

## **Chakuliya**

*City sanitation plan is the vision document for sanitation in Chakuliya for next 30 years and is one of the key document required to qualify for getting the financial support for sanitation related infrastructure development under key Government programmes like Swachh Bharat Mission (SBM) and other Central Government Programmes.*

### **Baseline Information**

The following were the data collected from different sources during primary, secondary data collection, site visit, meetings, and stake holder consultations at Chakuliya and has been provided as a baseline document which will be useful for development of sanitation infrastructure projects for the town.

- All the baseline information for the Town collected
- Demographic information along with population projection for next 30 years provided
- Scale map of the town including base map of the town ward wise maps and land use maps for the towns prepared which can be utilised by town authorities for further planning, development of master plan
- Detailed slum profile including notified and non-notified slums collected and validated during field survey; details on sanitation infrastructure available in the slum - Information can be further utilised in preparation of detailed slum development plan or other programmes in similar lines like Housing for All.

### **Access to toilet**

#### **Study and Analysis details**

- Existing defecation system in the town has been assessed – ward wise number of individual toilets, public toilets, open defecation area, sludge removal equipments, sludge management and sanitation in slums
- Ward wise location of public toilet and open defecation areas have been mapped which would support the ULB is finalising the location of proposed public and community toilets.
- Swot analysis , key issues and benchmarking with MOUD standards have been done
- Demand gap assessment for toilet block requirement has been done till the year 2045 which will give clear picture to the ULB for phase wise construction of toilet blocks
- Study of ongoing schemes and program for toilet construction – SBM
- Details on Namma toilets and other innovative options for toilet construction and management identified for ULBs to explore further during tendering and construction stage.

#### **Action Item for ULB**

- Total 1757 individual toilets need to be constructed in CSP under SBM till 2045. Phase wise construction plan provided in section 7.7.1 of report
- Total 11 community toilets (6 seats per toilet block) need to be constructed in Chakuliya till 2019 under SBM, with 30 seats for men and 38 for women. Phase wise construction plan and other details provided in Section 7.7.2 of the report.
- Locations for community toilets should be mainly on slum and open defecation areas. The locations needed to be identified by the CNP officilas.

- Currently one public toilet block already exist in CNP. two more toilet block would be meet the demands required till 2025, after which CNP requires two more public toilets to meet the demand till 2045.
- Total cost of individual toilet, community toilet and public toilet is Rs 250 lakhs, Rs 50 lakhs. and Rs 41 lakhs respectively

### ***Solid Waste Management***

#### ***Study and Analysis details***

- Assessment of existing waste collection, disposal and treatment system for domestic, industrial and institutional areas based on field observation, stakeholder consultations (ULB, rag picker, sanitation workers, slum dwellers and residents).
- Quantification of Municipal waste and projection till the year 2045. Calculation of the infrastructure for collection, transportation, treatment and disposal along with area requirement for processing and landfill facility.
- Mapping of existing and proposed waste disposal site
- Site suitability analysis for selection of processing and landfill provided
- SWOT analysis, key issues and benchmarking with MOUD standards have been done and waste management system in short term, medium term and long term proposed for Chakuliya.

#### ***Action Item for ULB***

- Area required for development of new landfill site calculated.
- Technology options for waste treatment in short term, medium term and long term are given in section 9.14.
- Waste management best practice case studies provided to ULBs to refer for during implementation stage.
- Awareness campaign and capacity building initiatives to be done by ULBs for proper management of waste – funding for the same can be availed from SBM.

### ***Sewerage System***

#### ***Study and Analysis details***

- Study of existing waste water management has been studied – domestic waste water, industrial waste water and dhobi ghats.
- Ward wise waste water disposal system
- Estimation of waste water generation quantity and sludge generation quantity and projections (based on population projection and water supply projections) till 2045 to finalise the capacity of treatment facilities.
- SWOT analysis , key issues and benchmarking with MOUD standards have been done
- Study of existing DPR and its recommendations.
- Based on the existing infrastructure and funding proposals are given on short term and long term basis in the form of on-site and off-site sanitation respectively.

#### ***Action Item for ULB***

- Analysing the local issues, provision of Sanitation facility has been proposed as medium term and long term

- Septic tank based sanitation for medium term – ULB to increase coverage from 43.2% to 100 % (also discussed in Section on access to sanitation)
- Sewerage system provided for long term
  - Capacity of STP identified based on waste water projections for next 30 years. ULB to develop plan for construction of 3 MLD STP for Chakuliya.
  - Two decentralized options of STP 2 MLD and 1MLD DEWATS system are also discussed
  - Site suitability analysed for selected sewage treatment plant was done along with infrastructure and site development.
  - Location of proposed STP is shown in map 8-1 and 8.2
- Cost estimates for the sewerage works including septage management, suction machines, STP, sewer lines, site development works would be Rs. 327.51 lakh, Rs. 2829.20 and Rs.47.92 lakh for the phases 2017-2020, 2020-2025 and 2025-2045 respectively.
- In Chakuliya Industrial waste water treatment has to be given more attention from the ULB side because most of the industries are disposing the untreated industrial waste water into open lands and nearby ponds (mainly Kamarigora Talab)

### **Storm Water Drainage**

#### **Study and Analysis details**

- Existing baselines status of storm water drainage including water logging areas identified for the town;
- Ward wise drains and their outfall points have been identified and located on map along with details of existing storm water in slum areas.
- Swot analysis , key issues and benchmarking with MOUD standards have been done
- New proposal to be taken up for improving the storm water drainage situation has been identified and tentative cost has been provided for short term, medium term and long term.
- The total cost for storm water development is 12.39 crores

#### **Action Item for ULB**

- Develop project report and implementation for storm water drain from water logging areas identified in the report and shown on map number 6.2 of the report. The main water logged areas are in ward 9 and 10.
- Construction of new drains of 4 km length in non-drain existing areas and water logged areas respectively
- Strengthening of existing storm water drains 5.5 km of the existing drains in Chakuliya

### **Ponds and Crematoria**

#### **Study and Analysis details**

- Detail assessment and mapping of existing crematoria with respect to available infrastructure, physical condition, waste management, drainage management, facilities for visitors etc.
- Site survey and mapping of all the ponds in the town. Listing of activities near the ponds such as cattle wallowing, bathing, washing, open defecation, vehicle cleaning.
- Details of crematoria is given in section 10.1 of CSP.
- Identification of proposed activities and infrastructure to be set up at the crematoria.
- Identification of drains meeting ponds and strategy to divert them.

- Strategy to boost local tourism near the ponds.

### **Action Item for ULB**

- Ponds
  - ULB need to improve the condition of all the ponds in phase wise manner. Details of ponds that require improvement is provided in section 10.4 of CSP.
  - Restricted activities such as cattle wallowing, bathing, washing, open defecation, vehicle cleaning should be banned by ULB.
  - Set up separate pond for Idol immersion activity during the festival period.
  - Ponds having open spaces around needs to be developed as local tourism spots in the first phase.
  - Waste water (black water) reaching ponds should be diverted to natural drains on immediate basis.
- Crematoria
  - Up-gradation of existing wood based conventional facility to improved technology such as improved wood based / electric based/ gas based crematoria
  - ULB should provide basic facility in the existing crematoria as mentioned in section 10.1 of CSP.
  - Preliminary cost estimates for up-gradation and setting of new electric crematoria along with pond development cost is given in table 10.3 of CSP (Total cost estimates for these facilities till the 2045 would be Rs 1667 lakh).

### **Other Details Addressed**

- Sources of the funding for the projects identified in CSP have been given in chapter 13 of the CSP.
- Assessment of institutional structure at state and local level has been done in chapter 11 of the CSP. Manpower required for sanitation sectors and capacity building of the staff is also discussed.
- A brief summary of all the relevant policy, guidelines, programs and schemes is provided in chapter 2 of CSP.
- Role of City Sanitation Task Force and strategy for awareness generation are discussed in chapter 12 of CSP.