Among the institutions of Higher learning, the District has 3 colleges under the University of Delhi. Besides, there are 174 Government, Government aided and unaided recognized schools under the Directorate of Education. There are 202 MCD run schools in the district. Most of these schools have been earmarked as relief and rehabilitation centres in case of disasters by the district authorities.

5.9 HOSPITALS

In East District health care facilities are provided both by the government of Delhi and the non-governmental organizations. Among the government organizations, Directorate of Health Services (DHS) of Government of NCT is a major plan-implementing agency relating to health sector services under the Directorate of Health Services which cover medical and public health. Besides these several other agencies are entrusted with the health care, in their respective area of responsibility, eg. MCD is also entrusted with health care activities. Hence there are multiple agencies managing and performing health services in Delhi. The directorate of health services is providing health care facilities at primary and secondary level to the citizens of Delhi, through various types of health outlets, spread all over Delhi viz., dispensaries and Health Centres (24), Hospitals (3), School Health Clinics and Mobile Health Clinics. The directorate also monitors the health services being provided by the registered private nursing homes. Details of Government and private hospitals/nursing homes, with bed capacity, in East Delhi District are given below:

a) Government Hospitals.
   i) Lal Bahadur Shastri Hospital, Kalyanpuri - 100.
   ii) Dr Hedgewar Arogya Sansthan, Kankarduma- 200.
   iii) CNBC Pediatric Hospital, Geeta Colony - 216.

   Total - 516

b) Area-wise Private Hospitals with total bed capacity.
   i) Trilokpuri (with 2 out of 12 hospitals/nursing Homes having > 50 beds) - 253.
The total combined bed capacity of 3 Govt and 73 Private Hospitals is **2010**. CATs run ambulance services in Delhi. Presently there are 28 ambulances. Their contact number is 102.

### 5.10 DELHI POLICE

In 1978, the Delhi Police Act was promulgated, by which Delhi came under the Commissioner of Police system. Under this system, as per Section 107 and the Section 144 Cr.PC, law and order in the capital is directly being dealt by the Delhi Police, which comes under the Union Home Ministry. The city is divided into eleven police districts, each of which is headed by a Deputy Commissioner of Police. For each Revenue District, there are numerous Police Stations headed by a Station House Officer. There are 16 Police stations in East Delhi District, namely, Shakarpur, Preet Vihar, Jagatpuri, Madhu Vihar, Mandawali, Pandav Nagar, Mayur Vihar, Kalyan Puri, Ghazipur, New Ashok Nagar, Gandhi Nagar, Geeta Colony, Krishna Nagar, Vivek Vihar, Anand Vihar and Farash Bazaar. Police Control Room (PCR) vehicles are stationed at a number of vulnerable locations. They keep moving and their contact number is 100. The PCR vehicles in Delhi have also been fitted with a stretcher each, for expeditious carriage of the injured to the nearest hospital, without waiting for the ambulance vehicle.

### 5.11 DELHI FIRE & EMERGENCY SERVICES
The jurisdiction of the Delhi Fire & Emergency Services extends over both the urban and rural areas of the national capital territory. In the rural areas, temporary stations are opened during the summer. District east has at present three fire stations located in Laxmi Nagar, Geeta Colony and Mayur Vihar. The Fire office for East, South and East are common which is located in Laxmi Nagar, which also functions as DM training centre. The contact number of Delhi Fire Service is 101. Delhi Fire Services has three Disaster Management Control Centres, located at Nehru Nagar, Laxmi Nagar and in Rohini. Delhi Fire Service is divided into 5 Divisions and 17 Sub-Divisions for attaining operational efficiency. Each division is headed by a Deputy Chief Fire Officer and assisted by Divisional Fire Officers and Assistant Divisional Fire Officers. East Division gives fire fighting support to the East Delhi District, with following Fire Stations:

1. Shahadara
2. Laxmi Nagar
3. Geeta Colony
4. Mandavali Mayur Vihar
5. Darya Ganj
6. Shastri Park
7. Gokul Puri
8. Pai Walan

5.12 PUBLIC UTILITIES

While Delhi Jal Board performs water supply, drainage and sewerage services, conservancy and scavenging services are mandated functions of the three Municipal Corporations of Delhi. The Delhi Municipal Corporations also performs such functions as city transportation and power generation where-as a private player called BSES Yamuna Power Ltd looks after distribution of electricity in East Delhi District. Most of the constructions in the district are under the purview of Delhi Development Authority, Municipal Corporations of Delhi and the Public Works Departments. These three major Civic Bodies are also involved in the day-to-day affairs of the development activities of the people of the district and therefore have a say in disaster management. East District falls under Municipal Corporation of Delhi (East).

5.13 HAZARD, RISK & VULNERABILITY ANALYSIS
District East is highly prone to multi hazard disasters, like earthquake, flood, fire accidents, LPG cylinder blast, building collapse, epidemics, road accidents, stray cattle incidences etc. The high density of population coupled with socio economic backwardness increases the vulnerability towards various disasters. The history of disasters in the district will provide a clear picture of the vulnerability to which the district is prone to.

(A) Record of Previous Disasters - The district has witnessed various types of disasters in the past. The district is highly vulnerable to Earthquake and the area has experienced several tremors of minor intensities in the past years the last three among the series being in April 2015, April 2013 and March 2012. The district is also highly vulnerable to fire hazard, especially the Yamuna Pushta JJ clusters, where the fire incidences keep happening at an amazing regularity, with the intensity increasing in the summer months. Incidences of cylinder bursts and building collapses have also been reported often. The unauthorized dairies in the district and stray animals have also led to disasters in the district. Chemical accidents have also been reported causing loss of life and property. Some reported incidences in the district in the last decade are given below:-

1. Fire at Pushta Slums (Thokar-8) in June, 2004. 600 Jhuggi were gutted.
2. Fire at Pushta Slum (Geeta Colony) in July, 2004. 700 Jhuggi were gutted
5. Chemical Fire Accident, Parwana Road, Khureji, in September, 2004 13 died and, 7 were injured.
6. Yamuna Pushta slum fire (Thokar-21), Kailash Nagar, near old railway bridge in December, 2004. 70 Jhuggi were gutted, no casualty.
8. Yamuna Pushta Slum Fire (Thokar-16) Safeda Wali Jhugi, Geeta Colony, in January, 2005. 450 Jhuggi were gutted.
9. Yamuna Pushta Fire (Thokar-16) Shamshan Ghat in February, 2005. 150 Jhuggi were gutted
10. Mad bull rampage, Khureji February, 2005. 2 person died and 2 were injured.
11. Slum Fire, Mandawali in April, 2005. 30-40 Jhuggi gutted
12. Pushta Fire, Geeta Colony May, 2005 08 jhuggi were gutted
13. Pushta Slum Fire, Kailash Nagar, near railway line May, 2005. 58 jhuggis were gutted
16. Earth Quake in June 2004. Magnitude 2.0
17. Earthquake in April 2004. Magnitude 1.9
22. Earthquake in June 1992. Magnitude 2.8
23. Riots in Dec 1984, sikh riots.
25. Flood in Yamuna Bank (effected area - Chilla Khadar, Near Shastri Park, Pushta No.4 in September 2008
26. Metro mishap at Vikas Marg,Laxmi Nagar on 19 Oct 2008. Metro Rail concrete stretch under construction, fell on Blue Line City Transport Bus, killing the driver and 11 construction workers. 1 civilian was injured in the mishap.
27. Four storey building under construction collapsed at South Anarkali, Jagatpuri,East Delhi on 20 Dec. 2008. 3 persons were injured.
28. Five Storey building collapse at Lalitha Park, Laxmi Nagar on 15th November,2010. 66 persons died & 65 were injured.
29. Earthquake in March 2012 with epicentre in Bahadurgarh and in April 2013 with epicentre in Iran – no casualty in both.

From the above listed disasters/accidents, it could be interpreted that the District is highly susceptible to hazards such as earthquakes, fires and floods. The poor soil condition, high density of population, socio-economic conditions, poor masonry non engineered constructions, high migrant population leading to mushrooming of JJ clusters, make the district highly vulnerable to
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multi hazard disasters and lack of capacity/resources makes the district highly risk prone to various disasters.

5.13.1 EARTHQUAKES - Of all natural hazards, earthquakes are the most devastating. They can inflict tremendous damage within seconds and without warning, at any time of day or night, on any day of the year. Ground shaking and surface faulting are often just the forerunners of secondary damage, such as fires, floods (caused by dam bursts), landslides, quick soil and tsunamis (seismic sea waves). It is seen that the Delhi region has a long seismic history being affected by earthquakes of local origins as well as those of Himalayan origin. Based on the tectonic map of the region prepared by Srivastav and Roy, this region is characterized by several dominant features such as the Delhi-Haridwar ridge, Delhi-Lahore ridge, the Aravalli Delhi fold, the Sohna fault, the Mathura fault and the Moradabad fault. Verma et al. and Chouhan et al., who have studied more than 100 events recorded in the region, have shown that the epicentres have a pattern of clustering in two belts, namely Rohtak and Delhi. The distribution of the epicentres appears to have a NE-SW trend correlated with the direction of major tectonic features of the region. According to these authors it is not possible to associate the seismicity of Delhi with any particular tectonic unit. On the other hand a number of lineaments appear to be active to various degrees.” (Extract from Seismic status of Delhi mega city, RN Iyengar). A study of local small earthquake events shows a good correlation of seismicity with major fault zones. It is likely that seismicity near Rohtak is caused by fault zone of the Aravalli. The major fault zone passing through Mathura and Moradabad is likely to be active and might have been the cause of past few earthquakes. (Delhi fold, the Sohna fault, the Mathura fault and the Moradabad fault. Verma et al. and Chouhan et al.). Seismicity around Delhi appears to be associated with a major geological structure, which is known as the Delhi-Hardwar Ridge. This ridge constitutes an important tectonic block between 28 degree - 30 degree North and 76 degree – 79 degree East with a NE-SW trend. It coincides with the extension of the Aravalli Mountain belt beneath the alluvial plains of the Ganga basin to the north-east of Delhi towards the Himalayan Mountain (Jain, 1996). The Yamuna River bed section, extending till NOIDA and Faridabad, are more vulnerable to damage even by a moderate earthquake because they are on alluvial soil upto 200 m deep. These regions face a very grave problem of soil liquefaction during an earthquake. Moreover, earthquakes are amplified by alluvial soils. The Chamoli earthquake (29 March 1999) was felt all
over Delhi. There have been reports of cracks in a few tall buildings located on alluvial deposits in the trans-Yamuna area of East Delhi District.

The entire state of Delhi falls under Seismic Zone IV in the national seismic map. This means the State is adjacent to the high vulnerability area i.e. zone V. The tectonic activities under the National Capital Region are shifting swiftly. The increased number of illegal construction practices in the area has been one of the forces behind this. The Yamuna Pushta of the National Capital Region of Delhi in East Delhi District has been considered as the most vulnerable area in Delhi. Many areas in the district such as resettlement colonies, unauthorized areas and villages are very vulnerable to Earthquake risk due to poor masonry constructions, high density of population, narrow streets and most of the houses have only one opening. The population residing in the area is socially and economically weaker section, which makes them all the more vulnerable. Some of such high congested areas in the district are, Trilokpuri, Kalyanpuri, East Vinod Nagar, West Vinod Nagar, Khichripur, Mandawali, Khureji Khas, Ganesh Nagar, Laxminagar, Preet Vihar, Bhikam Singh Colony, Jwala Nagar, Mukesh Nagar, New Sanjay Amar Colony, Teliwada, Vivek Vihar, Gandhi Nagar, Seelampur village, Kanti Nagar, Kailash Nagar and Gandhi Nagar.

5.13.2 FLOODS - Yamuna is the main river of the NCT of Delhi, which flows, in its Easterly direction from North to South. This river is an alluvial river and hence has got a meandering tendency. In the past, it has caused serious flood situations in NCT of Delhi by inundating large areas during flood season, and disturbing the normal life of Delhites. Prior to construction of Shahdara Marginal Bund and Left Marginal Bund in 1956, this river used to inundate the trans-Yamuna areas very often (nearly every year). The main city areas of Delhi and New Delhi and Trans-Yamuna Area of Shahdara Block although are protected by embankments but there also remains a danger of breaches to Bunds, which may endanger the normal life of the residents in these areas. The floods of 1924, 1947, 1955, 1956, 1967, 1971, 1975, 1976, and 1978 are the main examples of the flooding in River Yamuna when the normal lives of the residents of Delhi were either disturbed or threatened, badly. As per available records, during the last 40 years, the years of 1967, 1971, 1975, 1976, 1978, 1988, 1995, 1998, 2008 and 2010 have been the high
flood years for River Yamuna, when the water level in the river at old railway bridge was observed to be 206.0 m or more.

Out of above, the floods of 1978 have been the highest recorded in the recent history of River Yamuna, which was recorded as 207.49 m (680.75 ft.) on 5/6 September 1978 at Delhi Old Railway bridge, with a discharge of 7175 cumecs (2,53,350 cusecs). The right marginal bund between Palla village and Bawana Escape out-fall also breached which caused a very large area of Alipur block and urban colonies like Adarsh Nagar, Model town, Mukerji Nagar submerged under deep water. Apart from the damages estimated at nearly Rs. 10 crores, eighteen lives were lost and thousands of people were rendered homeless. On the left bank also Shahdara marginal bund reached the point of distress but could be saved by raising its heights in certain reaches with earth filled bags. Nearly 35000 jhuggis are located on the either banks of river Yamuna and nearby areas.

Approximately 7000 people are living in flood prone areas in the East District and around 2000-2500 people residing in the slums are located within the marginal embankments in the river bed at various locations. Residents of these jhuggi clusters are mostly required to be shifted from the river bed in the event of high floods. The Irrigation and Flood Control Department has marked the following areas falling in the district along the river as vulnerable points prone to flooding or erosion by river:

- Left forward Bund in Trans Yamuna area.
- Left Marginal Bund between Old Railway Bridge & ITO Barrage.
- Kondli Gharoli area (Shahdara) Dallupura
- Adjoining areas of Ashok Nagar (Shahdara)

5.13.3 FIRES - East District is highly vulnerable to fire keeping in view the mushrooming JJ clusters in the district. The Yamuna Pushta belt starting from Old Railway Bridge till Chilla village is littered with JJ clusters all along on both banks of the river and across the embankments. Due to the use of highly inflammable material like polythene sheets, dry palm leaves and wooden logs in construction of jhuggies and loose electricity wirings added with high density of residents makes the whole area highly vulnerable to fire risk. The people residing in
these jhuggies are socially and economically weak and are mostly migrants from the neighbouring states. There have been several fire accidents in these areas as given out earlier in this Chapter. East Delhi District also has 69 unauthorized colonies with unplanned settlement pattern and poor housing conditions and a very high density of population which makes these areas highly vulnerable to fire risk. Short-circuiting is often a result of illegal connections, low quality wiring and therefore even if this single major cause is taken note of, not only would it lead to saving innumerable lives and properties but also cut down on expenditure incurred on fire mitigation. If the number of incidents of fires is carefully studied area wise in Delhi, maximum percent of calls of fire incidents have been received from Shahdara (East division) and Janakpuri (East division). Others areas which fall in other divisions are Moti Nagar (West), Connaught Circus (Central), Roopnagar (North) and Nehru Place in South Delhi. The reason is congestion and illegal storage of recycling material and chemicals. Causes of fires have been found to be electricity short circuit, carelessness, spark/heat, fireworks. Naked fires, incendiaries, lightning, radiation and children playing with fire. (Source: State Fire Training Centre, Delhi)

High population density, crowded streets, un-matching mix occupancies, inadequate water supply, poor electrical services, unplanned sitting of fire stations, encroachment are few examples of ineffective planning which adversely affect the fire response time. The developmental activities are in full swing in the sub-urban area, with complete disrespect to environment and fire safety aspects in absence of regulatory laws exempted in these areas.

5.13.4 OTHER MAN-MADE DISASTERS - Other disasters which impact East Delhi District are terrorist related disasters and chemical/hazardous material leaks. For terrorist related disasters prior intelligence inputs would be forth-coming and will be managed by the Delhi Police commandoes and Special Forces like the National Security Guards (NSG) and Armed Forces. For chemical leaks, the East Delhi District does not have the wherewithal to manage, except HAZMAT vehicle with the Delhi Fire Services. Accidents, mostly road accidents can be prevented by general awareness programs at the school and community level and in schools and strict actions against the defaulters by the Police. Building Collapses are also common. Two such disasters took place in the last three years, due to the poor quality of constructions and unauthorized constructions over existing floors of the buildings.
5.14 CONCLUSION

East Delhi District is the most hazardous district of not only the NCT of Delhi but among the worst affected in the whole country. It is vulnerable to multiple disasters. The risk and vulnerability of the district get accentuated due to congested populous urban area, unsafe buildings, poor and illiterate people inhabiting the area and dereliction in implementing the guidelines and instructions for safe infrastructure and awareness programs.

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