

Preparation of City Sanitation Plan for a Urban Local Bodies in India

by:

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Implementation of the NUSP

- Sanitation is a **state subject** and on ground implementation and sustenance of public health and environmental outcomes requires **strong city level institutions and stakeholders**.
- Considerable field work with technical inputs and effective consultations at local level to reflect the local needs of sanitation are required to make the plans more realistic.
- Further, to ensure quality and uniform approach it could be best **managed through a single agency** at the State level.

Vision for Urban Sanitation in India

All Indian cities and towns become

- Totally Sanitized,
- Healthy,
- Livable and
- Sustain good Public Health and Environmental outcomes

for all their citizens with a special focus on **hygienic and affordable sanitation facilities** for the urban poor and women.



Key Sanitation Policy Issues

- Poor Awareness
- Social and Occupational aspects of Sanitation
- Fragmented Institutional Roles and Responsibilities
- Lack of Integrated City-wide Approach
- Limited Technology Choices
- Reaching the Un-served and Poor
- Lack of Demand Responsiveness

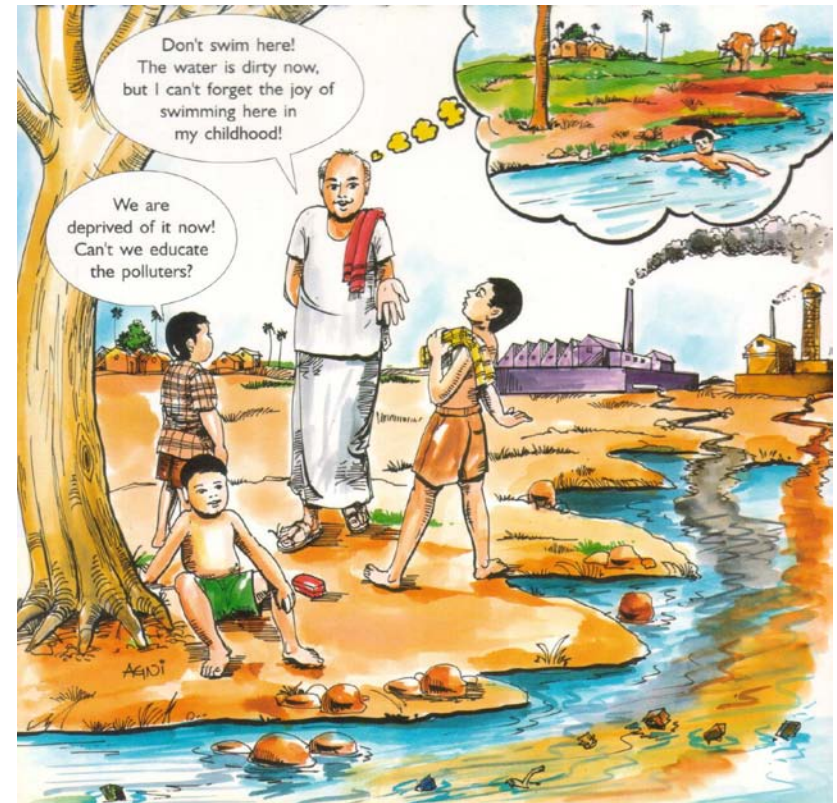
Policy Goals

- Awareness Generation and Behavior Change
- Open Defecation Free Cities
- Integrated City-Wide Sanitation
- Sanitary and Safe Disposal
- Proper Operation & Maintenance of sanitary Installations

Activities in the CSP

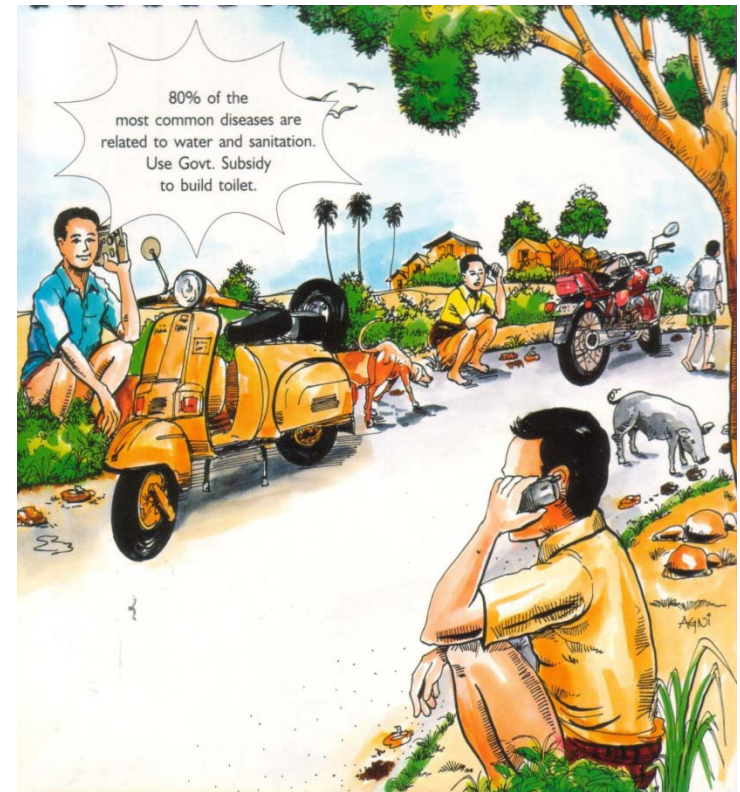
Awareness Generation and Behavioral Change

- Generating awareness about sanitation and its linkages with public and environmental health amongst communities and institutions
- Promoting mechanisms to bring about and sustain behavioral changes aimed at adoption of healthy sanitation practices



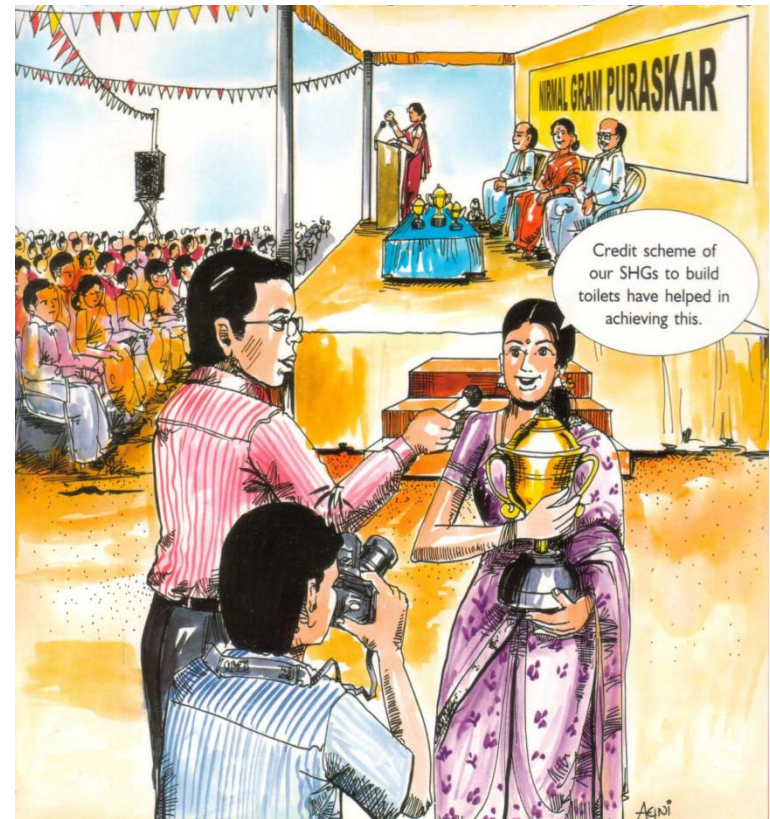
Open Defecation Free Cities

- Promoting household access to safe sanitation facilities (including **proper disposal arrangements**)
- Promoting **community-planned and managed toilets** wherever necessary, for groups of households who have constraints of space, tenure or economic constraints in gaining access to individual facilities
- Adequate availability and 100 per cent upkeep and management of public sanitation facilities in all urban areas, to **rid them of open defecation and environmental hazards**



Integrated City-wide Sanitation

- Mainstreaming **thinking, planning and implementing** measures related to sanitation in all sectors and departmental domains as a cross-cutting issue, especially in all urban management endeavors
- Strengthening national, state, city and local institutions (public, private and community) to accord priority to sanitation provision, including **planning, implementation and Operation & Maintenance (O&M) management**
- Extending access to proper sanitation facilities for **poor communities and other un-served settlements**



Sanitary and Safe Disposal

- Promoting proper functioning of **network-based sewerage systems** and ensuring connections of households to them, wherever possible
- Promoting recycle and **reuse of treated waste** water for non-potable applications, wherever possible, will be encouraged
- Promoting proper **disposal and treatment of sludge** from on-site installations (septic tanks, pit latrines, etc.)
- Ensuring that all the human wastes are collected safely confined and **disposed-off after treatment** so as not to cause any hazard to public health or the environment

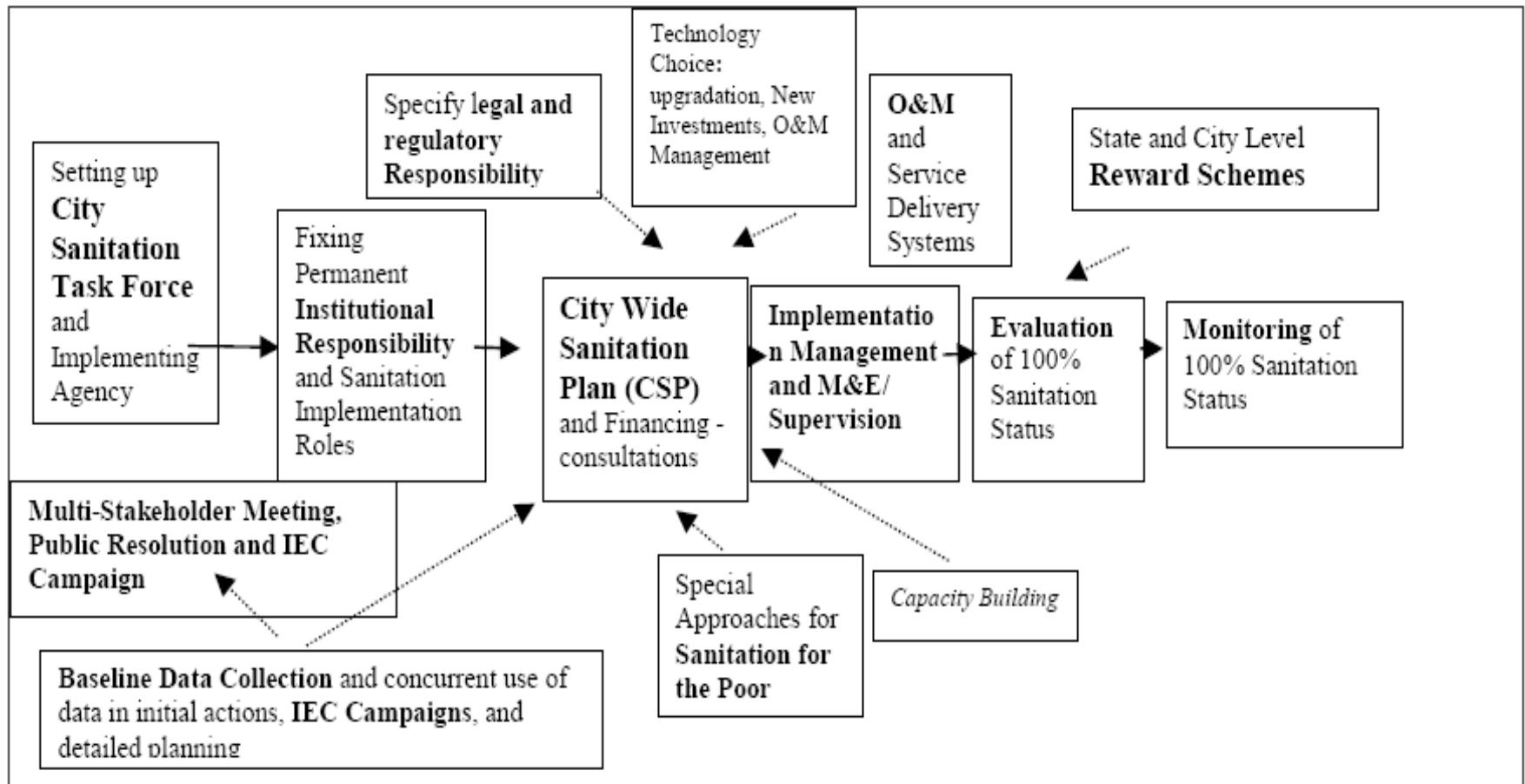
Proper Operation and Maintenance of All Sanitary Installations

- Promoting proper **usage, regular upkeep and maintenance** of household, community and public sanitation facilities
- **Strengthening Urban Local Bodies (ULBs)** to provide or cause to provide, sustainable sanitation services delivery

City Sanitation Plan

- The basic step to achieve the state sanitation is **city sanitation**
- The CSP framework is to assist Urban Local Bodies, NGOs, community based organizations, citizens and private sector agencies in Govt. of India through a series of steps toward achieving the goal of **100 percent sanitation in their cities.**

Generic Elements of Planning, Implementation and O & M of City Wide Sanitation



Methodology to be adopted

- **Preparatory Activities**

- Setting up City Sanitation Task Force
- Stakeholders Consultations (Urban Local Bodies, other parastatal departments, NGOs, Civil societies, Unions, private firms/contactors and Users)
- Baseline Data Collection and Creating Database
- Households data
- Development of GIS

- **Awareness Generation and Behavioral Change**

- Personal Hygiene and Behavioral Surveys
- Awareness Generation Strategy

Continued..

- **Open Defecation Free Cities**
 - Condition Assessment Surveys for existing sanitation facilities
 - Technical Choices and Designs
 - Stakeholders Consultations
 - Engineering Surveys & Designs
 - Willingness to Pay for Services Surveys
 - Finance Strategy
- **Integrated City Wide Sanitation**
 - Institutional Assessment – Availability of Manpower, Skills, Systems & Procedures, Roles & Responsibilities, Legal & Regulatory Framework
 - Stakeholders Consultations (Urban Local Bodies, other parastatal departments, NGOs, Civil societies, Unions, private firms/contactors and Users)
 - Service provision for Urban Poor

Continued...

- **Sanitary and Safe Disposal**
 - Implementation and Supervision Strategy
 - Monitoring and Evaluation
- **Proper Operation and Maintenance of all Sanitary Installations**
 - O&M and Service Delivery Strategy
 - Capacity Building Strategy
 - Financial Status – O&M, Revenue and Tariffs, Overall Finance Status

City Sanitation Plan

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Proposed Plan

Experts

Hygiene & Low cost Sanitation Expert

Solid Waste Expert

IEC & Capacity Bldg Expert

Social Specialist

Finance Specialist

GIS Expert

City Sanitation Task Force

Chief Officer / Commissioner – Conveyer

President / Mayor

Irrigation / PWD Engineer

Medical officer

Water Supply Engineer

Sewerage System Engineer

District Health Officer

PHC Head

City Engineer

NGO's working in City Sanitation

Peoples Forum (If any)

Key Area for CSP....

- Safe Disposal of human excreta
- Solid Waste Management
- Liquid Waste Management
- Safe handling of drinking water
- Home sanitation & food hygiene
- Personnel hygiene
- Community environmental sanitation

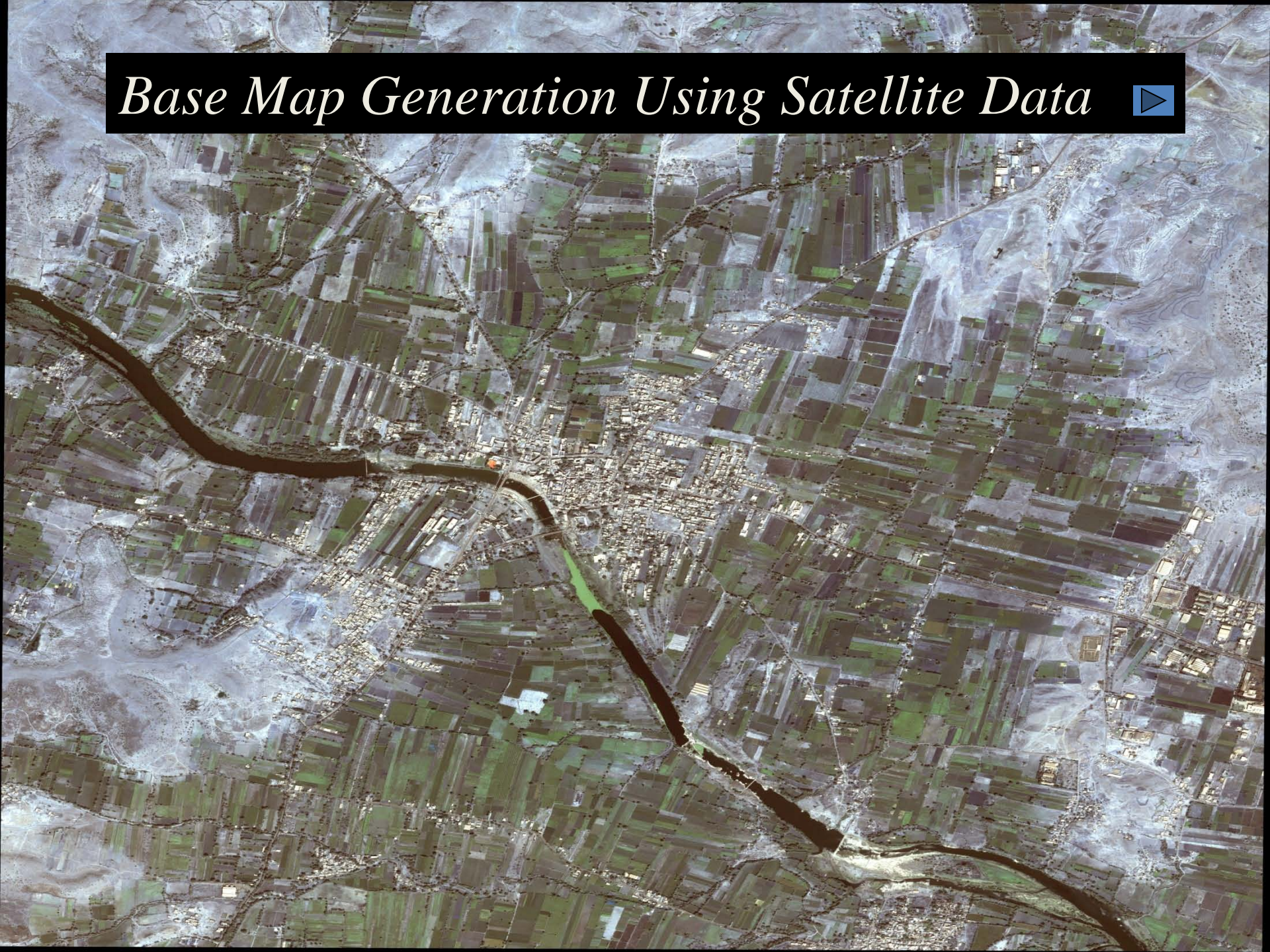
Broad contents

- Introduction to the Town/City-Profile
- Water supply
- Sewerage facilities
- Solid Waste Management facilities
- Total Sanitation facilities
- Gaps and missing links
- Comprehensive Plan based on Missing links
“City Sanitation Plan”

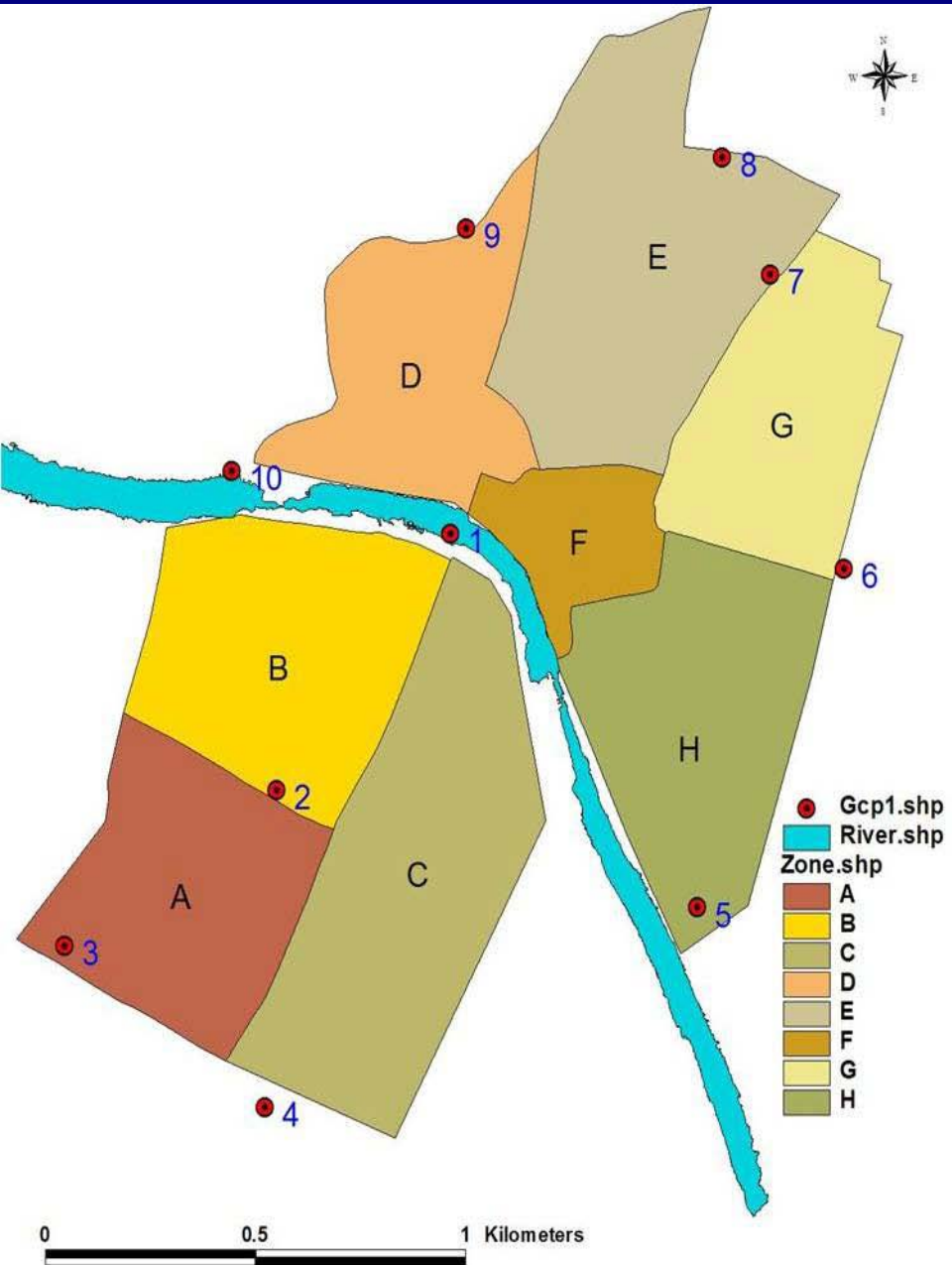
Proposed activities

- **Sewerage**
 - Identify missing links
 - Update the network
 - Onsite Sanitation Facilities e.g De-sludging units etc
 - Low cost sewerage facilities- Soak Pits, Septic Tanks
 - Toilet construction
- **Solid waste management**
 - Efficient Collection and Transportation Mechanism
 - Sweeping (mechanical and manual)
 - Sanitary landfill (closure of existing landfill site and identification of new)

Base Map Generation Using Satellite Data



Various Surveys for Preparation of Zone /Base Map





Base Map Generation

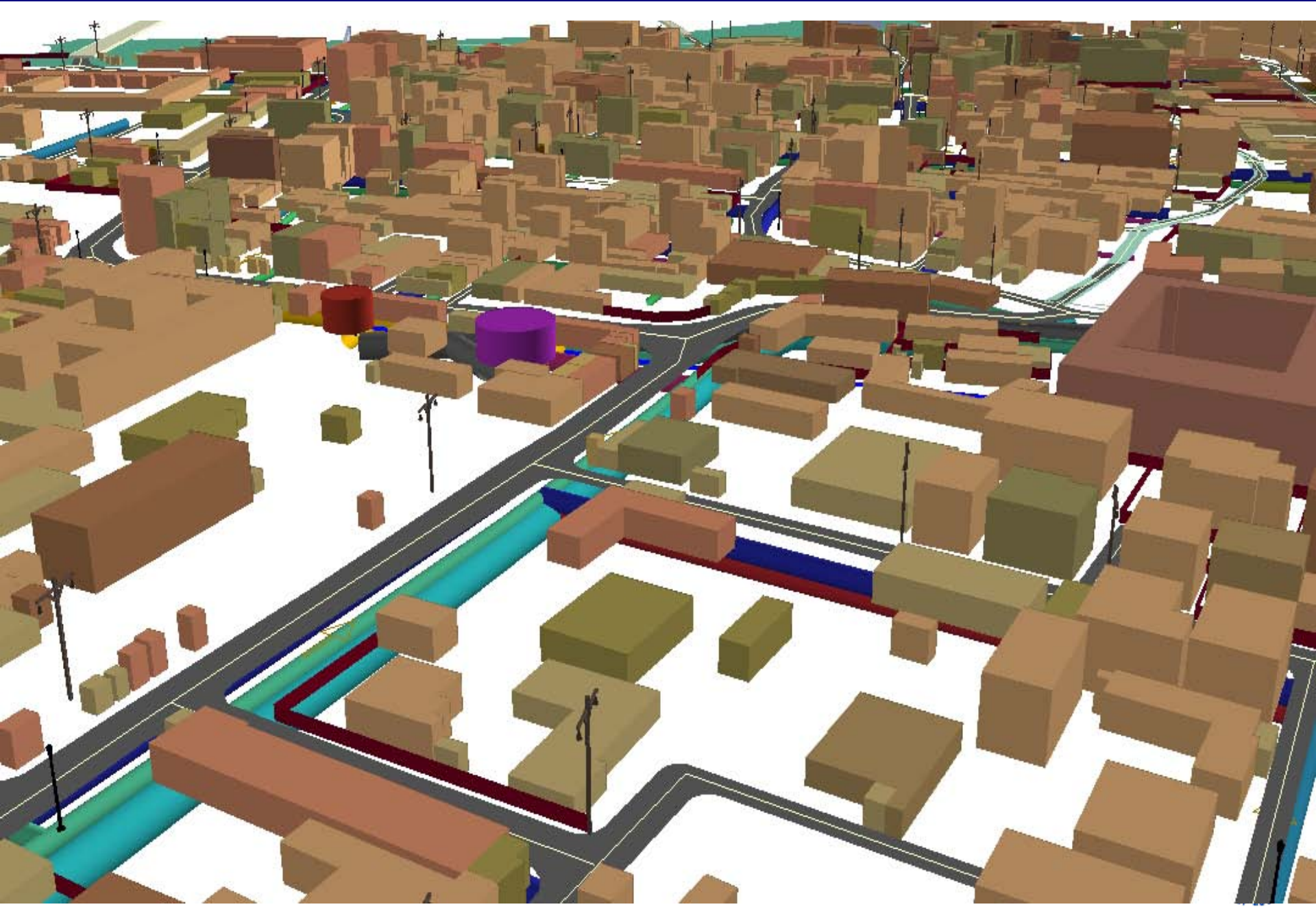
Properties

epole ByLayer ByLayer ByLayer ByColor

- 0
- eline
- epole
- manhole
- property
- roads
- swline
- wtr
- wtrpmp

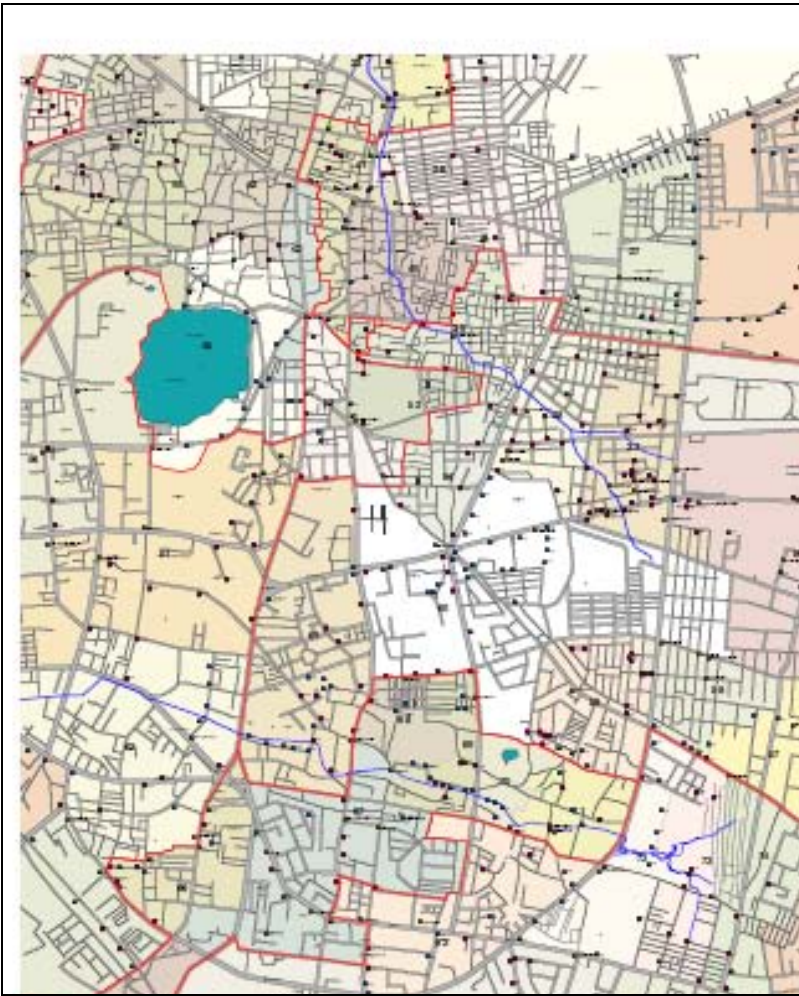
Model Layout1 Layout2

Command:

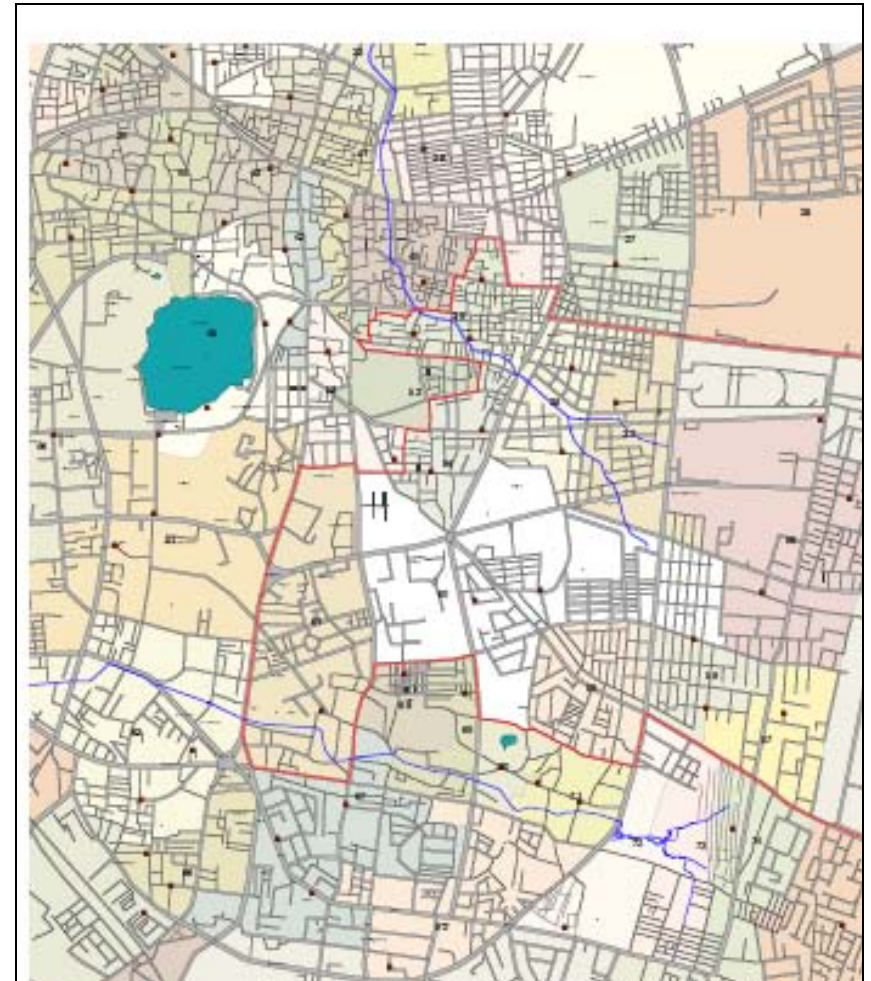


A Typical Sewerage Network Map

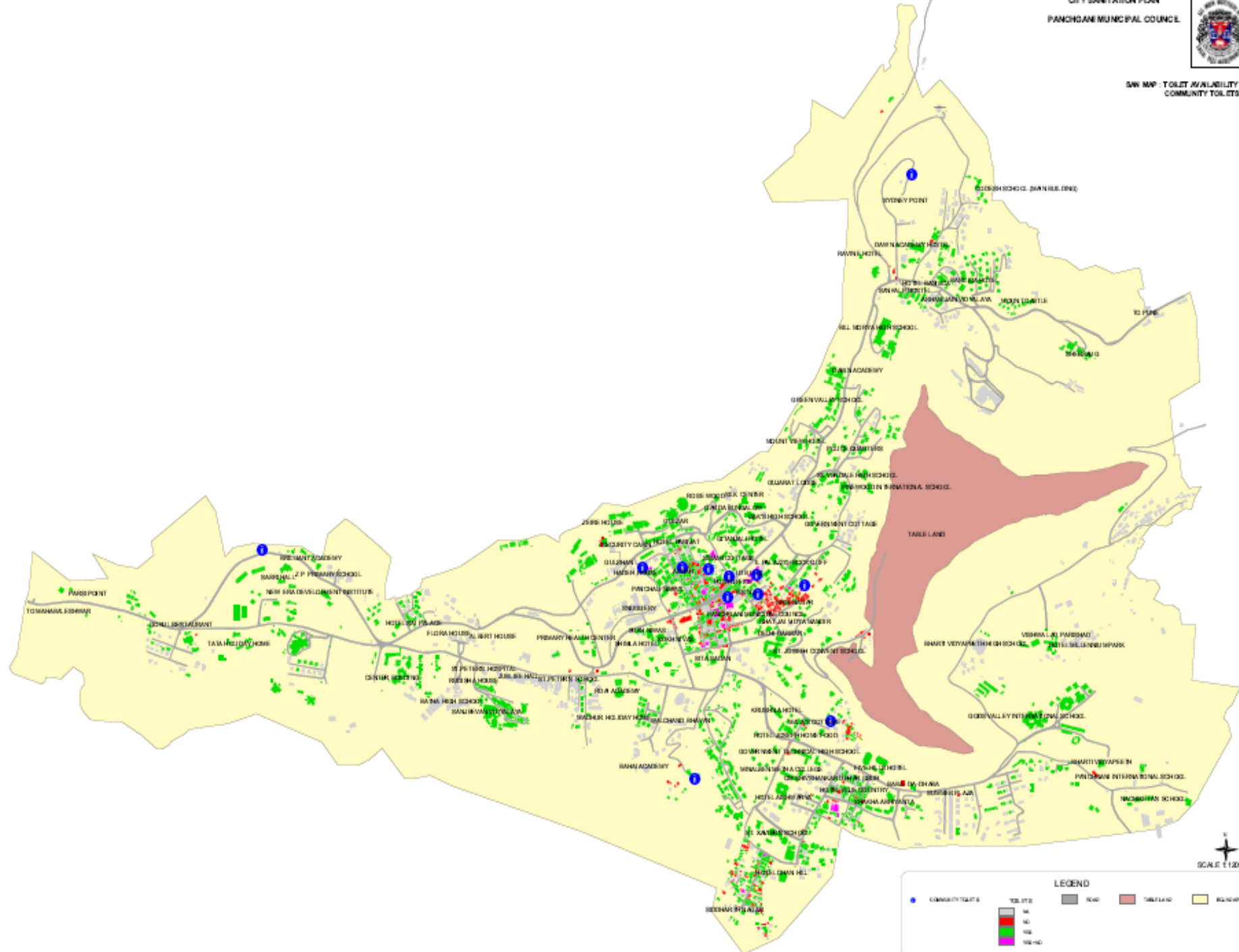




Community Bins Before



Community Bins After

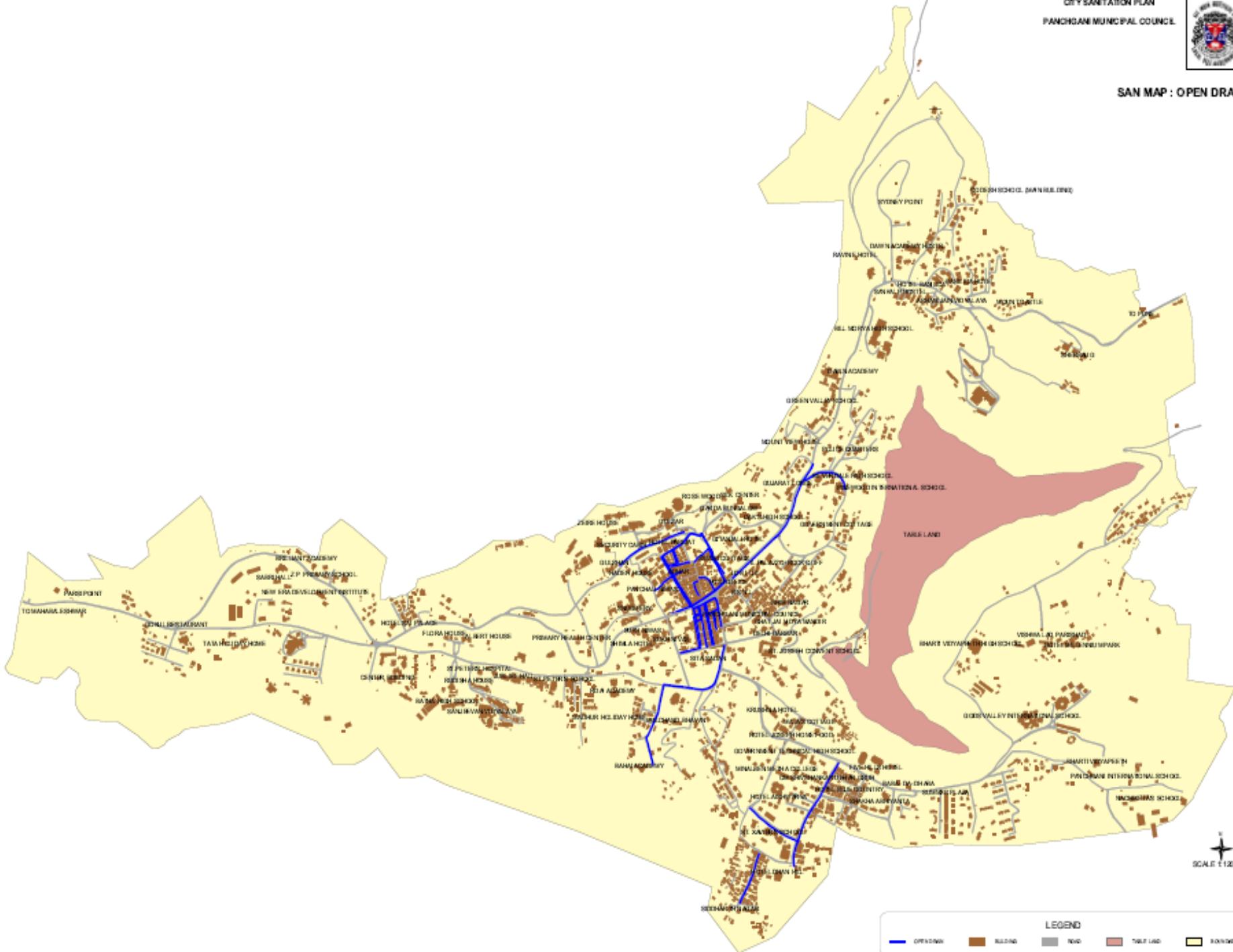


LEGEND

● COMMUNITY TOILETS	 ROAD	 TANK LAND	 BUILDING
 50	 100	 150	 200



SAN MAP : OPEN DRAIN



LEGEND

	OPEN DRAIN		BUILDING		ROAD		TALK LAND		BOUNDARY
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SCALE 1:1200





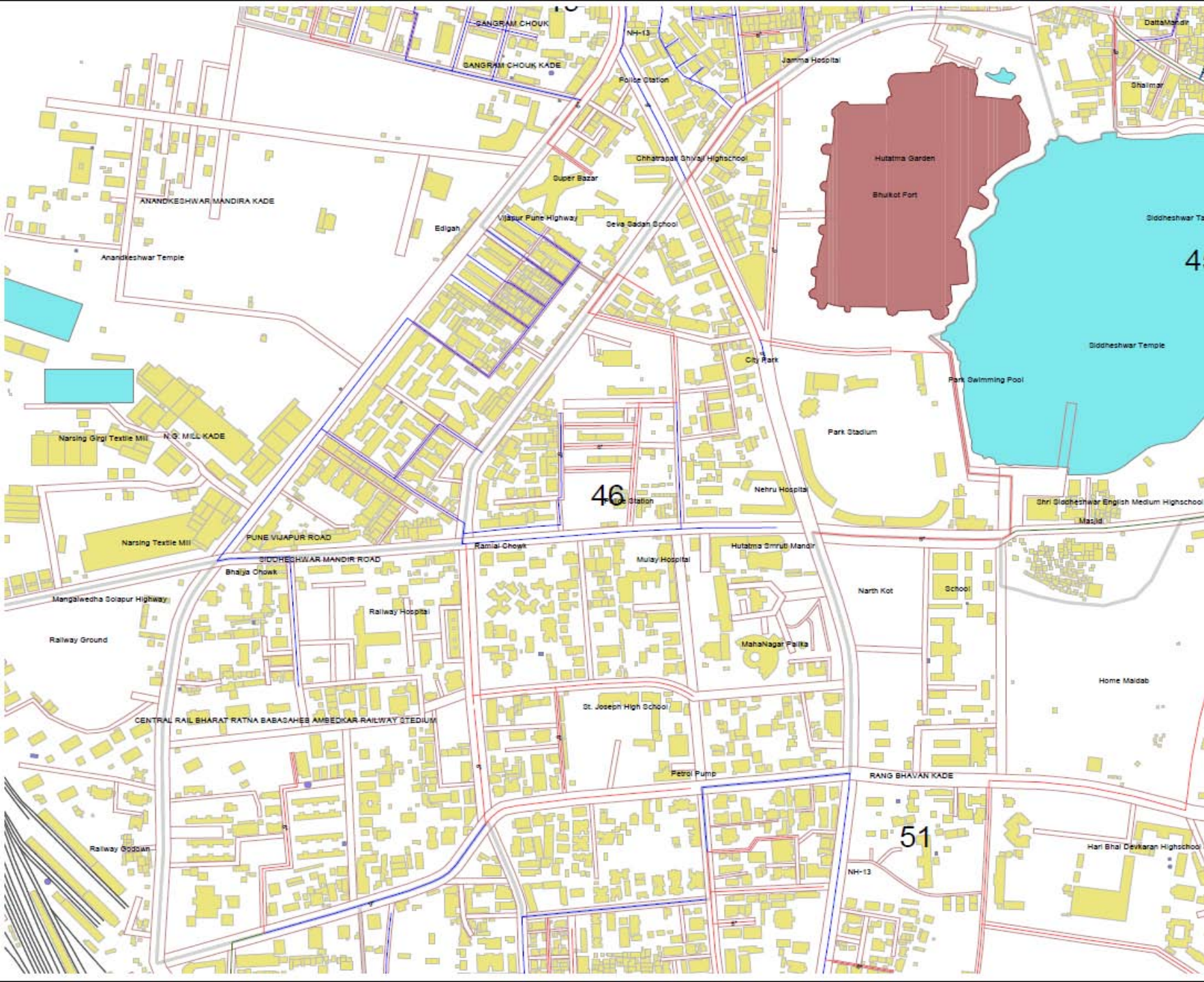


SOLAPUR MUNICIPAL CORPORATION

GIS PROJECT:
UTILITY NETWORK
MAP : SEWAGE

LEGEND

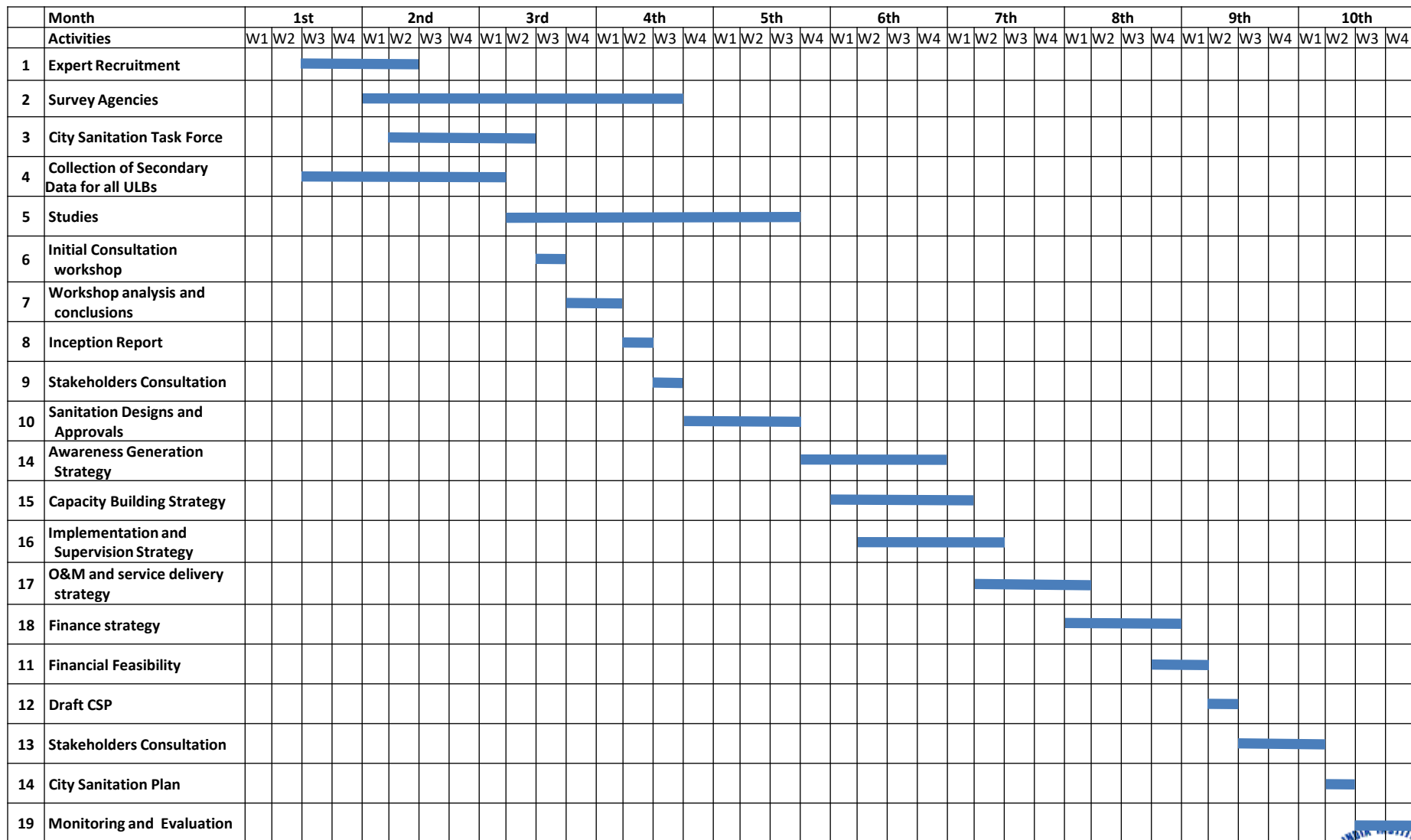
- CHAMBERS
- SEWAGE LINES
- RAIL WATER
- 4"
- 6"
- 8"
- 10"
- 12"
- 16"
- 24"
- 30"
- 36"
- 48"
- 72"
- 65P
- PORT
- RAIL LINE
- ROAD
- WATER TANK
- NLA
- WATERBODY
- BUILDING
- WARD
- CANAL



WARD - 46
1:1500



Gantt Chart



Preparations Required by Cities

- Identify Task Force members and setup Task Force
- Update database on Sanitation
- Update maps showing existing sanitation facilities in the city
- Identify areas presently not covered under sanitation and collect relevant technical details

Thank you !!!

