Chapter-4

Performance Audit of Implementation of Jawaharlal Nehru National Urban Renewal Mission (JNNURM)

Municipal Administration and Urban Development Department

4.1 Introduction

4.1.1 Objectives of JNNURM

JNNURM was launched in December 2005 by Government of India (GoI) with a mission period of seven years (2005-12) to encourage reforms and fast track planned development of identified cities, with focus on efficiency in urban infrastructure and service delivery mechanisms, community participation and accountability of Urban Local Bodies (ULBs)/parastatal agencies towards citizens.

4.1.2 Sub-missions and components

The two main sub-missions of JNNURM are as follows:

- Urban Infrastructure and Governance (UIG), administered by the Ministry of Urban Development, which covers infrastructure projects relating to water supply and sanitation, sewerage, solid waste management, road network, urban transport and redevelopment of old city areas; and
- Basic Services to the Urban Poor (BSUP), administered by the Ministry of Housing and Urban Poverty Alleviation (GoI), which covers integrated development of slums through projects for providing shelter, basic services and other related civic amenities with a view to providing utilities to the urban poor.

JNNURM has the following two additional components for projects in small and medium towns (i.e., non-mission cities):

- Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT), administered by the Ministry of Urban Development (GoI), which covers improvement in urban infrastructure projects relating to water supply, sewerage, solid waste management and roads, etc., in towns and cities in a planned manner.
- Integrated Housing and Slum Development Programme (IHSDP), administered by the Ministry of Housing and Urban Poverty Alleviation (GoI), which covers slum development with a healthy and enabling urban environment by providing adequate shelter and basic infrastructure facilities to the slum dwellers.

Based on Census 2001, 65 cities/Urban Agglomerations (UAs) were identified as 'mission cities' under JNNURM under three different categories. These included Hyderabad (Category A), Visakhapatnam and Vijayawada (Category B) and Tirupati[1] (Category C) in Andhra Pradesh. Other cities (termed as 'non-mission cities') are not eligible for coverage under the two main sub-missions of JNNURM (UIG and BSUP), but are eligible for finance under the two smaller components of JNNURM *viz.,* UIDSSMT and IHSDP.

[1]Notified as a JNNURM 'mission-city' in 2009

4.1.3 Mission Strategy

JNNURM envisaged the following strategy to achieve its objectives:

- Preparing a ***City Development Plan (CDP)*** indicating policies, programmes and strategies, financing plans and also facilitating identification of projects;
- Preparing ***Detailed Project Reports (DPRs)*** for undertaking projects in the identified spheres, which would ensure and demonstrate optimisation of the life cycle costs over the planned horizon of the project;
- ***Releasing funds*** (by the Central and State Governments) as grants-in-aid to the State Level Nodal Agency (SLNA), which would, in turn, disburse funds to the ULB/parastatal agency as soft loan or grant-cum-loan or grant; the SLNA/ULB would also ***leverage additional resources*** from other sources; and
- ***Incorporating private sector efficiencies*** in development, management, implementation and financing of projects through Public Private Partnership (PPP) arrangements.

4.1.4 Reforms Agenda

Since JNNURM was envisaged as a national level reform linked investment initiative, the State Governments and the ULBs (including parastatal agencies) were required to execute a tripartite Memorandum of Agreement (MoA) with the GoI regarding the reforms agenda, indicating specific milestones for each item of reform, as a necessary condition for accessing GoI assistance. Another mandatory condition for accessing GoI assistance is having elected bodies for all the cities.

4.1.5 Funding Pattern

Funding pattern for various categories of projects is broadly as follows:

Table 4.1

(In percentage)

Category	UIG			BSUP		UIDSSMT			IHSDP	
	Grant		ULB or Parastatal Share/Loan from FIs	Grant - Central Share	State/ULB/ Parastatal share, including Beneficiary Contribution	Grant		Nodal/ Implementing agency/Loan from FIs	Grant - Central Share	State /ULB/ Parastatal Share including Beneficiary Contribution
	Centre	State				Centre	State			
Category – A **Mission cities**	35	15	50	50	50	80	10	10	80	20
Category – B **Mission cities**	50	20	30							
Category-C **and other cities**	80	10	10	80	20					

Source: JNNURM guidelines

4.1.6 Organisational setup

JNNURM functions under the overall guidance of a National Steering Group (NSG) at the central level, which sets policies for implementation, monitors, reviews progress and suggests corrective action wherever necessary. The NSG is supported by

a Technical Advisory Group (TAG), whose task is to appraise proposals, and a Central Sanctioning and Monitoring Committee (CSMC), which is responsible for further appraising and sanctioning proposals. DPRs are scrutinised by the technical wings of the GoI Ministries/specialised technical agencies, before submitting proposals for sanction by the CSMC.

At the State Level, the programme is co-ordinated by a State Level Steering Committee (SLSC), headed by the Chief Minister/Minister of Urban Development/ Minister of Housing, which reviews and prioritises proposals for seeking inclusion under JNNURM and assistance from the GoI. The SLSC is supported by a host of agencies, as summarised below:

Agency	Function(s)	Remarks
State Level Nodal Agency (SLNA)	Appraisal of projects submitted by ULB/parastatal agencies and obtaining sanction of SLSC; management of grants received from the Central and State Governments, and release of funds to ULBs/parastatal agencies; management of revolving fund for O&M; monitoring implementation of reforms (as indicated in the MoA); and monitoring physical and financial progress of sanctioned projects.	Andhra Pradesh Urban Finance & Infrastructure Development Corporation (APUFIDC) has been designated by the Government as the SLNA in February 2006.
Programme Management Unit (PMU)	Assist the SLNA in discharging its responsibilities, by providing requisite technical and managerial support, with a focus on programme management and monitoring.	PMU for Andhra Pradesh was sanctioned in June 2008.
Project Implemen-tation Unit (PIU)	Operations unit, which supplements and enhances the existing skill mix of the ULBs, with a focus on enhancing the pace and quality of implementation of JNNURM.	10 PIUs – for three mission cities[2] and seven non-mission cities[3] were sanctioned in June 2008.

Source: JNNURM guidelines

4.2 Audit Framework

4.2.1 Audit objectives

The objectives of Performance Audit of JNNURM were to assess whether:

- Reform agenda was implemented effectively;
- Individual projects were planned properly and executed economically and efficiently and achieved their intended objectives;
- There was a comprehensive and reliable assessment and identification of the requirements for infrastructural development of cities;
- Financial control was exercised adequately; and
- Mechanism for monitoring and evaluation was adequate and effective.

[2]Hyderabad, Visakhapatnam and Vijayawada
[3]Vizianagaram, Rajahmundry, Guntur, Anantapur, Ranga Reddy, Karimnagar and Warangal

4.2.2 Audit criteria

Audit findings were benchmarked against the criteria sourced from the following:

- Mission Guidelines, instructions, circulars, orders and toolkits issued by the GoI from time to time;
- Tripartite Memorandum of Agreement signed between the GoI, State Government and the ULBs;
- Detailed Project Reports (DPRs) of selected projects; and
- Andhra Pradesh Financial code and instructions issued by the State Government from time to time.

4.2.3 Audit Scope and Methodology

Audit was carried out between April 2011 and June 2012 and covered the implementation of projects during the entire mission period of JNNURM (2005-12). Out of the 251 projects costing ₹11,907 crore approved for the State under JNNURM, 74 projects *(Appendix 4.1)* with approved cost of ₹6,352 crore (53 *per cent)* falling under the four Mission cities[4] and 38 Non-Mission cities[5] were selected for detailed audit scrutiny. The component wise details are given below.

Table 4.2

Components	Sewerage	Storm water drains	Water Supply	Infrastructure facilities/ Housing	Others	Total	Approved cost (₹ in crore)
UIG	8	8	10	0	1	27	3759.77
BSUP	0	0	0	4	0	4	1063.67
UIDSSMT	8	9	25	0	0	42	1473.39
IHSDP	0	0	0	1	0	1	55.36
Total	**16**	**17**	**35**	**5**	**1**	**74**	**6352.19**

The Performance Audit commenced with an Entry Conference with the Managing Director, APUFIDC (SLNA for Andhra Pradesh) in April 2011. Field audit involved scrutiny of records of APUFIDC, concerned ULBs and the implementing agencies[6] for the projects. Photographic evidence was obtained to substantiate audit findings where necessary. Survey of 1528 beneficiaries in respect of 20 projects was also conducted as part of audit. Audit findings were discussed with the Government in an Exit Conference in January 2013 and the responses of the Government/Department, including their written replies, were incorporated in the report at appropriate places.

[4] Hyderabad, Visakhapatnam, Vijayawada and Tirupati

[5] Anakapalli, Anantapur, Bapatla, Bhongir, Chirala, Dharmavaram, Dhone, Eluru, Kadapa, Kadiri, Kamareddy, Kandukur, Karimnagar, Kurnool, Mahbubnagar, Mancherial, Markapur, Medak, Miryalaguda, Nagari, Nalgonda, Nandyal, Narasaraopet, Narayanpet, Nizamabad, Ongole, Pithapuram, Proddutur, Rajampet, Rayadurg, Ramachandrapuram, Sangareddy, Siddipet, Suryapet, Tanuku, Wanaparthy, Warangal and Yemmiganur

[6] Hyderabad Metro Water Supply and Sewerage Board, Public Health Engineering Division of MA&UD Department

Audit Findings

4.3 Implementation of Reforms

4.3.1 Tripartite MoAs

Tripartite MoAs were executed with three of the mission cities (Hyderabad, Visakhapatnam and Vijayawada) in March 2006, while in respect of the fourth mission city (Tirupati[7]), it was executed in 2009.

4.3.2 State Level Mandatory Reforms

4.3.2.1 Background

The mandatory reforms at the State level under JNNURM covered the following:

- Implementation of the decentralisation measures envisaged in the 74th Constitutional Amendment Act (CAA);
- Repeal of Urban Land Ceiling and Regulation Act;
- Repeal of Rent Control Laws, balancing the interests of landlords and tenants;
- Rationalisation of stamp duty, to bring it down to not more than 5 *per cent*;
- Enactment of a Public Disclosure Law, so as to ensure preparation of medium term fiscal plan of ULBs and parastatal agencies and release of quarterly performance information to all stakeholders;
- Enactment of the Community Participation Law to institutionalise citizens' participation and introduction of the concept of Area Sabha in urban areas; and
- Assigning or 'associating' elected ULBs with the city planning function – over a period of seven years, transferring all special agencies delivering civic services in urban areas to ULBs, and creating accountability platforms for all urban civic service providers in transition.

Audit scrutiny revealed the following position in respect of the actual implementation of mandatory State level reforms in Andhra Pradesh:

4.3.2.2 Decentralisation measures

These involved transfer of 18 functions listed under the XII Schedule of the Constitution to ULBs. While 17 have been transferred by State Government to the ULBs, fire services were not transferred, as it catered to the needs of both rural and urban areas. However, the actual transfer of responsibility for these functions to the ULBs differed in respect of several functions, notably urban/town planning, as indicated below:

- In respect of the four mission cities (Hyderabad, Visakhapatnam, Vijayawada and Tirupati), where the Urban Development Authorities were set up, the Master Plan (Layouts and Development Plan) under Town Planning rests with the Urban Development Authorities and not with the ULBs.

[7]Tirupati was added as a mission city only in 2009

- In August 2007, amendment to the Andhra Pradesh Urban Areas Development Act and the Hyderabad Metropolitan Water Supply and Sewerage Act were passed, associating elected ULBs with the functioning of UDAs and HMWSSB. However, in the six[8] test checked water supply and sewerage projects with HMWSSB, there was no evidence of the ULB's active involvement in preparation of Master plan and its implementation.

Audit findings in respect of other functions listed under the XII Schedule, formally transferred to the ULBs are summarised below:

Function	Status
Planning for economic and social development	This involved constituting District Planning Committees (DPCs) in all the districts, and the constitution of a Metropolitan Planning Committee (MPC) for Hyderabad. DPCs had been constituted in all the districts (except for Hyderabad). As regards the MPC for Hyderabad Metropolitan Area, Rules for formation of the MPC (in pursuance of the Act for constitution of MPC passed in December 2007) were issued only in January 2009. Further, the MPC for Hyderabad Metropolitan Area was yet to be constituted as of June 2012.
Roads and bridges	In the cities where UDAs are functioning, this function is being discharged by the UDAs as well as ULBs.
Water supply for domestic, industrial and commercial purposes	In respect of Hyderabad UA, this function is vested with HMWSSB and not GHMC.
Urban forestry	In the cities where UDAs were functioning, this function is being discharged by both UDAs and ULBs.

4.3.2.3 Other State level mandatory reforms

The Urban Land (Ceiling and Regulation) Repeal Act, 1999 came into force with effect from 27 March 2008. As regards reforms in rent control, as against the timeline of 2007-08 stipulated in the tripartite MoA[9], the Andhra Pradesh Rent Control Bill, 2011 was passed by the State Legislature in December 2011. However, assent of the President of India is awaited as of December 2012. As regards rationalisation of stamp duty, the State Government issued orders in July 2010, reducing the existing rates of stamp duty from 7 *per cent* to 5 *per cent* effective from 1 August 2010.

[8] 1. Rehabilitation and strengthening of sewerage system in old city area on south of Musi (Zone-I), 2. Rehabilitation and strengthening of sewerage system in old city area on south of Musi (Zone-II), 3. Implementation of sewerage master plan in Serilingampally municipality, 4. Comprehensive Water Supply Distribution Network and Implementation of Sewerage Master Plan for identified priority zones of Rajendranagar Municipal Circle of GHMC, 5. Krishna Drinking Water Supply Project - Phase II, and 6. Refurbishment of existing feeder system including distribution network for 10 zones in Old Municipal Corporation of Hyderabad

[9] Between the GoI, State Government and ULBs with regard to the reforms agenda

Enactment of Public Disclosure Law

An amendment was made in April 2008 to the Hyderabad Municipal Corporation Act, to facilitate disclosure of information to the public at various intervals. Rules made in compliance to the amendment stipulate disclosure of 24 key items of information to the public through websites, notice boards and news papers, public announcements, etc. However, orders for implementation of the amended Act were issued only in December 2009 i.e., after the lapse of 20 months.

Audit scrutiny of the websites of the four Mission cities indicated that the requisite information on issues like disclosure of Council resolutions, collection of taxes, defaulters' list, financial statements, list of welfare programmes under implementation, etc., was available on these sites. However, information relating to identification of beneficiaries under different subsidy programmes and welfare programmes, list of plan and non-plan grants received from the Government, and annual accounts (specified in the April 2008 amendment) were not available on the ULB websites. ULB-wise details of non-provision of the stipulated information are indicated in *Appendix 4.2.* State Government replied (December 2012) that necessary instructions were issued to all the ULBs to disclose all the information as per Public Disclosure Law.

Enactment of Community Participation Law

An amendment was made in April 2008 to the Hyderabad Municipal Corporation Act, providing for constitution of Ward Committees (consisting of members of the Council representing the Ward, nominated members representing civil society, and representatives of the Area Sabhas (if existing), Ward Sabha (consisting of all electors in the ward) were to be constituted for each ward in the Municipalities, whose population is less than one lakh) and Area Sabhas (consisting of representatives of civil society nominated by the Council from each area) where population is between 1,000 and 2,000.

Although Legislative amendments were passed in April 2008, Rules for the Ward Committees were framed only in February 2010.

- In GHMC (Hyderabad), Ward Committees and Area Sabhas have been constituted.
- In Visakhapatnam (GVMC), although Ward Committees were constituted, Area Sabhas were yet to be constituted[10].
- In the other ULBs in the State, these Committees/Sabhas were yet to be constituted as of June 2012.

Government stated (December 2012) that Ward Committees/Area Sabhas could not be constituted in other ULBs, due to absence of elected bodies, since elections were not held. Reply is not acceptable, since elected bodies were functioning in these ULBs at the time of issue of Rules (February 2010) and there was a delay of 22 months in framing the Rules.

[10] It was noticed from the Resolution dated 20 January 2012, that representatives were nominated for Area Sabhas, however, there was no documentary evidence that the Area Sabhas were constituted

4.3.3 ULB Level Mandatory Reforms

The ULB level mandatory reforms and the status of their implementation in the Mission cities are given below:

Reform	Status of implementation
E-Governance set up	The modules for major service delivery items relating to registration of births and deaths, payment of property tax and other service taxes have been developed, facilitating public to access through outsourced agencies like e-Seva centres.
Shift to Accrual based Double Entry Accounting	The ULBs of four mission cities generally indicated to audit that accounts were being prepared on accrual based double entry system and that, the units as well as the SLNA had reported successful achievement of this reform to GoI. However, Audit scrutiny revealed that only GHMC had actually prepared accounts on accrual based double entry system. As seen from the latest accounts of the other test checked ULBs (GVMC, VMC and TMC), accrual based double entry system was not being followed. The reporting of successful achievement of this reform by the ULBs and the SLNA to GoI, was thus, incorrect. In response, Government stated that the day-to-day transactions were being computerised in the new system.
Preparation of GIS database by the ULB	The ULBs committed to implement this reform within the first four years of the mission period. However, none of the test checked ULBs has so far succeeded in achieving this reform. Preparation of the GIS survey/database was still under progress in Hyderabad, Visakhapatnam and Vijayawada, while in the case of Tirupati, work has not been initiated. Government stated (December 2012) that preparation of GIS was completed in GVMC and confirmed that it was in progress in GHMC, VMC and TMC.
Property Tax (85 *per cent* coverage and 90 *per cent* collection efficiency)	All the ULBs reported that they had achieved coverage of property tax of more than 80 *per cent (GHMC 85 per cent; GVMC 90 per cent; VMC 89 per cent; TMC 100 per cent).* However, in the absence of a GIS database, correctness of the information could not be ensured. Regarding property tax collections, except VMC (97 *per cent*), the other three ULBs could not succeed in collection efficiency of more than 90 *per cent* as per the Demand Collection Balance (DCB) Register.
100 *per cent* cost recovery (Water Supply and Solid Waste)	Out of four mission cities, only GVMC had achieved the 100 *per cent* cost recovery towards water supply. As regards cost recovery towards solid waste, none of the ULBs had achieved this reform.
Internal Earmarking of funds for Basic Services to Urban Poor	Audit noticed that all the mission cities had earmarked stipulated percentage (40 *per cent*) of funds in the budget towards services for urban poor.

4.3.4 Optional Reforms

Audit noted that the State Government had initiated action with regard to all the optional reforms relating to revision of building by-laws, earmarking 20 - 25 *per cent* developed land in all housing projects for economically weaker sections/lower income groups, simplification of legal and procedural framework for conversion of agricultural land for non-agricultural purposes, encouragement to PPPs, etc.

4.4 Planning and Preparatory Work

Planning under JNNURM involved the following:

(i) Formulation of a ***City Development Plan (CDP)*** indicating policies, programmes and strategies, financing plans and ensuring that these remain living documents with updates as necessary.

Audit scrutiny revealed that CDPs have been prepared by the ULBs of all the four mission cities in the State and were approved by GoI.

(ii) ***Preparation of DPRs*** for projects in the identified categories to optimise the life cycle costs of the projects.

DPRs were prepared in respect of all the projects taken up under JNNURM. However, while MoUD developed toolkits for preparation of DPRs, Audit observed that these were not followed with regard to several aspects like clear and unencumbered title to land, assessment of utilities to shift, list of clearances and agencies from which those clearances are to be obtained, details of surveys and investigations to be carried out, schedule for adhering to above activities including tendering, identifying source of water, etc.

(iii) Creation of a ***Programme Management Unit (PMU***) to provide requisite technical and managerial support to SLNA.

Audit scrutiny revealed that PMU was sanctioned in June 2008 by GoI, and constituted in November 2008, by which time, the CDPs of all four mission cities were approved by GoI. Government stated during the Exit Conference (January 2013) that many of the projects included in JNNURM have been conceived long back and the DPRs were prepared much earlier and therefore these were forwarded to GoI without waiting for setting up the PMU. One of the PMU's focus areas was programme management and monitoring. However, the PMES (Program Monitoring and Evaluation System) of the PMU was not fully functional as of June 2012 as admitted by SLNA. Detailed and comprehensive information on a project-wise basis was not available through the PMES on the SLNA's website.

(iv) ***Project Implementation Units (PIUs)*** were to be created as operation units to supplement and enhance the skill mix of the ULBs.

While the JNNURM website of GoI indicated that 10 PIUs for three mission cities[11] and seven non-mission cities[12] have been sanctioned in June 2008, audit scrutiny of the test checked cities revealed that PIUs have not been set up in Vijayawada. Government replied (December 2012) that activities earmarked for PIUs were performed by the engineers and other staff of the ULBs concerned. The reply is not acceptable as it does not address the intended objectives of setting up the PIU, since several projects were delayed due to non-acquisition of land, non-receipt of permission from Railway authorities, etc., which could have been addressed had there been an effective PIU in place.

4.5 Financial Management

4.5.1 Fund release and expenditure

The details of funds released and expenditure incurred on 251 approved JNNURM projects as of March 2012 as per the records/information provided by SLNA are given below.

Table 4.3

(₹ in crore)

Component	No. of Projects	Approved Project Cost	Releases	Expenditure
UIG	54	5238	1971*	3451
BSUP	36	3012	1422*	2273
UIDSSMT	84	2460	2272	2194
IHSDP	77	1197	613	678
Total	**251**	**11907**	**6278**	**8596**

**This includes GoI and State Government share but excludes ULB share*

Audit could not verify the reliability of the above reported expenditure, in the absence of separate project accounts.

4.5.2 Diversion of funds

Scrutiny of records revealed cases of diversion of funds for non-JNNURM purposes and funds expended on items not permissible as per the programme guidelines, as detailed below:

- HMWSSB diverted (December 2008 – June 2009) ₹78.38 crore for making payment of bills under Godavari Drinking Water Supply Scheme Phase-I, which was not a part of JNNURM. Similarly, ₹2.86 crore were met from JNNURM funds towards charges for manning, operation and maintenance of pumping plants and substations at Kodandapur, Nasarlapally and Godakondla relating to Phase-I. State Government assured (December 2012) that the diverted funds would be recouped.
- Similarly, the Commissioner, TMC diverted ₹4.63 crore to Urban Poor Housing/ Indiramma Housing Infrastructure, based on the directions of State Government

[11] Hyderabad, Vijayawada and Visakhapatnam
[12] Anantapur, Guntur, Karimnagar, Rajahmundry, Ranga Reddy, Vizianagaram and Warangal

and ₹7.72 crore was paid on escalated items of steel and cement. In response, the Commissioner, TMC (December 2012) stated that the State Government would be requested to provide additional funds for the amounts diverted.

4.5.3 Other Financial Deviations

- Central Excise Duty (CED) exemption amounting to ₹10.17 crore was irregularly reimbursed to contractors in four projects[13]. In respect of two[14] projects in GVMC, Government agreed (December 2012) to recover the excess payment. As regards the project relating to augmentation of water supply to Gajuwaka, it was stated (December 2012) that payment was made as per orders in vogue, which is not acceptable, in view of the fact that exemption certificate was issued by the Collector from payment of excise duty. With regard to the project relating to ***'Warangal water supply scheme'***, it was stated (December 2012) that CED component was not included in the rates for finished item of MS pipes while preparing the IBM. The reply is not acceptable, in view of the fact that the rates for MS pipes as per IBM included all taxes and duties.

- It was noticed from the records that excess amount of ₹21 lakh was paid in respect of the project '***Kurnool water supply scheme'*** due to reduction in CED from 16.48 *per cent* to 14.42 *per cent*. Government informed (December 2012) that the recovery would be effected from the subsequent work bills.

- Non/short recovery of Service Tax and Value Added Tax (VAT) amounting to ₹1.42 crore was noticed in the work bills relating to two projects[15]. Government stated (December 2012) that action would be taken to recover the dues.

- Seignorage charges of ₹1.27 crore and National Academy for Construction (NAC) charges of ₹35.54 lakh recovered from the work bills of contractors in two sewerage projects and one water supply project of VMC (November 2006 - March 2012) were not remitted to the Government/NAC. Government stated (December 2012) that the amount would be remitted after receipt of non-plan grant. This is not acceptable, in view of the fact that recoveries were already effected and remittance to Government account should not be linked to receipt of funds from Government.

- Seignorage charges of ₹53.79 lakh were loaded in the work estimates for earth excavation for total quantity (2,68,690.60 cum) in the project '***Augmentation of drinking water supply to Gajuwaka area'*** but were not recovered from the work

[13] Warangal water supply(₹5.51 crore), Augmentation of drinking water supply to 32 peripheral areas of GVMC (₹3.38 crore); Replacement of existing Thatipudi pipeline from Thatipudi reservoir to town service reservoir and pumping units (₹1.04 crore) and Augmentation of water supply to Gajuwaka (₹24.24 lakh)

[14] Augmentation of drinking water supply to 32 peripheral areas of GVMC; Replacement of existing Thatipudi pipeline from Thatipudi reservoir to town service reservoir and pumping units

[15] Improvement of storm water drains for Zone VIII of Greater Visakhapatnam city (₹1.29 crore) and Replacement of existing Thatipudi pipeline from Thatipudi reservoir to town service reservoir and pumping units (₹12.79 lakh)

bills of the contractor at the time of payment, resulted in excess payment to the contractor. Government stated (December 2012) that recovery would be effected.

- In two water supply projects[16], the works awarded to the original contractors were terminated due to non-adherence to the milestones and left over works were awarded to new contractors. This resulted in an additional expenditure (₹1.78 crore), required to be recovered from the original contractors. Government stated (December 2012) that ₹76.53 lakh was recovered by encashing the Bank guarantee towards EMD and for the remaining amount, action would be initiated for recovery under RR Act.
- In ***'Krishna drinking water supply project (Phase-II)',*** excess payment of ₹1.37 crore was made to the contractors due to inclusion of loading charges in carting/excavation rates. Government informed (December 2012) that action would be taken to recover the excess payments.
- Similarly, in the project, '***Improvement of storm water drains for Zone VIII of Greater Visakhapatnam city (Gangulhedda and Yerrigadda branch canals)',*** (i) excess payment on supply of quarry rubbish with excess rates in Package–II amounting to ₹4.81 lakh; (ii) non-recovery of seignorage charges at revised rates resulting in excess payment of ₹4.08 lakh; and (iii) excess payment of ₹41.08 lakh due to loading of conveyance charges in stacking were noticed. Government agreed (December 2012) to recover the excess payments.
- The Department, while calculating price adjustment on DI pipes for the payments relating to '***Kadiri water supply improvement scheme'***, had adopted the rate of pig iron ₹15,250 per MT (communicated in November 2008) instead of ₹20,000 per MT as per SSR 2007-08, which resulted in excess payment of ₹3.09 crore made to the contractor. Government stated (December 2012) that the pipes and fittings used in the water supply schemes are manufactured as per I.S. No 8329 and 1536 for Ductile Iron (DI) and Cast Iron (CI) respectively. Since the raw material cost for these pipes was not included in the SSR 2007-08 and the rate of ₹15,250 per MT was adopted based on the offer made by M/s Kudremukh Iron Ore Ltd., Bangalore which is a Government of India Undertaking and the same was communicated by the Engineer-in-Chief (PH) Hyderabad in November 2008. Reply is not acceptable in view of the fact that the SSR rates for both DI and CI pipes for 2008-09 are the same and the rates indicated in M/s Kudremukh Iron Ore Ltd.'s letter did not indicate whether the rates were applicable for DI or CI pipes.

4.5.4 Non-recovery/non-adjustment of pending advances

According to the provisions of Andhra Pradesh Finance Code (Volume I), all the advances paid to the officials for various purposes should be recovered within one month from the date of actual drawal by the official concerned.

[16]Kandukur and Markapur

Scrutiny of the records of Andhra Pradesh State Housing Corporation Limited (APSHCL) pertaining to BSUP project of Vijayawada revealed that advances of ₹3.83 crore was given to the officials/agencies during January 2009 to May 2011 for carrying out departmental works, of which, only ₹3.09 crore was adjusted, leaving an amount of ₹74 lakh unrecovered/unadjusted. The recoveries furnished (December 2012) by the Government in their response were not specific to the cases pointed out in Audit.

4.5.5 Management of Revolving Fund

JNNURM envisaged creation of a Revolving Fund, which would graduate to a State Urban Infrastructure Fund at the end of the Mission period.

- In respect of UIG/UIDSSMT, the SLNA was to sanction grant-cum-loan to the ULBs/parastatal agencies in such a manner that 25 *per cent* of the Central and State grant put together was to be recovered and ploughed into a Revolving Fund to leverage market funds for financing further investment in infrastructure projects;
- In respect of BSUP, whenever the SLNA released funds to the implementing agencies as soft loan or grant-cum-loan, it was to ensure that at least 10 *per cent* of the funds released (Central & State funds) were recovered and ploughed into a Revolving Fund to be utilised for meeting O&M expenses of assets created under BSUP.

Government created (July 2006) a Revolving Fund with regard to UIG/UIDSSMT related projects, and recovered ₹6.37 crore (out of ₹64.90 crore) as interest on loans released to ULBs and deposited in the fund. The remaining amount of ₹58.53 crore was yet to be recovered as of March 2012. Government stated (December 2012) that notices were issued to the ULBs concerned to remit the interest amount.

In respect of BSUP/IHSDP projects, Revolving Fund has not been created at all, since Government relieved the ULBs of the loan burden, by converting loans to grants in September 2009. In the absence of a Revolving Fund for O&M of BSUP/IHSDP assets, neither the SLNA nor the ULBs formulated any long term plans to ensure viable and effective O&M of infrastructure created by them. State Government replied (December 2012) that civic infrastructure would be maintained by the ULBs concerned from their internal sources.

4.6 Tendering

As per Andhra Pradesh Public Works Department code ('D' code), tenders should be invited for works valuing above ₹20,000. JNNURM guidelines and State Government orders (2003) prescribe the procedures to be followed for tendering and award of works, which *inter alia* include that all the works costing more than ₹2 crore are to be referred to the Commissioner of Tenders (CoT) along with technical and price bid evaluation for consideration; negotiations are not permitted to be conducted at any

level; ceiling for tender premium to be limited to 5 *per cent* of the estimated cost and even after two calls, if tender premium quoted is more than 5 *per cent,* matter should be referred to Government for fresh call or may constitute a Committee to award the work on nomination to a reputed contractor from the list to be maintained by the department on the basis of performance of contractors.

Audit scrutiny of major tenders and contracts revealed the following:

4.6.1 Krishna drinking water supply project (Phase-II)

The Krishna drinking water supply project envisages tapping 16.5 TMC[17] of raw water from the Krishna River (equivalent to 270 Mgd[18]) for augmenting the existing water supply to the Hyderabad Metropolitan area. The project was taken up in three phases of 90 Mgd each; the first phase for drawing 90 Mgd was executed during 2002-2005 and commissioned in April 2005.

Despite repeated requests from audit, and direction from Government during the Exit Conference (January 2013) to make the relevant tender files of this scheme available, HMWSSB did not furnish the tender files for these works for audit scrutiny. With the limited extracts made available, (Tender committee minutes, assessment of offers, letter of acceptance and forwarding slips of agreements) Audit believes that the possibility of cartel formation between the three successful groupings cannot be ruled out. The one bidder (Essar Construction Ltd.), who could perhaps have enhanced competitiveness in the bidding process, was technically disqualified, and its financial bids for all four works were, thus, not opened.

4.6.2 Splitting up of works

As per the toolkit for preparation of DPR, the projects are to be executed through limited number of packages. However, 6 projects[19] (2 Sewerage, 1 Water supply and 3 Housing) with an approved cost of ₹939.61 crore were split into multiple packages/ works ranging from 15 - 200 works, without any recorded reasons and without the approval of Government. This is irregular and is fraught with the risk of applying differential rates for same type of work. Government justified splitting the works (December 2012) and attributed it to poor response to initial tenders. The reply is not acceptable since these projects were plagued by lack of funds and non-acquisition of requisite land, and awarding contracts by splitting works would not serve the envisaged purpose.

[17] TMC: Thousand million cubic feet
[18] Mgd: Million gallons per day
[19] Providing Under Ground Drainage (UGD) to unserved areas in VMC ₹56.56 crore; Providing sewerage facility to northern part of Vijayawada city ₹178.15 crore; Providing water supply facilities in unserved areas of Vijayawada city ₹35.48 crore; Integrated Housing and Infrastructure Development Scheme, Hyderabad (49,000 houses) ₹490 crore, Construction of 4,550 Houses and Provision of Infrastructure Facilities in Hyderabad ₹124.06 crore and Construction of 4,087 houses and Provision of Infrastructure at Tirupati (IHSDP) ₹55.36 crore

4.6.3 Award of works

4.6.3.1 Acceptance of single tenders

The Implementing Agencies awarded 13 works under five projects[20] relating to Sewerage, Storm water drains and Water supply, amounting to ₹18.44 crore to single tenderers in the first call itself, which included one work ***'Providing sewerage collection network in Kanakadurga colony'*** at an estimated contract value of ₹4.02 crore, which was entrusted with a premium (9.97 *per cent*) exceeding the ceiling of 5 *per cent*. Another work ***Construction of 20 Mld STP at Jakkampudi*** at an estimated contract value of ₹12.95 crore was awarded to single tenderer in the fourth call with premium of 6.10 *per cent* exceeding the prescribed ceiling of 5 *per cent*. Similarly, 8 works[21] relating to Storm water drain in Hyderabad amounting to ₹1.48 crore were entrusted to single tenderer in the second call.

In respect of two Sewerage projects of Vijayawada, Government attributed (December 2012) non-response to initial tenders invited on EPC. The eight Storm water drain project works in Hyderabad were stated to have been awarded due to non-response to the first call, and therefore, the period of completion was modified and tenders were recalled and allotted to single responsive tenderer. The Water supply project at Vijayawada was stated to have been awarded on single tender basis considering the fact that the tender was below 5 *per cent* and the need to complete the work within the mission period. Reply is not acceptable in view of the following:

(i) Government approval was not obtained for any of the above projects before awarding the works and in respect of two works entrusted with premium exceeding the prescribed ceiling, the fact should have been referred to Government as per orders *ibid*.

(ii) There is no specific order/provision for accepting single tenders in the first call itself within the ceiling of 5 *per cent* and award of work in such cases is fraught with the risk of accepting rates without competitive tension.

4.6.3.2 Award of work on nomination basis

Inspite of specific orders for awarding the work on tender basis, the department awarded (March 2006 to December 2008) 45 works valuing ₹72.58 crore relating to construction of 23,239 houses[22] ***on nomination basis*** to different agencies, on the grounds that there was no response to the tender. Due to non-production of records of entrustment, audit could not derive assurance relating to the robustness and

[20] Providing Under Ground Drainage (UGD) to unserved areas in VMC, 5 works (₹11.24 crore); Providing sewerage facility to northern part of Vijayawada city, 1 work (₹4.10 crore); Balkapur Nala 1 work (₹17.98 lakh); Kukatpally & Begumpet Nala 1 work (₹14.69 lakh); and Providing water supply facilities in unserved areas of Vijayawada city, 5 works (₹2.77 crore)

[21] Yellareddyguda Nala ₹13.13 lakh; Banjarahills Nala ₹11.03 lakh; Punjagutta Nala ₹21.63 lakh; Yousufguda Nala ₹18.62 lakh; Kalasiguda Nala ₹13.65 lakh; Nagamaiahgunta Nala ₹10.82 lakh; Murkinala (P8, P9 and P10) ₹32.04 lakh; Murikinala (P11 & P12) ₹27.52 lakh

[22] 13,793 houses were entrusted to 31 contractors in 45 packages and information in respect of balance 9,446 houses was not made available

transparency of the entrustment process, as also whether qualified contractors were engaged for the packages. It was seen that in one case, the construction of 96 houses in six packages at a cost of ₹96 lakh was awarded (2006-07) to Block Presidents, who were not qualified for such works.

4.6.3.3 Award of work with price negotiation

The Commissioner, TMC awarded (2008-09) the construction of 4056 houses amounting to ₹72.83 crore to 14 contractors on the basis of single bids after calling for local tenders, on the grounds that there were no responses to earlier tenders (September, October and December 2007). Considering the points raised by the contractors during three meetings held (16 October 2007, 23 October 2007 and 10 December 2007) in the presence of Honourable MLA, Tirupati and Municipal Commissioner, the financial and technical specifications were relaxed and the cost of dwelling unit was increased from ₹1 lakh to ₹1.58 lakh and finally to ₹2.04 lakh against ₹80,000 stipulated in JNNURM guidelines. Further, as against the approved carpet area of 25 sq.mts for each dwelling unit as per guidelines, the carpet area included in the revised estimates and constructed was 14.74 sq.mts with built up area of 20.96 sq.mts. Action of the Commissioner in awarding the works was irregular in view of the fact that awarding of works based on negotiations is not permissible as per Government Orders (2003) and change in specifications is against the JNNURM guidelines.

4.7 Execution of projects

As of March 2012, 251[23] projects were approved by GoI for implementation under JNNURM in Andhra Pradesh, as summarised below.

Table 4.4

(₹ in crore)

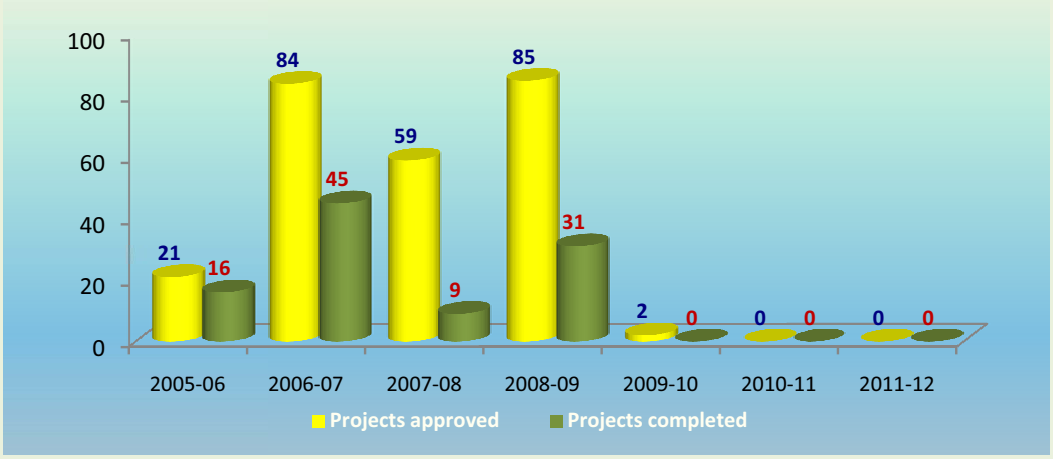
Component	No. of Projects	Sewerage	Storm water drains	Water supply	Infrastructure facilities/ Housing	Others	Project cost	Share of		
								GoI	State	ULB/ Beneficiaries
UIG	54	11	12	16	0	15	5238	2200	817	2221
BSUP	36	0	0	0	36	0	3012	1496	601	914
UIDSSMT	84	8	9	62	0	5	2460	1968	246	246
IHSDP	77	0	0	0	77	0	1197	764	155	278
Total	**251**	**19**	**21**	**78**	**113**	**20**	**11907**	**6428**	**1819**	**3659**

Source: State Level Nodal Agency

The year-wise break up of projects approved and completed as reported (December 2012) by the State Government is depicted in the bar chart given below.

[23] As per State Government reply in December 2012, total number of projects was 253. However, there were slight variations in component wise number of projects and project cost, which are yet to be clarified by the SLNA

Chart 4.1

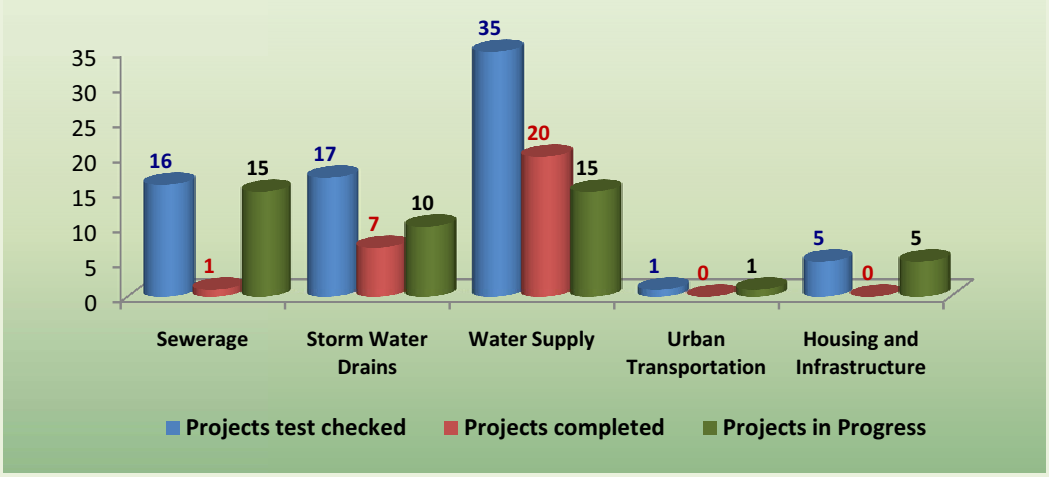


As can be seen from the above chart, out of 251 projects sanctioned, only 101 projects (40 *per cent)* were completed and out of those completed, only 9 projects were completed within the targeted date. The SLNA could not provide the due date of completion in respect of all the projects. Therefore, audit is not able to vouch whether the remaining 92 projects were completed within the scheduled date.

4.7.1 Status of sampled projects

With regard to 74 projects selected for detailed scrutiny in audit, the sector wise status as of end of June 2012 is given in the chart below.

Chart 4.2



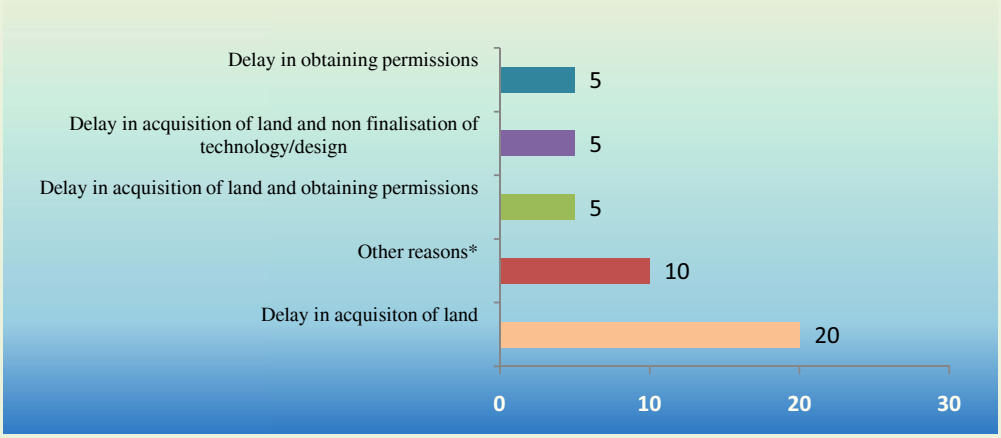
As can be seen from above, out of the total 74 projects of different categories selected in audit for detailed scrutiny, 28 projects (38 *per cent*) were completed and 46 projects were in progress as of June 2012. Government in its reply stated that five[24] more projects were completed as of December 2012.

[24] State Government reported completion of five more projects (4 water supply and 1 storm water drain) in December 2012

4.7.2 Delay in execution of projects

Audit analysis of the incomplete projects revealed that the main reasons for their non-completion are as under.

Chart 4.3



** Other reasons include court cases, non-identification of water source, paucity of funds, etc.*

Government, while accepting the above facts, stated (December 2012) that the implementation constraints and other procedural and technical issues arising in the course of implementation led to delays in completion, and that, these have been addressed in detailed guidelines issued in February 2012.

4.7.3 Sewerage

Out of 19 sewerage projects taken up in the State at an approved cost of ₹1,825 crore, 16 projects (84 *per cent*) sanctioned during 2005-09 at a cost of ₹1,781 crore were test checked in audit. The expenditure incurred on these projects as of March 2012 was ₹1,090 crore. However, only one out of these 16 projects was commissioned as of June 2012.

Significant observations on three major sampled projects in the mission cities and consolidated observations on the remaining 12 sampled projects of both mission as well as non-mission cities are given below:

Mission cities

4.7.3.1 Rehabilitation and strengthening of sewerage system in Old City area South of Musi in Zone I[25]

This project, implemented by HMWSSB, was divided into three packages and awarded between December 2007 and February 2010 at an agreement value of ₹161.73 crore with a stipulation for completion in 24 months i.e., Package-I: December 2009, Package-II: February 2012 and Package-III: January 2010 from the dates of agreement. However, the project remained incomplete[26] as of June 2012.

[25] Catchments S1 to S6, S12 and S14

[26] Percentage of completion in terms of physical as well as financial terms are Package-I 123 *per cent* and 85 *per cent*, Package-II 65 *per cent* and 47 *per cent* and Package-III 111 *per cent* and 83 *per cent*

Tendering for the second package went in for eight rounds of tender calls (between June 2007 and February 2009) without any responses. HMWSSB should have ascertained the reasons for lack of response after the first or second round of tender calls, and then revised the DPR and designs, after appropriate consultations with the relevant stakeholders. However, it continued to repeat calls for tenders until the ninth round of tendering (May 2009) and the package was awarded on a single financial bid to APR-Ramky in February 2010 after almost a year of call for tenders. After award of the package, work was stopped in November 2010 and the alignment of the Main Sewer Line was altered.

It is pertinent to note that the alignment proposed in the DPR had serious implications from a heritage perspective, considering its proximity to various buildings in the Charminar area. However, this aspect was not duly considered at the DPR stage; possibly, field survey was not carried out properly with the stakeholders (GHMC[27], HMDA[28], Heritage Committee, Police, etc.) and issue was sorted out only after award of work.

Government, while agreeing with the audit observation, stated (December 2012) that implementation constraints would be examined and further action would be taken.

4.7.3.2 Implementation of Sewerage Master Plan in Serilingampally Municipality

This project involved two distinct components:

- Laying of sewerage distribution network, costing ₹106.93 crore, to be completed by February 2011; however, the project was not completed as of June 2012.
- Construction of six Sewerage Treatment Plants (STPs) for treating the sewage generated from the above areas and letting the treated effluents into the nearby lakes/water bodies.

The packages for both the components were awarded separately. As a result, even though the sewerage distribution works were in progress, no benefit is likely to result to the residents of Serilingampally Municipality, as land was yet to be acquired for the STPs as of June 2012. Further, due to lack of clear identification of the location of STPs, the termination points for the sewerage main lines also remained unclear.

Government, while accepting the comment, stated during the Exit Conference (January 2013) that it would ensure synchronisation in execution in all the future projects.

4.7.3.3 Providing Underground Drainage (UGD) to unserved areas in Vijayawada Municipal Corporation (VMC)

This project was sanctioned (August 2006) at a cost of ₹56.56 crore, for providing collection network, construction of sump-cum-pump houses and erection of pump sets, laying of pumping mains and construction of STP. VMC subdivided the project

[27]Greater Hyderabad Municipal Corporation
[28]Hyderabad Metro Development Authority

into 132 works and awarded (2006-2010) them to as many as 52 contractors. Out of 132 works initiated, 128 were completed as of June 2012. As regards the four incomplete works, two major works *viz.,* (i) construction of 20 Mld STP at Jakkampudi with Up flow Anaerobic Sludge Blanket (UASB) technology entrusted (June 2009) at ₹13.75 crore and targeted for completion in 15 months, was stopped in April 2011 without any reasons on record after expending ₹9.86 crore, and (ii) construction of two Pumping mains was held up since December 2010 due to non-receipt of permission from Railway authorities for crossing the railway lines (near Jakkampudi), after expending ₹5.42 crore. Due to non-completion of these major works, the total expenditure of ₹66.22 crore (including the expenditure on completed components) incurred as of June 2012 remained unfruitful.

Government did not offer specific remarks in this regard.

4.7.3.4 Other projects

Audit observations relating to the 12 incomplete sewerage projects of mission cities and non-mission cities are summarised below.

Sl. No.	Project	Audit observations	Expenditure as of June 2012 (₹ in crore)
1	Rehabilitation and strengthening of sewerage system in Old City area South of Musi in Zone II (Catchments S7 to S11, S13 and S15).	Project was sanctioned (2007-08) for ₹251.25 crore. Implementation constraints like laying of sewer lines in narrow, congested and densely populated old city area; frequent bandhs, festivals, etc., adversely affected project completion. Even after granting EoAT for 15 months, the project was not completed. Government confirmed (December 2012) the reasons stated by Audit.	138.70
2	Providing Sewerage System to Central Part of Visakhapatnam City	Project was sanctioned (2006-07) for ₹244.44 crore. The main reasons for non-completion were non-acquisition of land, permissions to be received from NHAI and Railways, and shifting of locations of STPs. Out of four packages, only one package was completed. GVMC revised the DPR at an estimated cost of ₹264.01 crore (with additional cost to be borne by the State Government and GVMC, and targeted to be completed by March 2013). Delay in execution of the project resulted in flow of untreated sewerage into the open drain causing environmental hazards. Government, while accepting the comment stated (December 2012) that the revised DPR was forwarded to GoI and the additional cost would be borne by GVMC.	189.11

Sl. No.	Project	Audit observations	Expenditure as of June 2012 (₹ in crore)
3	Providing Sewerage System in old city area of Visakhapatnam	The project was completed in October 2009 but against the 13,000 households targeted, underground drainage was provided only to 10,339 households. Delay in completion was attributed to high cost of alignments and space constraints. Further, arrangements were made for sale of 3.6 Mld out of the 12 Mld of treated water generated from STPs set up under the scheme. Government stated (December 2012) that user charges were being collected from April 2012, without indicating reasons for non-collection from the date of approval of the proposal for collection of user charges by the Council (July 2008 and August 2011). It also stated that tenders were under process for selling the balance quantity of treated sewage water.	35.95
4	Providing sewerage facility to northern part of Vijayawada city	Project was sanctioned (2008-09) for ₹178.15 crore, but was yet to be completed, due to delay in awarding works and other implementation constraints like non-availability of sand. Government, while attributing non-response to initial tenders stated (December 2012) that the work would be completed by June 2013.	60.55
5	Miryalaguda Sewerage scheme	Project was sanctioned (2006-07) for ₹34.93 crore. Construction of two STPs remained incomplete, due to non-acquisition of land and non-approval of drawings and designs of STP. Government stated that 80 *per cent* of work was completed and in spite of constant persuasion with revenue authorities, land could not be acquired.	29.70
6	Narasaraopet Sewerage scheme	Project was sanctioned (2006-07) for ₹26.41 crore and is yet to be completed, due to delay in acquisition of land and non-finalisation of STP technology. Government confirmed the facts.	23.36
7	Nagari Sewerage (ETP) scheme	Project was sanctioned (2008-09) for ₹9.83 crore, but remained incomplete due to non-finalisation of site for construction of Effluent Treatment Plant (ETP). Government stated (December 2012) due to protest from villagers, alternative land was identified, which necessitated extension of time to contractor.	11.18

Sl. No.	Project	Audit observations	Expenditure as of June 2012 (₹ in crore)
8	Kadapa Sewerage Scheme	Project was sanctioned (2006-07) for ₹49.15 crore. Out of two STPs with 20 Mld capacity, construction of STP at one place was yet to commence due to non-acquisition of land, as also confirmed (December 2012) by the State Government.	63.32
9	Nizamabad Sewerage Scheme	Project was sanctioned (2006-07) for ₹81.06 crore. Three STPs initiated for construction remained incomplete, due to paucity of funds and delay in land acquisition for construction of STPs; this necessitated revision of estimates. Government, while confirming the fact, stated (December 2012) that the revenue authorities could not conduct survey for acquisition of land for construction of STPs, as the land owners were resisting for the survey due to non-payment of compensation in full.	55.53
10	Nalgonda Sewerage Scheme	Project was sanctioned (2006-07) for ₹46.88 crore. Work was not completed due to not completing the work of STPs, due to non-acquisition of land and delay in finalisation of technology for construction of STP. Government stated (December 2012) that out of two STPs, the construction of one STP was not taken up due to non-acquisition of required land and other STP was also not taken up due to non-acquisition of land, which, further, necessitated delay in finalisation of technology for construction of STP and revision of estimates.	41.16
11	Yemmiganur Sewerage Scheme	Project was sanctioned (2008-09) for ₹39.83 crore and is yet to be completed, due to delay/non-acquisition of land for construction of STP and septic tanks.	27.89
12	Karimnagar Sewerage Scheme	Project was sanctioned (2006-07) for ₹62.37 crore and even after according extension of time, it remained incomplete, due to non-obtaining permission from Roads and Buildings Department for laying of pipe lines, revision of designs and other implementation constraints expressed by the contractor.	44.91

4.7.4 Storm Water Drains (SWDs)

Out of 21 Storm water drain projects taken up at an approved cost of ₹676 crore, 17 projects (81 *per cent*) at an approved cost of ₹542 crore were selected for detailed scrutiny. Of these, only seven were completed as of June 2012. Out of eight test checked projects in the mission cities, only two projects were completed as of June 2012 and out of nine test checked projects in non-mission cities, only five projects were completed as of June 2012. Significant observations on six projects are detailed below, followed by summarised observations on four projects.

4.7.4.1 Re-modelling/Improvement of Storm water drains in five projects of GHMC - Murkinala (P8,P9,P10), Murkinala (P11,P12), Kukatpally and Begumpet Nala; Balkapur channel, and Improvement of Storm water drains of Zones I and II of erstwhile Municipal Corporation of Hyderabad (MCH)

Initially, the Irrigation & CAD Department took up (2005-2010) four projects[29] by dividing them into small packages. Later, GHMC took over the execution of four left over SWD works along with other improvement works of SWDs of Zones I and II of erstwhile MCH (18 works). None of the projects was completed as of June 2012, due to the delay in land acquisition. It was, however, noticed that the requisition for land acquisition was not mentioned in any of the records relating to these works. Even though an expenditure of ₹40.89 crore was incurred (as of June 2012) on these works, these could not be completed in all respects.

Government replied (December 2012) that action was being taken to clear the encroachments and the work was under progress where site is free of encroachment. It was, further, stated that implementation constraints and other procedural and technical issues arising in the course of implementation, which led to delays in completion, had been addressed in detailed guidelines issued in February 2012.

4.7.4.2 Improvement of storm water drains for Zone VIII of Greater Visakhapatnam city (Gangulhedda and Yerrigadda branch canals)

This project, estimated at ₹72.27 crore, was taken upto relieve the serviced area from traffic hold-ups and flooding of low level area by improvement of the canals of length 16.39 km. The work was divided into three packages and entrusted (October - December 2009) for completion by June 2011. However, audit scrutiny revealed that the hurdles such as encroachments, shifting of electrical poles and cables etc., were not considered at the time of DPR. Therefore, none of the works were completed as of June 2012. The encroachment at chainage 750 to 770 by JNNURM apartment was also a hurdle to the work as confirmed by IRMA report. Government stated (December 2012) that the works would be completed by December 2012, as the special teams were

[29] Remodelling of SWD - Murkinala (P8, P9, P10), Murkinala (P11, P12), Kukatpally and Begumpet Nala; and Balkapur channel

being formed along with the town planning wing to clear the encroachments, but no report of completion was submitted as of January 2013.

4.7.4.3 Other projects

Sl. No.	Project	Audit Observation	Expenditure as of June 2012 (₹ in crore)
1.	Suryapeta SWD scheme	Project was sanctioned (2008-09) for ₹24.64 crore. The work remained incomplete due to non-acquisition of required land for construction of sullage treatment plant. Government replied (December 2012) that the land acquisition by the revenue authorities is in process, and the site had not been handed over till date.	9.73
2.	Ankapalli SWD scheme	Project was sanctioned (2006-07) for ₹22.22 crore. The work remained incomplete for want of permission from Railways, Road & Buildings and Irrigation & CAD Departments. Government, while accepting the delay, indicated (December 2012) that steps had been taken to obtain the required permissions.	13.80
3.	Miryalaguda SWD scheme	Project was sanctioned (2008-09) for ₹34.35 crore, but was delayed due to implementation constraints like flow of water from NS canal during August to March hampering the execution, and heavy rains. However, the fact of flow of water from NS canal is a known factor, and this reason should not have been entertained. As per the information furnished (December 2012) by SLNA, the project was completed.	10.99
4.	Nalgonda SWD scheme	Project was sanctioned (2008-09) for ₹35.86 crore. The project remained incomplete. Delays were attributed to inclusion of additional cross sections in the scope of work, land acquisition delays and other implementation constraints like heavy rains.	23.03

4.7.5 Water Supply

Out of 78 Water supply projects taken up in the State with the approved cost of ₹3,642 crore, 35 projects sanctioned during 2005-09 with an estimated cost of ₹2,457 crore were taken up for detailed scrutiny in audit. Only 11 projects out of the 35 sampled projects were commissioned as of June 2012. Significant observations on the projects are detailed below.

4.7.5.1 Krishna drinking water supply project (Phase-II)

Government submitted the DPR for Krishna drinking water supply project (Phase-II) at an estimated cost of ₹830 crore in February 2006 indicating the initiation of project with an expenditure of ₹223.50 crore. GoI sanctioned the project in November 2007 for ₹606.50 crore with the scheduled date of completion as ***November 2007*** itself. Incidentally it was also noticed the main components of the project works were completed and the scheme was commissioned partially during April 2007 i.e., well before the date of approval of DPR by GoI, and on completion of other miscellaneous items and associated works of ring mains, the scheme was commissioned during November 2008. In the light of partial completion of the project before approval of the project by GoI and in the absence of documentation, the correctness of the expenditure reported by State Government to GoI while preparation of DPR could not be verified in audit.

Government, without furnishing supporting details and documents, stated (December 2012) that the project was commenced (May 2005 – January 2006) with a view to augment water supply to the city immediately due to precarious water supply situation prevailed at that time (2005-06).

4.7.5.2 Refurbishment of existing feeder system including distribution network for 10 zones in Old Municipal Corporation of Hyderabad

This project was sanctioned (July 2008) at an estimated cost of ₹232.22 crore for providing inlet and outlet mains to the proposed additional storage water reservoirs (14 Nos) for distribution of water in the 10 zones of North and South of Musi river. The construction of storage water reservoirs was sanctioned as two separate JNNURM projects.

Though the construction of 12 out of 14 reservoirs were completed as of December 2011, works related to inlet, outlet and distribution network (the sampled project) remained incomplete[30] as of June 2012, even though the works were entrusted between February 2009 and March 2011, with a stipulation for completion in six/nine months. According to HMWSSB, the delay in progress was due to grant of permissions for road cutting by the concerned authorities in spells, which adversely affected the completion of works in each zone. Government, while attributing the delay to non-obtaining of permissions from the concerned departments and also to elections, festivals and bandhs etc., stated (December 2012) that discussions with all stakeholders would be held to devise a mechanism to prevent occurrence of such avoidable delays in further schemes as well as in completion of ongoing schemes.

4.7.5.3 Augmentation of drinking water supply to 32 peripheral areas of GVMC

This project, sanctioned (February 2008) for ₹240.74 crore, was divided into two packages and entrusted to two different contractors in October 2008/January 2009,

[30] Out of 15 packages, only three packages were completed

one for the water treatment plants, pump houses, water tanks/reservoirs and associated infrastructure, and the other for laying distribution pipelines with a stipulation for completion in 24 months. Audit findings are summarised below:

- 43 out of 53 water tanks/reservoirs (ELSR/GLSR[31]) were completed; work was in progress in respect of nine reservoirs and was yet to commence as of June 2012 in respect of one reservoir. The main reason for non-completion was non-acquisition of land from various authorities - Railways, NHAI, Visakhapatnam Steel Plant, Revenue authorities, etc.
- The site for the proposed Water Treatment Plant (WTP) of 85 Mld[32] at Attavaripalem was relocated to Aganampudi due to non-alienation of the requisite land by the Visakhapatnam Steel Plant; consequently, the construction of the WTP was at an initial stage.
- Although the laying of distribution lines was 90 *per cent* complete, construction of water tanks/reservoirs and water treatment plants was way behind schedule (October 2010). Thus, the targeted beneficiaries in the peripheral areas of Visakhapatnam could not be benefited and were dependent on bore wells and irregular supply of water through tankers.

Government, while accepting the delay, stated (December 2012) that land was acquired and work was under progress.

4.7.5.4 Comprehensive water supply system in old city of GVMC area

The project was sanctioned (March 2009) at a cost of ₹47.93 crore for providing 24x7 water supply covering 6 blocks of the old city serving a population of 1.25 lakh. Even though there was clear indication in the DPR about availability of land for construction of all the components of the projects such as GLSR, ELSR, and sump-cum-pump house etc. GVMC was not in possession of the sites demarcated for the purpose. Thus, approval for DPR was sought from GoI, based on incorrect facts. Due to delays in handing over the sites by the Endowment Department, VPT, etc., for construction of sump-cum-pump house of 575KL, 1050KL ELSR and 6000KL GLSR, the works scheduled to be completed by December 2011, remained incomplete as of June 2012. Progress was also affected due to delayed payments to the contractor and diversion of ₹8.19 crore to other projects. Audit scrutiny further revealed that although none of the proposed GLSRs/ELSRs and laying of pipe lines was completed, GVMC paid for purchase of 12,000 water meters which were lying idle since April 2010.

Government, while accepting the delay, stated (December 2012) that all the issues were resolved and the work was under progress.

[31]ELSR: Elevated Level Storage Reservoir; GLSR: Ground Level Storage Reservoir
[32]Mld: Million litres per day

4.7.5.5 Refurbishment of comprehensive water supply in North Eastern Zone of Central Area of GVMC

The objective of taking up this project (sanctioned for ₹190.18 crore in March 2009) was to ensure per capita supply of 150 lpcd to cover the present population of 4.60 lakh as well as projected population of 5.38 lakh by 2023 AD, by utilising the entire 118.84 Mld of water available for distribution from Town Service Reservoir, which is fed from various sources such as Raiwada, YLMC, Narva and Thatipudi. The work was entrusted in December 2009 and was slated to be completed by December 2012. The audit findings are given below:

- A consolidated DPR was prepared for refurbishment of distribution system of comprehensive water supply in central area for an estimated cost of ₹425.89 crore; but GoI approved the segment of North East sector alone at a cost of ₹190.18 crore. However, the revised DPR prepared for North East Sector was not furnished to audit and IRMA, and in the absence of DPR, the authenticity of works taken up under the project could not be verified.
- Execution of project was delayed due to change of site for construction of Reservoir from MVP Colony to Resavanipalem and further soil analysis, for which revised designs were to be prepared afresh for approval. Government stated (December 2012) that the reservoir location was shifted on the request of public representatives. The fact, however, remained that project was delayed due to improper survey of location before initiation of the project.
- IRMA reported (February 2012) that the contractor had failed to achieve the milestones fixed by the GVMC as per the agreement. The financial progress achieved was only 49 *per cent* as against the stipulated 80 *per cent* to end of January 2012. Similarly, there was 55 *per cent* shortfall in procurement of pipes and 45 *per cent* shortfall in respect of civil works. Government stated (December 2012) that the shortfall in the progress was due to various reasons like site problems, labour problem and critical working conditions including delay in making payments, which affected the progress of work.
- Funds amounting to ₹33 crore released for the project were diverted to meet the expenditure for other project works within the JNNURM scheme which also adversely contributed to the slow progress of the works.

4.7.5.6 Augmentation of drinking water supply to Gajuwaka area of GVMC

The project was sanctioned in April 2007 for ₹39.76 crore to bridge the gap between demand and supply of drinking water to Gajuwaka Municipality. The only protected water supply was from the scheme constructed by Visakhapatnam Steel Plant (VSP) in 1995 with an installed capacity of 2 Mgd[33] (7.57 Mld) and as per the agreement with the Gajuwaka Municipality, VSP was supplying 0.80 Mgd (3 Mld) of water. The project was entrusted between June 2007 and November 2009 and was reported

[33] One US Gallon is equal to 3.785 litre

(December 2012) as completed by SLNA. The project could not be completed within the stipulated period on the grounds of delay in acquisition of required land for construction of WTP, ELSR and permission from Railway authorities for laying pipe lines.

Scrutiny of records revealed that the DPR envisaged that the ultimate demand for water in the year 2038 in the Gajuwaka area will be around 120 Mld, whereas the project was prepared to meet the requirement of 57.50 Mld capacity only. The project therefore would be sufficient only to meet the current demand, which is contrary to the JNNURM guidelines. In reply, Government stated (December 2012) that WTPs were designed for prospective demand of 15 years as per guidelines of CPHEEO. Reply is not acceptable in view of the fact that as per the DPR, projected prospective demand for 15 years was 79.42 Mld as against which only 57.50 Mld was taken up for execution.

4.7.5.7 Providing water supply distribution system to Gajuwaka area of GVMC (Phase 2)

This project was sanctioned at an estimated cost of ₹46 crore in January 2008, to provide distribution network for Gajuwaka, as the existing distribution system covered only about 50 *per cent* of the project area. Though the project was scheduled to be completed by December 2009, the same remained incomplete as of March 2012. The delay was attributed to non-receipt of clearances for laying pipelines from the Road and Buildings Department, Andhra Pradesh Eastern Power Distribution Company Limited (APEPDCL), Andhra Pradesh Industrial Infrastructure Corporation (APIIC), VSP and Gangavaram Port. The project was reported (December 2012) as completed by SLNA.

Further, even though the responsibility for providing household connections and fixing of water meters rests with the contractor, GVMC had provided connections and fixed meters (300) in respect of certain areas in Yerrigedda colony by collecting the cost of meters from the households. This aspect needs to be looked into while making final payment towards this purpose. Government replied (December 2012) that GVMC and the nodal agency were asked to identify the cases of financial loss, if any, for taking further action and report to Government.

4.7.5.8 Other projects

Sl. No.	Project	Audit observations	Expenditure as of June 2012 (₹ in crore)
1	Dhone water supply scheme	The project was sanctioned (2008-09) for ₹44.76 crore, but remained incomplete due to delay in acquisition of land. Government, while accepting the delay regarding obtaining permissions from Forest Department, stated (December 2012) that progress of work was hampered due to the protest made by the Water Users Associations and the farmers from where raw water would be drawn.	36.01

Sl. No.	Project	Audit observations	Expenditure as of June 2012 (₹ in crore)
2	Pithapuram water supply scheme	The projects were sanctioned (2008-09) for ₹126.65 crore. The Pithapuram and Ramachandrapuram projects remained incomplete due to delay in acquisition of land and this also resulted in delay in approval of designs. Further, all the four schemes were launched without identifying permanent source of water. Government replied (December 2012) that permission for drawal of water for Ramachandrapuram water supply scheme was obtained (April 2012), while the same was under process in respect of the other schemes.	8.81
3	Ramachandrapuram water supply scheme		9.66
4	Dharmavaram water supply scheme		53.43
5	Nizamabad water supply scheme		41.61
6	Kamareddy water supply scheme	The project was sanctioned (2008-09) for ₹22.35 crore. However, supply of 15.97 Mld of clear water as planned was not fully ensured due to scarcity of water at source. Government replied (December 2012) that the RWSS Department had agreed to spare only 10 Mld of raw water. This necessitated additional components for treatment of water at estimated cost of ₹8.21 crore.	15.33
7	Warangal water supply scheme	The project was sanctioned (2006-07) for ₹164.46 crore, but was delayed due to delay in acquisition of land for sump-cum-pump houses, and delay in permission from Irrigation & CAD Department for additional off-take arrangement on Kakatiya Canal at KUC and at Desaipet and delay in power connections. This project was completed as per the information furnished (December 2012) by SLNA. Further, even though the scheme was designed to meet the requirement of ultimate population demand (i.e., upto 2036), provision of water in Desaipet division could not even cater fully to the prospective demand. In response, Government stated (December 2012) that the combined capacity of existing filtration plants and one filtration plant constructed under the scheme is 78.19 Mld and is sufficient to meet the prospective drinking water requirements of Desaipet Zone upto 2021. The reply is not acceptable as the requirement of prospective demand of Desaipet division is 94.54 Mld as per the projection made in the report accompanying the detailed design of clear water feeder mains of WSIS for Warangal.	164.00
8	Tanuku water supply scheme	The project was sanctioned (2008-09) for ₹14.14 crore, but remained incomplete due to non-acquisition of land for construction of Summer Storage Tank.	11.53

Sl. No.	Project	Audit observations	Expenditure as of June 2012 (₹ in crore)
9	Mancherial water supply scheme	The project was sanctioned (2006-07) for ₹22.87 crore, but remained incomplete due to non-identification/ change of site for construction of raw water pumping main and revision of works.	22.23
10	Narayanapet water supply scheme	As against the requirement of 6 Mld of water to be supplied from the identified source of Sri Satya Sai Water Supply Project, only 1.5 Mld of water could be supplied (July 2009), as the balance 4.5 Mld was withheld by the Satya Sai Water Supply Board on account of non-payment of ₹2.05 crore towards additional cost of pump-sets and up-gradation of transformers etc. Government replied (December 2012) that the amount of ₹2.05 crore was not provided in the initial estimates, and, further, that the Board authorities were being addressed to intimate the present cost of upgradation.	6.74

4.7.6 Urban Transportation

4.7.6.1 Bus Rapid Transport System (BRTS) for Visakhapatnam

The project, sanctioned (November 2007) at an estimated cost of ₹452.93 crore and implemented by GVMC, involved the creation of a Bus Rapid Transit Corridor for a continuous 43.36 km route network, consisting of Pendurthi Transit Corridor (PTC) (21.62 km), Simhachalam Transit Corridor (STC) (20.12 km) and a flyover at Asilmetta (1.62 km). The project was supposed to be completed by October 2010, remained incomplete due to not obtaining permissions from Defence Department, Railways, Simhachalam Devastanam, and delay in acquisition of land from private individuals, shifting of temples etc. Further, the delay in finalisation of land issues has resulted in cost escalation of ₹3.64 crore.

Government while accepting the delay, stated (December 2012) that the proposal was still being pursued with the Endowment Department.

4.7.7 Housing and Infrastructure facilities

Out of 113 projects relating to housing and infrastructure sanctioned (2005-09) at an approved cost of ₹4209 crore, only 22 projects were completed as reported (December 2012) by State Government. Five projects sanctioned during 2005-08 with an approved cost of ₹1,119 crore were taken up for detailed audit scrutiny. Even after incurring an expenditure of ₹1,159 crore, not a single project was completed as of June 2012. Audit observations relating to all the five projects are detailed below.

4.7.7.1 'Integrated Housing and Infrastructure Development Scheme, Hyderabad (49,000 houses)' and 'Construction of 4550 Houses and Provision of Infrastructure Facilities in Hyderabad'

A brief summary of both the test checked BSUP projects in Hyderabad is given below.

Table 4.5

Particulars	Integrated Housing and Infrastructure Development Scheme, Hyderabad (49,000 houses)	Construction of 4550 Houses and Provision of Infrastructure Facilities in Hyderabad
Date of Administrative sanction	March 2006	February 2008
Estimated cost	₹490 crore	₹120.33 crore
Implementing agency	GHMC (23,239 houses) APHB (25,761 houses)	GHMC (4,550 houses)
Bid	Nomination basis	Competitive
Date of entrustment	March 2006 to December 2008	May 2008 to August 2010
Name of the agency to whom the work was entrusted	Split into 45 packages and entrusted to 31 contractors (for construction of 13,793 houses the information in respect of remaining houses was not furnished)	Split into 15 packages and entrusted to 9 contractors
Stipulated date for completion	Differed from package to package	November 2008 to November 2010
Status	The project for 25,761 houses (APHB) completed, and the project for 23,239 houses (GHMC) yet to be completed	Not completed

Source: Work records of the projects

Note: The project for 23,239 houses was initially assigned in 2005 to AP State Housing Corporation Ltd. (APSHCL), transferred to GHMC in July 2007, and partially transferred to AP Housing Board (APHB) in August 2009. Reasons for such changes were not on record

As against the stipulated completion dates of March 2008/June 2009, as per DPR, both projects were still incomplete as of June 2012, as summarised below.

Table 4.6

Name of the scheme	Number of houses completed	Number of houses allotted	Number of houses occupied	Number of houses allotted but not occupied
49,000 houses	45027	36462	25971	10491
4,550 houses	2534	75	35	40

Source: Information furnished by GHMC

Physical inspection and beneficiary survey

- As against the 48 and 40 houses proposed for construction at Bansilalpet and Gollakomaraiah colonies respectively, GHMC constructed only 42 (April 2010) and 32 (May 2010) houses. None of the houses had been allotted to the beneficiaries on account of the difficulties in selection of beneficiaries. However, physical inspection (9 May 2011) by the audit team revealed that the completed houses had been unauthorisedly occupied by the people without allotment and without contributing their share. In response, Government stated (December 2012) that the beneficiaries would be officially issued ownership rights, after collection of their share of contribution.

- The main reason for low occupancy of houses already handed over by APHB, as ascertained from the Collectorate records, was lack of basic and essential needs. The laying of 570 Rmt drinking water pipeline was pending due to land acquisition issues. The occupants were dependent on water supplied through tankers. This was also confirmed during the beneficiary survey (9 August 2011) by the audit teams. Government confirmed the fact (December 2012) and stated that sufficient numbers of tankers are provided for supplying drinking water.

- Out of the 3809 houses in the Ahmedguda colony, only 1255 houses had been occupied by the beneficiaries, on account of the fumes/ smell from burnt and decayed garbage at a dumping yard located at a distance of ¾ km. from the colony (photograph alongside). This was confirmed during the physical inspection (13 August 2011) and beneficiary survey by the audit team. Government, while stating the occupancy at present was about 1700, indicated (December 2012) that the action for treatment of dumped waste was initiated.

Dump yard next to Ahmedguda colony

4.7.7.2 Construction of Houses for rehabilitation of flood victims of river Krishna and Budameruvagu in VMC & G+3 Group Housing in slums located in Circle-I of VMC

A brief summary of the two test checked BSUP projects is given below.

Table 4.7

Particulars	15000 houses for victims of floods in River Krishna	6752 houses for flood victims of Budameruvagu
Date of Administrative sanction	September 2006	October 2007
Estimated cost	₹258.74 crore	₹190.88 crore
Implementing agency	VMC	VMC
Bid	Competitive	Competitive
Date of entrustment	April 2007 to September 2010	August 2008 to March 2011
Name of the agency to whom the work was entrusted	Split into 127 packages and all the packages were entrusted.	Split into 120 packages (90 packages were entrusted as of June 2011)
Stipulated date for completion	September 2007 to February 2011	November 2008 to June 2011
Status	Not completed	Not completed

Source: Work records of the project

Note: As in the case of the test checked BSUP projects at Hyderabad, these two BSUP projects in Vijayawada were initially assigned by State Government (2006) to APSHCL, and subsequently transferred to VMC in July 2007 (with a small portion retained by APSHCL); reasons for these changes were not available on record, although State Government stated that these were transferred from APSHCL to ULBs based on a decision taken in July 2007

Both projects were incomplete, mainly because the requisite quantity of land could not be acquired in full.

- Out of 108.38 acres of land required for the 'Construction of 15,000 houses for rehabilitation of flood victims of River Krishna and Budameru Vagu in VMC' project, VMC could acquire only 17.15 acres in VMC limits and 87.55 acres at Jakkampudi.
- Against 68.20 acres of land required for the 'G+3 Group Housing in Slums located in Circle-I of VMC' project, only 9 acres was available; consequently, VMC constructed only 832 out of the proposed 6,752 houses. According to VMC's status report, the possibility of acquiring the remaining land at Gollapudi (near Jakkampudi) was very low.

The change in implementing agency as well as delay in land acquisition led to cost escalation of ₹172.62 crore to be borne by State Government and the ULB - from ₹258.74 crore to ₹373.55 crore for the 15,000 houses project; and from ₹190.88 crore to ₹248.69 crore for the 6,752 houses project.

The status of completion of houses as of June 2012 is given below.

Table 4.8

Name of the scheme	Number of houses completed	Number of houses allotted	Number of houses occupied	Number of houses allotted but not occupied
15000 houses	12480	8013	6760	1253
6752 houses	832	0	0	0

Source: VMC

As regards the 1056 houses taken up by APHSCL, the works were divided into two packages but entrusted (May/June 2007) to a single agency at ₹18.51 crore for completion by November/December 2008. However, the Managing Director, APSHCL subsequently cancelled (December 2008) the contract due to substandard work by the contractor (by which time only 10 *per cent* of work costing ₹1.77 crore was completed). Subsequently, the work was executed departmentally.

Government attributed (December 2012) the delay to transfer of project from APSHCL to VMC and further stated that non-response to initial tenders had led to cost escalation.

4.7.7.3 Construction of 4087 houses and Provision of Infrastructure at Tirupati (IHSDP)

The project was sanctioned in May 2007 at an estimated cost of ₹55.36 crore (Housing: ₹40.87 crore and Infrastructure cost: ₹14.49 crore) to be taken up at two areas *viz.,* Avilala and Damineedu. The project was split into 89 sub-works and entrusted to 14 contractors between May 2008 and March 2009 with stipulated completion between November 2008 and March 2011. The findings in audit are given below.

- Against the construction of 4,087 houses[34], as of June 2012 no units had been completed at Avilala, while 528 houses were completed in Damineedu, of which only 456 were allotted and 124 houses had been occupied by the beneficiaries. For the remaining 332 houses, Government stated (December 2012) that electrical cable connections from transformer to the housing block (Service lines) were given to the completed houses in September 2012; however, status of their occupation by the beneficiaries was, however, not furnished by Government.
- Further, TMC was unable to facilitate bank loans for the beneficiaries, resulting in many of the completed houses remaining unoccupied. Government stated (December 2012) that the implementing agency had yet to come up with the proposals for revised funding pattern.

4.7.8 Deviations

Projects were to be executed as per detailed estimates approved as per DPR and detailed survey/investigation is required to be carried out before commencement of the works. Scrutiny of the records of the following projects revealed deviation on account of change in the scope of works indicated in the DPRs, incorrect adoption of lead charges, incorrect provision of soil gravel in the Bill of quantities and change in designs.

4.7.8.1 Rehabilitation and strengthening of sewerage system in Old City area South of Musi in Zone I (Catchments S1 to S6, S12 and S14)

HMWSSB executed the supplemental and authorised extra items costing ₹32 crore (reportedly on account of 'soil and site variations') to more than 53 *per cent* of the estimated cost of ₹60.38 crore[35], which was well beyond the permissible limit of 10 *per cent* variation. This is evidence of faulty planning and site survey/ investigation, which should have been properly conducted before finalising detailed estimates and initiating contract award. Government stated (December 2012) that implementation constraints would be examined and take further action.

4.7.8.2 Implementation of Sewerage Master Plan in Serilingampally Municipality

- There was a huge increase in laying of SWG pipes in Package-II of higher diameters vis-à-vis the quantities indicated in the original DPR. The increase in quantities of 200 mm, 250 mm, and 300 mm diameter SWG pipes were 462 *per cent*, 257 *per cent* and 56 *per cent* respectively. Department responded (December 2012) that the pipes of 150 mm dia were substituted with 200 mm dia as per site conditions and to meet the demand of the densely populated area of Serilingampally Municipality. This is not justified, since the original DPR

[34] Bids were invited by TMC for construction of only 4,056 houses
[35] Without considering quoted tender premium over Estimated Cost

projections were already based on year 2041 as the horizon year. Government stated (December 2012) that the issue would be examined for further action.

- Even though sewer lines for two major catchments (Beverly Hills and Madhapur) at an estimated cost of ₹73.90 crore was included in DPR, HMWSSB deleted the same while dividing the scope of works into packages for award. It was observed the works at these catchments were already conceived in November 2007 itself with partial funding from HMDA and the works were already in full swing at the time of DPR approval by GoI. In response, Government stated (December 2012) that the works were taken upto provide amenities to the IT special economic zones in these areas immediately. Reply is not acceptable as the projects were initiated before approval of the DPR, which is against the JNNURM Guidelines.
- HMWSSB increased the estimated value of Package-III (₹34 crore) almost three times the estimated cost (₹11 crore) on the grounds of two annual revisions (2007-08 and 2008-09) of the SSR. Government replied (December 2012) that the revision was also on account of coverage of additional areas, however, details of additional areas covered had not been furnished.

4.7.8.3 Rehabilitation and strengthening of sewerage system in Old City area South of Musi in Zone II (Catchments S7 to S11, S13 and S15)

There was a huge increase of 80 (200 mm) and 187 (300 mm) *per cent* in the quantities of large diameter pipes in lieu of smaller diameter pipes (150 mm and 250 mm) from the quantities estimated in the original DPR to the quantities actually laid. Government responded (December 2012) that the variations were made based on requests made by the local public representatives, and also site conditions, which indicated poor survey and planning.

4.7.8.4 Refurbishment of existing feeder system including distribution network for 10 zones in Old Municipal Corporation of Hyderabad

- Against the provision for laying 1000 Rmt of 600 mm diameter MS pipe, 1630 Rmt was laid/to be laid, which would result in additional expenditure of ₹90.86 lakh owing to increase in earthwork and hard rock excavation, supply of good gravel, crushed stone dust and bends.

  Government stated (December 2012) that the work was not executed as per the field report, and further stated that a report from MD, HMWSSB would be called for on the matter for further action.
- Estimates for carting of excavated earth and rock to a distance of 5 km by incorrectly adopting the rates for 10 km lead. This had resulted in excess commitment of ₹29.96 lakh with reference to the total quantity of work to be executed.

In response, Government stated (December 2012) that ₹11.23 lakh was deducted and the balance would be recovered based on actual execution of quantities.

- Even though as per normal engineering principles and practices, excavated soil/ gravel already available after excavation is utilised for filling of trenches, HMWSSB made a separate provision in Bill of Quantities (BoQ) for refilling the trenches with borrowed gravel for ₹2.23 crore, on the grounds of existing soil unsuitable for refilling.

  Government responded (December 2012) that the lumps of Cement Concrete (CC) roads and Black Topped (BT) roads got mixed with the excavated soil. Reply is not acceptable as the said lumps of CC and BT should have been dumped separately, so as to utilise the existing excavated soil.

- There was huge difference between the value of works entrusted to contractors (₹51.99 crore and ₹16.78 crore) and the cost of works indicated in the DPRs (₹23.88 crore and ₹48.36 crore respectively) relating to the works of inlet, outlet and distribution network in two zones. (Maisaram and Asmangadh).

  Government stated (December 2012) that the variation was on account of additional reservoirs/components. This clearly indicates unrealistic preparation of estimates in the DPR.

4.7.8.5 Replacement of existing Thatipudi pipeline from Thatipudi reservoir to town service reservoir and pumping units

Commissioner, GVMC revised the estimates for Package-III (construction of 1000 KL sump-cum-pump house at Krishnapuram Head works) from ₹85 lakh to ₹134 lakh and approved (May 2009) reportedly on account of the site conditions, which was also confirmed (December 2012) by the State Government. This indicated that the initial estimates were unrealistic.

4.7.8.6 Providing sewerage facility to northern part of Vijayawada city

VMC executed (2009-10) 25 works (valuing ₹23.79 crore) relating to extension of sewer lines, which were outside the scope of DPR. Further, it was noticed that certain works of current DPR relating to collection network (estimated cost of ₹33 crore) were taken under another BSUP project. Government accepted (December 2012) the comment and stated that revised DPR was prepared incorporating the above deviations.

4.7.8.7 Providing water supply facilities in unserved areas of Vijayawada City

The change in designs of intake well and recasting of estimates for construction of 50 Mld water treatment plant resulted in cost escalation of ₹2.34 crore. Government accepted (December 2012) the observation.

4.7.8.8 Warangal water supply scheme

A provision of ₹75 lakh was made in the IBM for construction of a Quality Control (QC) laboratory building to accommodate different quality control equipment and to conduct quality control tests, and accordingly, the department incurred ₹82.42 lakh on construction of the building with a plinth area of 10,000 sft. However, the building was occupied by the offices of Circle and Division (PH) Warangal, which is irregular.

Government stated (December 2012) that the QC laboratory and Department Quality Control Staff were all accommodated in the building and the remaining area of the building was accommodated by the Superintending Engineer (PH) Circle Warangal, but did not indicate the plinth area utilised by the circle office.

4.7.8.9 Rayadurg water supply scheme

While working out (March 2009) the cost of foundation treatment to ₹5.11 crore, the Department included an amount of ₹3.18 crore towards extra depth excavation, and submitted the revised estimates.

Government stated (December 2012) that the IBM also specified for extra payment for foundation treatment based on suggestion of Geological Survey of India (GSI) and accordingly additional cost towards extra depth was worked out. This indicated that the required soil investigation was not carried out before including the cost of foundation treatment in the IBM.

4.7.9 Undue benefit to contractor

Scrutiny of works bills of the nine projects revealed instances of excess payments/ undue favour as discussed below:

- Under EPC system, the contractor was bound to execute all supplemental works found essential, incidental and inevitable during execution of main work. However, the implementing agencies entered into supplementary agreements with the same contractors for execution of works, which were incidental and essential to the main work, thereby extending undue favour to contractors. Details are given below:

Projects	Audit Observations
Kadapa Sewerage scheme	A supplementary agreement was concluded (May 2009) with the same contractor for laying of NP PVC-U pipes in place of SWG pipes on account of water logged areas with heavy seepage. Government stated that (December 2012) there was no undue benefit to the contractor as cost of unlaid SWG pipes was not paid. This is not acceptable in view of the fact that extra commitment indicated above is after considering the cost of SWG pipes indicated in the IBM.

Projects	Audit Observations
Karimnagar Sewerage scheme	Even though the scope of the work included 'restoration of damaged public utilities' by the bidder and all necessary permissions/clearances/approvals were to be processed by the firm only, the Department deposited ₹43.00 lakh with R&B Department for obtaining permission for laying of pipelines and cutting of roads, which needs to be recovered from the contractor (M/s Ramky Infrastructures Pvt. Ltd.) as per agreement.
Eluru, Dharmavaram, Pithapuram, Mancherial and Ongole water supply schemes	In contravention to the agreement clause under EPC, the works relating to obtaining power connection were included in the IBM values awarded to the contractors. This had led to undue benefit of ₹1.19 crore to the contractors. The contention of the Government stating (December 2012) that the power connection to run the scheme was to be borne by the Department is not acceptable in view of the specific condition of the contract agreement (Clause 60), wherein the contractor had to make his own arrangements for drawing power after obtaining permission from Transmission Corporation of Andhra Pradesh Limited (APTRANSCO) at his cost.
Mancherial water supply scheme	The work awarded (December 2007) under EPC for ₹24.72 crore included construction of Foot Bridge. However, a supplementary agreement was concluded with the same contractor for construction of Foot Bridge for ₹2.92 crore as an additional item due to change of site of intake well during execution. In response, Government stated (December 2012) that a common intake well was proposed for Mancherial and other two ULBs water supply schemes by Irrigation authorities, which had necessitated increasing the width of Foot Bridge to accommodate the three pipe lines to be laid over the Foot Bridge and the same was approved in the Committee meeting in February 2011. Reply is not acceptable as the construction of Foot bridge was stated to be contingent, as per the minutes of the meeting of February 2011.
Warangal water supply scheme	Against ₹1.18 crore loaded towards insurance premium charges for the work in the IBM, the agency paid only ₹47 lakh towards insurance premium. Government assured (December 2012) that the balance amount of ₹71 lakh would be recovered from the contractor.

4.8 Monitoring and Evaluation

The following deficiencies were noticed in roles and responsibilities discharged by SLNA and PMU:

- Audit scrutiny revealed that TPIMAs/IRMAs for monitoring the implementation of some of the test checked projects were appointed after the projects were conceived. Consequently, their role could not cover the pre-construction stages of the projects concerned.

- The SLNA did not respond to the audit query on action taken reports on the observations made by the TPIMAs. In particular, with regard to the Housing Project in Tirupati, TPIMA had raised certain major observations *viz.,* splitting of works into huge numbers, non-entrustment of works on EPC system, payments without obtaining administrative approval for revised cost from the State Government etc. Consequently, we could not ascertain whether the issues pointed out in TPIMA reports were actually rectified/settled. State Government, while stating the reasons for splitting of works of the Tirupati project, did not specifically indicate the status of action on the TPIMA Reports.
- One of the PMU's focus areas was programme management and monitoring to MoUD through web based Project Monitoring and Evaluation system (PMES). This monitoring and reporting support system was intended to appraise effective utilisation of funds, progress of projects and implementation of reforms. However, the PMES was not fully functional, as admitted by the SLNA. Detailed and comprehensive information on a project-wise basis was not available through the PMES on the SLNA's website. Government stated (December 2012) that Central Monitoring Unit (CMU) was created in October 2008 to look after the project monitoring at SLNA level. The CMU's functioning was analysed subsequently and it was found to be unable to provide the necessary services and, hence, closed in October 2009. However, at the SLNA level, Nodal Officers were appointed for a set of ULBs to monitor and evaluate the JNNURM programme projects being implemented in the concerned ULBs.

4.9 Impact assessment

In order to assess perception of the citizens about the effectiveness of the implementation of projects, 1528 beneficiaries with regard to 20 projects were surveyed (May 2011 to March 2012) at random in audit relating to sewerage (5), water supply (7), storm water drains (3) and housing (5).

4.9.1 Sewerage

About 85-90 *per cent* of the beneficiaries surveyed in respect of sewerage projects[36], expressed satisfaction and stated that water logging in their area had been reduced after implementation of these projects. Many of them (55 *per cent*) at the same time, however, reported that they were unaware of new schemes reportedly on account of not completing the works to full extent. As a result, they were still dependent upon septic tanks ***(Implementation of Sewerage Master plan in Serilingampally – project relating to Hyderabad UA).***

[36] 1. Rehabilitation and strengthening of sewerage system in old city area on South of Musi (Zone-I), 2. Rehabilitation and strengthening of sewerage system in old city area on South of Musi (Zone-II), 3. Implementation of sewerage master plan in Serilingampally municipality, 4. Providing sewerage system to central part of Visakhapatnam city and 5. Providing sewerage system in old city area of Visakhapatnam

4.9.2 Water supply

While the beneficiaries in respect of three [37] water supply projects expressed satisfaction on the improvement in water supply, targeted beneficiaries of the remaining four[38] water supply projects sampled were not satisfied since they felt the projects did not address their requirements. Their grievances included supply of water for less than an hour per day/non-supply on a daily basis, pumping water through motors due to inadequate pressure, etc. This was also on account of non-completion of projects' works, thereby not achieving the intended objective of providing water.

4.9.3 Storm water drains

Beneficiaries interviewed for the projects[39] relating to storm water drains expressed satisfaction in general, as inundation of the area was solved to a great extent, except for one project[40], where about 8 - 12 *per cent* beneficiaries felt there was water logging and unclean drains. Field visits (relating to the project '***Regularisation of S.L. Canal and Improvement of Yerrigedda storm water drain including bench drains'*** in Visakhapatnam) also confirmed the fact that residents of the areas around the storm water drains were dumping huge quantities of garbage into the canals, which requires to be addressed by GVMC.

4.9.4 Housing

As regards survey related to housing, beneficiaries in Vijayawada were satisfied with the quality of construction and amenities in their area. In contrast, beneficiaries in Hyderabad and Tirupati expressed dissatisfaction on the size of dwelling unit, lack of water/drainage facilities, improper/poor condition of roads, and stink from the decayed garbage from the dumping yard. The beneficiaries interviewed for the project relating to Tirupati further reported lack of hospital facilities, bus stops nearby the area.

State Government stated (December 2012) that once all the projects are commissioned, the impact will be felt by all the people living in the project area and that, corrective action would be taken wherever necessary.

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[37] 1. Augmentation of drinking water supply to 32 peripheral areas of GVMC, 2.Comprehensive water supply system in old city of GVMC and 3.Replacement of existing Thatipudi pipeline from Thatipudi reservoir to town service reservoir and pumping units

[38] 1. Refurbishment of comprehensive water supply in North Eastern Zone of Central Area of GVMC, 2. Providing water supply pipeline from Town service reservoir to Yendada and Kommadi junction for augmenting water supply, 3. Augmentation of drinking water supply to Gajuwaka area and 4. Providing water supply distribution system to Gajuwaka area of GVMC (Phase 2)

[39] 1. Improvement of storm water drains for Zone VIII of Greater Visakhapatnam city (Gangulhedda and Yerrigadda branch canals), 2. Regularisation of S.L. Canal and 3. Improvement of Yerrigedda storm water drain including bench drains

[40] Improvement of storm water drains for Zone VIII of Greater Visakhapatnam city (Gangulhedda and Yerrigadda branch canals)

4.10 Conclusion

As brought out in the foregoing paragraphs, while implementation of the mandatory and optional reforms by Government was largely satisfactory, execution of a majority of test checked projects was adversely affected due to non-availability of required land/defective designs. Lack of co-ordination with the related departments, splitting up of works into innumerable sub-works, change of technology, etc., resulted in non-completion of projects in a significant number of cases, and non-achievement of the envisaged objectives and benefits. Tendering and contract management activities involved irregularities which included awarding of works on single tender/nomination basis resulting in undue benefit to contractors. Monitoring mechanism was not adequate to ensure that projects were executed within time to the envisaged quality standards.

4.11 Recommendations

- State Government should ensure preparation of Detailed Project Reports with authenticated inputs from survey reports and ensure strict compliance with all the pre-requisites (especially land acquisition and clearances from different Departments), before commencing project execution.
- Effective co-ordination with other Departments responsible for granting clearances must be ensured.
- Government orders relating to two-stage tendering process (survey and investigation, and execution) should be strictly adhered to.
- Monitoring mechanism, as stipulated in the guidelines, should be strengthened to ensure that projects are executed on time within the budgeted cost.