



**MUNICIPAL ADMINISTRATION
AND WATER SUPPLY DEPARTMENT**

**POLICY NOTE
2022- 2023**

DEMAND No. 34

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Minister for Municipal Administration

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TABLE OF CONTENTS

Sl.No.	Title	Pages
Vision Statement		1
1.	Preamble	2-10
	1.1 Departments	10-11
	1.2 Urban Local Bodies	11-13
	1.3 Ordinary Elections to the Urban Local Bodies	14-18
2.	Directorate of Municipal Administration	19
	2.1 Administration	19-25
	2.2 Infrastructure Development	25-41
	2.3 Urban Health Infrastructure	41-47
	2.4 Education and Youth Welfare	47
	2.5 Flagship Schemes	48-53
	2.6 Schemes Under Implementation	54-68
	2.7 Externally Aided Projects	68-76
	2.8 Financial Management	76-83
	2.9 Tamil Nadu Institute of Urban Studies	83-84
	2.10 Corporations under the Administrative Purview of DMA	85-114
3.	Greater Chennai Corporation	115-117
	3.1 Infrastructure	117-143
	3.2 Health and Sanitation	143-167
	3.3 Revenue	167-171
	3.4 Education	172-176

Sl.No.	Title	Pages	
	3.5	Namakku Naame Thittam	177-178
	3.6	Nagarpura Velaivaippu Thittam	178-179
	3.7	Training Needs and Capacity Building Activities	179-180
	3.8	Singara Chennai 2.0	180-182
	3.9	Measures Taken for Flood Mitigation	182-185
	3.10	Sustainable Development Goals	185-188
4.	Commissionerate of Town Panchayats		189
	4.1	Administration	189-190
	4.2	Functions of the Town Panchayats	190-198
	4.3	Sanitation	198-205
	4.4	Environmental Development	205-207
	4.5	Schemes under Implementation	207-211
	4.6	State Government Schemes	211-219
	4.7	e-Governance	219-220
	4.8	Financial Management	220-226
5.	Chennai Metropolitan Water Supply And Sewerage Board		227-231
	5.1	Water Supply Management	231-238
	5.2	Water Supply Schemes	238-248
	5.3	Sewerage Management	248-251
	5.4	Sewerage Schemes	251-257
	5.5	Recycle and Reuse	257-259

Sl.No.	Title		Pages
	5.6	Capacity Building	259-260
	5.7	Use of Technology	260-264
	5.8	Monitoring Consumers Grievances	264-266
	5.9	Employee Welfare	266-268
	5.10	Financial Position	268-271
6.	Tamil Nadu Water Supply And Drainage Board		272-273
	6.1	Vision of TWAD Board	274
	6.2	Activities of TWAD Board	275
	6.3	Combined Water Supply Schemes	275-295
	6.4	Stand-alone Water Supply Schemes	295-301
	6.5	Under Ground Sewerage Schemes	301-309
	6.6	Special Schemes	310-311
	6.7	Research, Design, Training and Project Management Centre	311-314
	6.8	Material Testing and Quality Control Laboratory	314-315
	6.9	Water Quality Testing and Surveillance	315-317
	6.10	Hydro- Geological Activities	317-318
	6.11	Rain Water Harvesting Structures	318-319
	6.12	Financial Position	319-321
	6.13	Jal Jeevan Mission	322-332

Sl.No.	Title	Pages
7.	Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL)	333-334
	7.1 Tamil Nadu Urban Development Fund (TNUDF)	334-336
	7.2 Externally Aided Projects	337-347
	7.3 Water and Sanitation Pooled Fund (WSPF)	347-349
	7.4 Chennai Mega City Development Mission (CMCDM)	349-350
8.	Chennai Rivers Restoration Trust	351
	8.1 Completed Eco-Restoration Projects	351-356
	8.2 Ongoing Eco-Restoration Projects	356-359
	8.3 Projects Set to Commence	359-360
	8.4 Preparation of Detailed Project Reports (DPRs)	360-363
9.	Tamil Nadu Urban Finance And Infrastructure Development Corporation Limited (TUFIDCO)	364
	9.1 The objectives of TUFIDCO	365
	9.2 Mission Directorate / Nodal Agency	365-366
	9.3 Fund Manager	366-367
	9.4 Atal Mission For Rejuvenation And Urban Transformation	367-372

Sl.No.	Title		Pages
		(AMRUT)	
	9.5	Atal Mission For Rejuvenation And Urban Transformation 2.0 (AMRUT 2.0)	372-375
	9.6	Smart Cities Mission	376-378
	9.7	Kalaingar Nagarpura Mempattu Thittam	378-380
	9.8	Singara Chennai 2.0	380-382
	9.9	Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) - Revolving Fund	383
	9.10	Metropolitan Infrastructure Development Fund (MIDF)	384
	9.11	Integrated Urban Development Mission (IUDM) Phase I (2011-16)	384-387
	9.12	TUFIDCO Infrastructure Funding Scheme (TIFS)	388
	9.13	Special Roads Programme (SRP)	388-389
	9.14	Fund Manager for the State Government Schemes	389-390
10.	New Tirupur Area Development Corporation Limited		391-398
11.	Tamil Nadu Water Investment Company Limited		399-401
	11.1	Noteworthy Projects	401-405

Sl.No.	Title		Pages
	11.2	Ongoing Schemes	405-407
	11.3	Major ongoing Projects	407-410
	11.4	Awards Received	411
	11.5	Assignments for Government of Tamil Nadu	411-413
	11.6	Assignments for Government of India	413-415
	11.7	Financials of the Company	415
	11.8	Corporate Social Responsibility	415
12.	Sustainable Development Goals		416-417
13.	Training Needs And Capacity Building		418-419
14.	Way Forward		420-421

DEMAND NO.34

MUNICIPAL ADMINISTRATION AND WATER SUPPLY DEPARTMENT

Policy Note – 2022-2023

VISION STATEMENT

Provide a decent quality of life, clean, green and sustainable environment, quality basic amenities, vibrant public spaces, induce economic growth, generate employment and mitigate poverty through responsive city governance leading to a decent quality of life for all by following a comprehensive, inclusive, integrated, transparent and participatory approach of urban development.

1. PREAMBLE

Cities function as the crucible of civilization. Urbanization, the hallmark of Tamil Nadu is both inevitable and desirable. This is accompanied by an unprecedented urban and spatial transformation. Urbanization has helped in poverty alleviation in the rural areas as well, through strong economic linkages besides the obvious direct benefit to urban residents. The challenge then is to harness the engine of urbanization to foster economic growth, and this would be the key strategic priority for the Government of Tamil Nadu.

Though Tamil Nadu is a pioneer in many aspects of urban development, there is the urgency to address the pressure on already stretched basic services.

Notwithstanding the budgetary outlays of both centrally sponsored and state schemes, the

gaps in urban services require effective urban finance reforms, improving urban governance and capacity building to facilitate local bodies to take on the challenges under the 74th Constitutional Amendment.

Investing in Growth

Tamil Nadu is one of the most urbanized state in India. Census 2011 estimates that 48.45% of the total population of the state resides in cities pegging the growth rate at (27% during 2001-11) clearly outpacing the rural population growth of 6%, during the same period (2001-2011). Population projections have estimated that by 2036, 60% of the population of the state would be urban.

The fundamental development challenge facing the state is to accommodate the increasing need for housing and urban services such as water supply, drainage, solid waste

management, urban transportation systems, all the while creating opportunities for economic growth against the growing (reality) concern of climate change and depletion of natural resources. Some of the real challenges on the ground confronting cities are i) acute infrastructural deficits in emerging growth centers; ii) low institutional capacity to provide quality governance; and iii) need for financial reform and tariff changes to address sustainability of assets.

Therefore, the scale of challenges presented before us call for huge investments, and a targeted approach through focused schemes.

Water as the basis of life

Access to clear water is the bedrock of civilization. In line with the vision as enunciated,

water balance plans have been prepared for every city / town.

A strong thrust is given to rejuvenation and restoration of water bodies. Allocation for this component is substantial in many schemes, such as Kalaignar Nagarpura Mempattu Thittam (KNMT), Singara Chennai 2.0 etc. IEC activities seek to educate, inform, and elicit people's participation in water conservation.

Reducing wastage and water loss, recycling and reusing treated used water assume paramount importance against the adverse impact of climate change. The existential threat of climate change exposes cities to extreme weather events of flooding and water run-off.

Cities are urged to take up plantation works wherever possible, using native species to promote soil health, water retention and ground water recharge.

The Waste Management Conundrum

Tamil Nadu has the highest number of statutory towns in India with the dispersed pattern of urbanization of 21 municipal corporations, 138 municipalities and 490 town panchayats. The largest ULB namely the Greater Chennai Corporation has a population density of 3,521 persons per Sq.KM. Sanitation and solid waste management therefore have direct bearing on the health and wellbeing of residents. This challenge is being addressed through 100% UGSS / septage coverage in all 28 cities under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme. Area specific storm water drainage plans and long-term plans taking a basin approach are being devised.

Legacy waste reclamation projects are getting grounded using bio remediation / biomining technology to reclaim land that has been polluted by solid waste. Smaller towns are

taken up in a cluster or individually for providing septage management services.

Access to well maintained toilets and eliciting public support in making the cities litter free are planned comprehensively under Swachh Bharat Mission (SBM) and Singara Chennai 2.0. Private participation in this venture is sought through viable public private partnership (PPP) models.

Roads as connecting networks

In order to ensure that roads are laid with ease of commute in mind all earthen roads not only in municipal corporations but also in municipalities and town panchayats, are to be converted into allweather roads. This component is inbuilt in schemes of Tamil Nadu Urban Road Infrastructure Fund (TURIF), Singara Chennai 2.0 and Kalaignar Nagarpura Mempattu Thittam (KNMT). The roads are further provided with

energy efficient streetlights using LED lights in all ULBs.

Carbon sinks for the city

In the asphalt jungles that cities have come to be, the smallest patch of green is worth growing. Desilting water bodies, rejuvenation with planting native species, maintaining parks and public spaces find pride of place in schemes such as KNMT, Namakku Naame, Singara Chennai 2.0 etc.

Employment Opportunities

Municipal corporations and municipalities are to establish libraries and knowledge centers for students to benefit. Placement linked skill development programmes will be put in place by all ULBs.

Chennai – the capital

Singara Chennai 2.0 would provide a host of amenities and upgraded infrastructure as befitting a modern metropolis.

Dignity to the departed

Hygienic, eco-friendly crematoria are to be taken up in phases. KNMT and Singara Chennai provide for the same.

Other infrastructure

ULB based / area-based schemes will provide for modern markets and slaughter houses, integrated bus stands and parking facilities and night shelters for the homeless.

Heritage and Culture

A city with life is in its public square. Historic buildings such as the Victoria Public Hall is to be renovated. Cities would actively organize cultural festivals bringing people together in celebration.

People’s Participation and Capacity Building

The endeavor is to develop a citizen engagement strategy including building the capacity of all those engaged in service delivery

during all stages of planning, implementation, and monitoring of urban interventions.

The recently concluded local body elections have placed 12,819 ward members and 646 Mayor / Chairman candidates at the helm of decision making. Sensitization programmes are scheduled to provide the necessary information on government schemes and to delineate their duties and responsibilities.

1.1 Departments

The departments under Municipal Administration and Water Supply Department are as follows:

1. Directorate of Municipal Administration (DMA)
2. Greater Chennai Corporation (GCC)
3. Commissionerate of Town Panchayats (CTP)
4. Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB)

5. TamilNadu Water Supply and Drainage Board (TWAD Board)
6. TamilNadu Urban Infrastructure Financial Services Limited (TNUIFSL)
7. Chennai Rivers Restoration Trust (CRRT)
8. TamilNadu Urban Finance and Infrastructure Development Corporation Limited (TUFIDCO)
9. New Tirupur Area Development Corporation Limited (NTADCL)
10. Tamil Nadu Water Investment Company Ltd (TWIC)

1.2 Urban Local Bodies

In addition to the Constitution of new municipal corporations last year, at present 21 Corporations, 138 Municipalities and 490 Town panchayats are under the administrative control of this department. The details of district wise urban local bodies in the state are provided in the following Table 1.1.

Table 1.1

Sl. No.	District	Corporations	Municipalities	Town Panchayats	Total
1.	Ariyalur	-	2	2	4
2.	Chennai	1	-	-	1
3.	Coimbatore	1	7	33	41
4.	Cuddalore	1	6	14	21
5.	Dharmapuri	-	1	10	11
6.	Dindigul	1	3	23	27
7.	Erode	1	4	42	47
8.	Kancheepuram	1	2	3	6
9.	Chengalpattu	1	4	6	11
10.	Kanniyakumari	1	4	51	56
11.	Karur	1	3	8	12
12.	Krishnagiri	1	1	6	8
13.	Madurai	1	3	9	13
14.	Nagapattinam	-	2	4	6
15.	Mayiladudurai	-	2	4	6
16.	Namakkal	-	5	19	24
17.	Nilgiris	-	4	11	15
18.	Perambalur	-	1	4	5
19.	Pudukkottai	-	2	8	10
20.	Ramanathapuram	-	4	7	11

Sl. No.	District	Corporations	Municipalities	Town Panchayats	Total
21.	Salem	1	6	31	38
22.	Sivagangai	-	4	11	15
23.	Thanjavur	2	2	20	24
24.	Theni	-	6	22	28
25.	Thiruvallur	1	6	8	15
26.	Thiruvannamalai	-	4	10	14
27.	Thiruvarur	-	4	7	11
28.	Thoothukudi	1	3	18	22
29.	Tiruchirappalli	1	5	14	20
30.	Tirunelveli	1	3	17	21
31.	Tenkasi	-	6	17	23
32.	Tiruppur	1	6	15	22
33.	Vellore	1	2	4	7
34.	Thirupathur	-	4	3	7
35.	Ranipet	-	6	8	14
36.	Villupuram	-	3	7	10
37.	Kallakurichi	-	3	5	8
38.	Virudhunagar	1	5	9	15
	Total	21	138	490	649

1.3 ORDINARY ELECTIONS TO THE URBAN LOCAL BODIES

Article 243U of the Constitution of India, as introduced by the Constitution 74th Amendment Act, mandates that every municipality shall continue for five years from the date appointed for its first meeting and an election to constitute a municipality shall be completed, before the expiry of its duration. Accordingly, the first round of ordinary elections to the urban local bodies after the 74th Constitutional Amendment Act came into force was held during the year 1996. Subsequently, the ordinary elections to the local bodies were held periodically during 2001, 2006 and 2011. However, the fifth round of ordinary elections to the local bodies, which were due in 2016 were not held until May 2021.

This Government believes strongly in the principle of local self governance and therefore

the government announced its determination to hold the fifth round of ordinary elections to the urban local bodies, which were due in 2016 and initiated necessary steps for holding the elections on a war-footing. The delimitation of the urban local bodies in the recently reconstituted districts and the newly formed corporations and municipalities were completed in record time followed by reservation of seats in the said urban local bodies. Subsequently, the reservation of office of mayor of Municipal corporations and chairman of municipalities and town panchayats for women and for persons belonging to scheduled castes/scheduled tribes, including women of the said categories were notified. For the first time, 50% of seats and offices of urban local bodies were reserved for women.

Elections to all the urban local bodies (except one town panchayat) were held on

19.02.2022 in a free and fair manner and counting of votes was held on 22.02.2022. A total of 1,373 councillors in 21 municipal corporations and a total of 3,842 councillors in 138 municipalities and 7,604 councillors in 489 town panchayats have been elected besides 21 Mayors and 21 Deputy Mayors of municipal Corporations; 138 Chairmans and 136 Vice Chairmans of municipalities and 487 Chairmans and 483 Vice Chairmans of town panchayats. The first meeting of the elected councils was held in which the elected councillors have subscribed an oath/affirmation. An abstract of the number of Office of Mayor / Deputy Mayor of Municipal corporations, Chairman / Vice Chairman of municipalities and town panchayats and Councillors in municipal corporations, municipalities and town panchayats is given below in Table 1.2 and Table 1.3.

Table 1.2: Office of Mayor / Deputy Mayor of Municipal Corporations and Chairman / Vice Chairman of Municipalities and Town Panchayats

Office/Wards	SC (General)	SC (Women)	ST (Women)	Women (General)	General	ST (General)	Total
Mayor of Municipal Corporations	1	2	0	9	9	-	21
Deputy Mayor of Municipal Corporations	-	-	-	-	21	-	21
Chairman of Municipalities	10	10	1	58	59	-	138
Vice Chairman of Municipalities	-	-	-	-	136	-	136
Chairman of Town Panchayats	42	42	2	199	201	1	487
Vice Chairman of Town Panchayats	-	-	-	-	483	-	483
TOTAL	53	54	3	266	909	1	1,286

Table 1.3: Ward Councillors of Municipal Corporations, Municipalities and Town Panchayats

Office/ Wards	SC (General)	SC (Women)	ST (Women)	Women (General)	General	ST (General)	Total
Ward Councillors of Municipal Corporations	74	85	0	605	609	-	1,373
Ward Councillors of Municipalities	241	309	5	1,647	1,640	-	3,842
Ward Councillors of Town Panchayats	565	797	21	3,166	3,050	5	7,604
TOTAL	880	1,191	26	5,418	5,299	5	12,819

2. DIRECTORATE OF MUNICIPAL ADMINISTRATION

2.1 Administration

2.1.1. Formation of New City Municipal Corporations and Municipalities

Tamil Nadu is among the most urbanized States in the country. As per the 2011 population census, the percentage of urban population in the State was 48.45. Now the percentage of population living in urban areas to the total population has increased to over 53 percent. It has therefore become essential to merge the areas having urban characteristics adjoining corporations and municipalities with the respective urban local body and to create necessary infrastructure in those areas also. Considering this rapid pace of urbanisation in the State, the Government felt it necessary to reorganise the urban local bodies.

Accordingly, the Government in a historic move, during the Demand for Grant for the year 2021-22, announced on the floor of the Legislative Assembly, that the Municipalities of Kancheepuram, Kumbakonam, Karur, Cuddalore and Sivakasi and adjoining urbanised areas will be merged to form respective municipal corporation. The Government also announced that, the Tambaram Municipality and the adjoining municipalities of Pallavaram, Sembakkam, Pammal, Anakaputhur and the adjoining town panchayats and village panchayats will be merged to form a municipal corporation.

Keeping in mind, the need to meet the growing demands of civic infrastructure in fast urbanizing pockets, the Government further announced that, the town panchayats of Pallapatti, Tittakudi, Mangadu, Kundrathur, Nandivaram-Guduvancheri, Ponneri,

Tirunindravur, Sholingur, Edanganasalai, Tharamanagalam, Thirumuruganpoondi, Gudalur, Karamadai, Karumathampatti, Madukkarai, Vadalur, Kottakuppam, Tirukovilur, Ulundurpettai, Adirampattinam, Manamadurai, Surandai, Kalakkadu, Tiruchendur, Kollencode, Musiri and Lalgudi will be upgraded as Municipalities. Also, the town panchayats of Pugalur and TNPL Pugalur will be merged to form Pugalur Municipality.

Based on the said announcement, detailed proposals were formulated for the creation/upgradation of urban local bodies and after following due statutory procedure. 6 new municipal corporations and 28 new municipalities have been formed, raising the hopes of more than a million people for better civic amenities, enhanced economic opportunities and quality of life. This

Government will endeavor to meet these aspirations of the people.

On formation of these new municipal corporations and municipalities, the administrative domain of the Directorate of Municipal Administration has been extended to 20 municipal corporations viz., Madurai, Coimbatore, Tiruchirappalli, Tirunelveli, Salem, Erode, Tiruppur, Thoothukudi, Vellore, Thanjavur, Dindigul, Hosur, Nagercoil, Avadi, Tambaram, Kancheepuram, Kumbakonam, Karur, Cuddalore, Sivakasi and 138 municipalities.

The municipalities are classified based on their annual income as detailed in Table 2.1.

Table 2.1

Sl. No.	Category	Annual income (Rs.crore)	Number
1	Special Grade	Above 15	13
2	Selection Grade	9 - 15	31
3	First Grade	6 - 9	24
4	Second Grade	Below 6	70
Total			138

Functions of Urban Local Bodies (ULBs)

The urban local bodies in Tamil Nadu are discharging most of the functions stipulated under Article 243 W and Twelfth Schedule of the Constitution of India, except census and fire service. The functions of ULBs are as given below:

- Urban planning including town planning.
- Regulation of land-use and construction of buildings.
- Planning for economic and social development.
- Roads and bridges.

- Water supply for domestic, industrial and commercial purposes.
- Public health, sanitation, conservancy and solid waste management.
- Urban forestry, protection of the environment and promotion of ecological aspects.
- Safeguarding the interests of weaker sections of society, including the differently abled and mentally challenged.
- Slum improvement and upgradation.
- Urban poverty alleviation.
- Provision of urban amenities and facilities such as parks, gardens, playgrounds.
- Promotion of cultural, educational and aesthetic aspects.
- Burials and burial grounds; cremations, cremation grounds and Electric crematoriums.

- Cattle pounds; prevention of cruelty to animals.
- Vital statistics including registration of births and deaths.
- Public amenities including street lighting, parking lots, bus stops and public conveniences.
- Regulation of slaughter houses and tanneries.
- Ensuring the services rendered by the Government reaches the citizens.

2.2 Infrastructure Development

2.2.1 Water Supply

The Government aims to ensure daily water supply in all Corporations and Municipalities and also to increase the hours of water supply, to rehabilitate the existing infrastructure by integrating various schemes and to increase the coverage by identifying new

sources and to complete the ongoing water supply schemes within the stipulated time.

The present status of water supply in Corporations and Municipalities are as detailed in Table 2.2.

Table 2.2

Category	Water Supply(LPCD)	No. of ULBs
Corporations	135 and above	6
	110 to 134	4
	70 to 109	10
Municipalities	135 and above	7
	110 to 134	23
	70 to 109	108
	Total	158

The Government will provide functional water tap connection to every household in urban areas. Action is being taken to supply water @ 135 LPCD in all Corporations and Municipalities having UGSS and @ 90 LPCD in rest of the municipalities.

Rejuvenation of water bodies

The total number of water bodies available in the corporations and municipalities in the state are as below

Sl.No	Urban Local Bodies	Water bodies (nos.)
1	Corporations	164
2	Municipalities	425
	Total	589

Preventing dumping of solid waste and sewage into the water bodies, rejuvenation of inlet and outlet channels, desilting of water bodies, reclaiming and renovating the urban water bodies and recycling of used water will be implemented effectively to increase the water storage.

Accordingly, the Government have announced rejuvenation of 150 water bodies in Budget 2021-22 out of which 75 works have been taken up at an estimated cost of Rs.88.62 crore by dovetailing funds under

Kalaingar Nagarpura Membattu Thittam, Namakku Naame Thittam and grant from Kfw (German Development Bank). For rejuvenation of the remaining 75 water bodies, funds have been tied up under AMRUT 2.0.

2.2.2 Streetlights

A total number of 8.62 lakh streetlights are available in 20 corporations (other than Greater Chennai Corporation) and 138 municipalities. Further, additional streetlights will be provided wherever required, to meet the norms of one streetlight for every 30 metres. Optimum and efficient utilization of energy is the motto of Government. Based on this, all streetlights will be made energy efficient.

As per announcement made in Budget 2021-22, steps are being taken to provide 12,710 number of new streetlights with pole in 11 corporations and 18 municipalities at an

estimated cost of Rs.85.43 crore under KfW funding. Further, provision of 1,00,642 new street lights at an estimated cost of Rs.147.58 crore is being taken up, with funding under 15th Finance Commission Grants. Also, replacement of 3,11,601 existing streetlights is being taken up in 87 municipalities and 4 corporations at an estimated cost of Rs.399.50 crore, under TUFIDCO revolving fund.

2.2.3 Roads

Roads play a major role in connecting various parts of the town and also improving the mobility and the quality of life in urban areas. The safe motorable roads are designed and built for the use of vehicular traffic and pedestrians by following the norms prescribed by the Ministry of Road Transport and Highways (MORTH).

The corporations (except Greater Chennai Corporation) and municipalities maintain a total

length of 25,814 KM of roads. This include 5,399 KM of cement concrete (CC) roads, 15,911 KM of black top (BT) roads, 169 KM of water bound macadam (WBM) roads, 2,890 KM of earthen roads and 1,445 KM of other type of roads like paver block roads etc.

A detailed survey was taken up and based on the survey, online register of assets, viz. roads, streets and lanes has been created for scientific selection and execution of works.

New Roads

Based on the budget announcement 2021-22, earthen roads for a total length of 400 KM have been taken up for conversion into All Weather Roads i.e., BT roads, CC roads and paver block roads at an estimated cost of Rs. 300 crore, by utilizing funds under KNMT, CGF and TNSUDP.

Restoration of Damaged Roads

Roads are damaged due to execution of underground sewerage scheme & water supply improvement schemes, natural calamities and rains. It is imperative to restore these damaged roads. As against a target of 500 KM, 3,046 works for a total length of 538.23 KM have been taken up for restoration at an estimated cost of Rs.442.92 crore during the year 2021-22, under various schemes like TURIF, CGF, TNSUDP and General funds of the urban local bodies.

2.2.4 Sanitation

(i) Solid Waste Management (SWM)

The Government is committed to make the cities garbage free by segregating the garbage at source and converting the bio-degradable waste into manure or producing biogas. Scientific management of solid and liquid waste in an environment friendly manner is an important function of urban local bodies.

Over 6,800 MT of solid waste is being generated in 20 corporations and 138 municipalities. Out of this, nearly 52% wet waste and 48% dry waste. The wet waste is scientifically processed and converted into manure. Similarly, the dry waste is being collected and transported to Resource Recovery Centres (RRC) and disposed through the identified vendors for recycling. The non-recyclable and combustible waste is separated and transported to nearby cement plants, for disposal by co-processing.

Action is being taken to process and dispose the legacy waste dumped at various locations in an environment friendly manner through bio-mining. The Government intends to convert the surplus reclaimed land as urban green spaces, parks depending on the nature of the land. The Government is committed to make the cities garbage free by segregating the solid waste at source and converting the

bio-degradable waste into manure or producing biogas.

Based on the City Sanitation Action Plan (CSAP), it has been proposed to provide more number of Micro Compost Centres (MCC), Biomethanation plants and Resource Recovery Centres to bridge the gap in processing of both wet and dry waste.

(ii) Removal of Legacy Waste

Out of 20 corporations, bio-mining process to eradicate legacy waste has been taken up in 11 corporations at an estimated cost of Rs.222.93 crore and 86 municipalities at an estimated cost of Rs.300.90 crore. Steps are being taken up to complete the bio-mining process in these corporations and municipalities expeditiously. A part of the reclaimed land in various cities will be used for setting up solid waste processing facilities and surplus land will

be used for public purposes including developing parks and green spaces.

During the year 2021-22, biomining work has been sanctioned for Madurai and Tiruchirapalli corporations with an estimated cost of Rs.70.75 crore and Rs.24.50 crore respectively under 15th Finance Commission Grants. Biomining works for 7 municipalities viz. Sirkali, Thiruthuraipoondi, Manapparai, Devakottai, Chinnamanur, Puliyangudi and Virudhunagar have been taken up under KfW funding with an estimated amount of Rs.13.75 crore. In case of Coonoor municipality biomining work with an estimated cost of Rs.0.94 crore has been completed by utilising the own fund of the municipality.

Steps are being taken up to expeditiously complete the bio-mining process.

2.2.5 Town planning

To address the need of common public and reduce the time in process of building approval, submission of application for **Building Plan Approvals** and payment of fees have been made online. The problems that persisted in online mode of building plan approval system have been rectified. Further the process has been made easy, all documents related to approval of building plans can be uploaded online by providing additional space and improvements in the back-end software. As soon as the planning file is approved online, the demand for payment of fees goes to the applicant directly and fee is paid through online mode only.

Since the building plan approval system has been made online without human intervention, it is not necessary for the general public to visit the offices of

municipality/corporation in person for building plan approval. As a result of this online building plan approval system and continuous monitoring of system, delay in processing the applications have been reduced now ensuring time bound and hassle-free service to the public.

In order to enhance the ease of doing business in issuing building plan approvals, a common online portal is being developed by TNeGA and is expected to be launched shortly. It has been proposed to further simplify the process of building plan approvals through seamless integration of all NOC agencies such as Fire service, AAI etc., in the online platform.

2.2.6 Other Infrastructure

(i) Modern Bus Stands

A total of 166 bus stands are under the maintenance of various corporations and municipalities, as given in Table 2.3.

Table 2.3

Abstract of the existing bus stands			
Grade of bus stand	Number of bus stands in municipalities	Number of bus stands in corporations	Total
A	14	20	34
B	40	9	49
C	59	5	64
D	16	3	19
Total	129	37	166

The Government has taken necessary steps to modernise all the bus stands in urban areas so as to provide adequate facilities to the public.

Based on the budget announcement 2021-2022, action has been initiated to construct an Integrated Bus Stand cum Commercial Centre at Tiruchirappalli, at an estimated cost of Rs.350 crore. Steps have been also taken up for construction of modern bus stands in Thirumangalam, Namakkal, Tiruthani, Tiruvannamali, Tindivanam, Mayiladuthurai municipalities and Karur and Kancheepuram

corporations. Action has also been initiated for construction of new bus stands in Mannargudi, Ranipet, Sankarankoil municipalities and in Erode Corporation. More number of bus stands will be taken up during 2022-23, based on the need. New integrated bus stands with modern amenities will be established, multi-level car parking facilities will be established at busy commercial centres/hubs, as per requirement.

(ii) Parks

Playgrounds and parks are maintained in urban local bodies for the benefit of the general public, especially children. There are 3,096 playgrounds and parks in corporations and municipalities. Renovation of 100 parks in corporations and municipalities has been announced in budget 2021-22. So far 56 parks have been taken up and work is in progress and the work for the remaining 44 parks will commence shortly.

(iii) Crematoriums

In total 1,260 crematoriums are being maintained by the corporations and municipalities, as given in Table 2.4.

Table 2.4

Sl. No	Urban Local Bodies	Types of Crematoriums				Total
		Burning shed	Gasifier	LPG	Electric	
1	Corporations	452	33	20	6	511
2	Municipalities	667	56	30	1	749
Total		1,119	128	50	7	1,260

The Government is committed to improve the crematoriums by providing basic amenities like water, lights, pathway and sheds for funeral rites. As per announcement made in budget 2021-22, 50 crematoriums in corporations and municipalities have been taken up for improvement at a cost of Rs.75 crore under various schemes and work is at various stages of implementation. The government is committed to convert all crematoriums into LPG /electrical crematoriums in a phased manner.

(iv) Markets

Markets play a vital role in meeting the day-to-day needs of the public. Markets also contribute to the revenue of the Urban Local Bodies. A total of 330 markets are being maintained by the corporations and municipalities as given in table 2.5.

Table 2.5

Sl. No	Urban Local Bodies	Weekly markets		Daily markets		Total	
		No of markets	Shops (Nos)	Markets (Nos)	Shops (Nos)	Markets (Nos) (3+5)	Shops (Nos) (4+6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Corporations	25	2,758	57	7,024	82	9,782
2	Municipalities	81	5,117	167	18,645	248	23,762
	Total	106	7,875	224	25,669	330	33,544

It is essential to upgrade and modernize the daily and weekly markets. The markets located in congested areas of big cities need to be de-centralized and relocated to avoid crowding and also to facilitate handling of goods.

While moving the demands for the year 2021-22, the Government has announced construction of 10 new markets at a cost of Rs.50 crore and redevelopment of 20 existing markets at a cost of Rs.65 crore in corporations and municipalities and the work is at various stages of implementation.

2.3 Urban Health Infrastructure

287 hospitals and 302 Urban Primary Health Centers (UPHCs) are being maintained by various corporations and municipalities. Steps are being taken to improve the hospitals and UPHCs.

2.3.1 Maternal and Child Health Care

Urban local bodies are focusing on improving maternal and child health services. Action is being taken to avoid infant and maternal mortality. Work has been taken up for construction of 89 wellness centres in

corporations and 164 wellness centres in municipalities during the year 2021-22 under 15th CFC grants.

2.3.2 UnderGround Sewerage Scheme (UGSS) and Septage Management

Out of 20 corporations, UGSS has been taken up for implementation in 18 corporations. The scheme has been completed in 16 Corporations and put to use. In respect of the Hosur Corporation UGSS will be taken up under AMRUT 2.0 during the year 2022-23. The government is committed to provide UGSS in all left out areas of the cities. To ensure 100% coverage, projects have been taken up in the added and uncovered areas of 10 Corporations, under AMRUT, Smart Cities Mission and Asian Development Bank assistance. The works are under various stages of implementation.

Status of UGSS in 138 Municipalities

- Out of 138 municipalities, 7 towns are having a population of more than 1 lakh. Out of these 7 towns, UGSS has been completed in 4 towns, viz. Tiruvannamalai, Namakkal, Nagapattinam, Pudukottai and in the remaining 3 towns, viz. Ambur, Karaikudi & Rajapalayam, the scheme is under implementation.
- Of the remaining 131 municipal towns, 54 towns have population between 50,000 to 1 lakh.
- UGSS has been completed in 18 towns, viz. Maraimalainagar, Tiruvallur, Chidambaram, Arakkonam, Tirupathur, Villupuram, Mettur, Rasipuram, Dharmapuri, Krishnagiri, Mayiladuthurai, Tiruvarur, Theni-Allinagaram, Bodinayakanur, Udumalaipettai, Ramanathapuram, Udhamandalam &

Virudhunagar and is under implementation in 3 towns, viz. Tindivanam, Pollachi & Mettupalayam.

- FSTP has been taken up for implementation in 21 towns (to cover 22 towns) and completed in 9 towns, viz. Idappadi, Thirumangalam, Dharapuram, Kovilpatti, Kadayanallur, Mannargudi, Pattukottai, Aruppukottai, Tiruchengode and under progress in 12 towns, viz. Chengalpattu, Panruti, Virudhachalam, Gudiyatham, Vaniyambadi, Attur, Paramakudi, Cumbum, Sankarankoil, Tenkasi, Puliyangudi and Srivilliputhur.
- The remaining 12 towns, viz. Palani, Ponnammallee, Tiruverkadu, Arcot, Pernampattu, Ranipettai, Arani, Kallakurichi, Komarapalayam, Devakottai, Gobichettipalayam and Valparai will be covered either under FSSM or UGSS

depending on the need, feasibility and financial capacity of the municipality.

- Out of 77 towns having a population of less than 50000,
 - UGSS has been completed with partial coverage in 8 towns, viz. Perambalur, Ariyalur, Periyakulam, Chinnamanur, Sathyamangalam, Sivagangai, Ulundurpet, Tiruchendur and is under implementation in 3 towns, viz. Rameswaram, Sattur, Ponneri.
 - FSSM has been taken for implementation in 24 towns (to cover 26 towns) and completed in 6 towns, viz. Kangeyam, Shenkottai, Vickramasingapuram, Thuraiyur, Melur, Ambasamudram and is under progress in 18 towns, viz. Nellikuppam, Walajapet, Vandavasi, Kulithalai, Vedharanyam, Sirkali, Thiruthuraipoondi, Koothanallur,

Aranthangi, Manapparai,
Jayamkondam, Usilampatti,
Gudalur(T), Keelakarai, Coonoor,
Colachel, Kuzhithurai,
Padhanathapuram. Further,
Narasingapuram clustered with
ongoing FSTP & 2 towns, viz.
Gudalur(C) & Madhuranthagam
clustered with completed Town
panchayat FSTP. The remaining towns
will be covered under faecal sludge and
septage management (FSSM).

- The Government will expedite the ongoing projects and will take up UGSS to cover the left over areas in all Corporations and Municipalities with a population of more than one lakh and every household will be connected to sewerage network.

Adequate number of equipment will be provided to all Corporations and Municipalities

for the maintenance of sewerage scheme and FSTP activities.

2.4 Education and Youth Welfare

Necessary steps will be taken up to improve the quality of education in all municipal schools with focus on learning outcomes. Vocational / skill training will be provided in higher secondary schools to enhance the employability of the students, in coordination with the industries.

2.4.1 Modern Libraries

Modern libraries and knowledge centres are being setup for benefit of the public, particularly, the students who are preparing for competitive exams. Work has been taken up for establishing 40 library cum knowledge centres at an estimated cost of Rs.88.70 crore under KNMT, Smart Cities Mission and CGF.

2.5 Flagship Schemes

2.5.1 Kalaingar Nagarpura Mempattu Thittam

The Government, in order to fulfill the infrastructural gaps in municipalities and town panchayats have launched the flagship program of “Kalaingar Nagarpura Mempattu Thittam”(KNMT). The Guidelines for the scheme have been issued vide G.O.(Ms) No.70 Municipal Administration and Water Supply Department dated 13.09.2021.

The Government have also accorded sanction for the release of Rs.1,000 crore for the implementation of the scheme for the year 2021-2022, vide G.O.(Ms) No.73 Municipal Administration and Water Supply Department, dated 24.09.2021.

Under this scheme, water supply works, street lights, roads/streets and lanes,

construction of community halls, markets and modern library/knowledge centres and other essential infrastructure works like construction of bus stand and improvement to existing bus stands, rejuvenation of water bodies, SWM activities, construction and improvement of crematoriums, shandy, community hall and parks & play fields works are taken up in municipalities and town panchayats. Sanction has been accorded for Rs.935.88 crore viz. Rs.486.15 crore for municipalities and Rs.449.73 crore for town panchayats.

The details of works taken up in various Municipalities are as detailed below in Table 2.6.

Table 2.6

Sl. No	Work details	Appraisal made/Sanctioned	
		Number	Amount (Rs. in crore)
(1)	(2)	(3)	(4)
1	New markets	7	29.63
2	Renovation of existing markets	17	55.19
3	Library / Knowledge centers	25	45.21
4	Modern gasifier crematorium	29	43.45

5	Parks	56	30.06
6	Rejuvenation of water bodies	42	57.69
7	Roads	174	206.92
Total		350	486.15

These works are at various stages of implementation.

2.5.2 Namakku Naame Thittam (Urban)

The Government, in order to improve the self-support mechanism of public and to enhance increased public participation in creating and maintaining community infrastructure, have launched the flagship programme of Namakku Naame Thittam (Urban). Guidelines for the implementation of the scheme have been issued vide G.O.(Ms) No.70 Municipal Administration and Water Supply Department, dated 24.09.2021.

Renovation of water bodies, formation, improvement and renovation of parks and play

grounds, installation of traffic islands, fountains, streetlights and CCTV cameras, planting of trees and installation of tree-guards, construction and renovation of buildings for schools, colleges, hospitals, urban primary health centres, shopping complex and any other buildings of public benefit, construction of modern libraries / knowledge centres, bridges, culverts, new crematorium and storm water drain, upgradation of earthen /gravel/WBM roads to All Weather Roads and construction / upgradation of community toilets / public toilets and markets/shops are taken up under this scheme.

The minimum public contribution for any of the identified work, except renovation of water bodies, should be one third of the estimate value. For the works relating to renovation of water bodies, the minimum public contribution should be 50%. There is no upper limit for public contribution.

A sum of Rs.150 crore has been sanctioned vide G.O.(Ms) No. 129 Municipal Administration and Water Supply Department, dated 20.12.2021.

So far, 136 projects in corporations (other than GCC) and 221 projects in municipalities have been approved and most of the works are under implementation.

2.5.3 Tamil Nadu Nagarpura Velaivaippu Thittam

The Government, in order to provide employment to urban poor by engaging them in the creation and maintenance of public assets like parks, play fields, storm water drains, roads, buildings and rejuvenation of water bodies etc., have launched the Nagarpura Velaivaippu Thittam (TNUES), on a pilot basis, with an initial budgetary allocation of Rs.75 crore for the year

2021-22. The scheme is being implemented on a pilot basis, in 2 zones in Greater Chennai Corporation, 1 zone each in 14 corporations, 7 municipalities (1 in each region) and 37 town panchayats (1 in each district).

Following wage rate is adopted under the scheme as given in Table 2.7.

Table 2.7

ULB	Wage rate (Rs./day)
GCC Coimbatore and Avadi Corporations	Rs.382
Other Corporations	Rs.363
Municipalities	Rs.342
Town panchayats	Rs.300

Under the scheme, a total of 63,480 Mandays have been generated in the 14 corporations and 7 municipalities, so far. The scheme will be extended further during 2022-23 based on the need.

2.6 Schemes under Implementation

2.6.1 Government Schemes

(i) Smart Cities Mission

The Smart Cities Mission has been launched by the Union Government in 2015, with the object of promoting the cities that provide core infrastructure, a clean and sustainable environment and a decent quality of life to all citizens. Smart Cities Mission provides application of smart solutions in providing service delivery on sustainable and inclusive development and the idea is to look at compact areas, create a replicable model, which will act as a light house to other aspiring cities.

The Smart Cities Mission is being implemented in 11 corporations of the state, viz. Chennai, Coimbatore, Madurai, Salem, Thanjavur, Vellore, Tuticorin, Tirunelveli, Tirupur, Tiruchirappalli and Erode. Under the Mission, each city is provided with a financial

assistance of Rs.1,000 crore, shared between the Government of India and the state in the ratio of 50:50.

In 10 corporations (except Chennai), 619 works at an estimated cost of Rs.9,722.62 crore have been taken up so far. Of which, 247 works at a cost of Rs.1,853.45 crore have been completed and remaining works are at various stages of implementation. The Mission period has been extended upto March 2023.

(ii) Atal Mission for Rejuvenation and Urban Transformation Scheme (AMRUT)

Atal Mission for Rejuvenation and Urban Transformation (AMRUT) aims to ensure the basic infrastructure such as drinking water facilities, sewage and septage management, storm water drains, non-motorized transport, parks and green spaces. Cities having a population of more than 1 lakh and towns of religious and tourist importance have been

included in the Mission. In Tamil Nadu, the Mission is being implemented in 28 cities viz., 26 cities with a population of more than 1 lakh and in 2 towns of religious and tourist importance, namely, Velankanni and Rameswaram.

Funding Pattern

City / Town Population	GOI Share	GOTN Share	ULB Share
More than 10 lakh	33%	20%	47%
Less than 10 lakh	50%	20%	30%

Under the mission, 385 projects at an estimated cost of Rs.9,977.37 crore are under implementation in 18 corporations and 7 municipalities under the administrative control of the DMA. Funding towards ULB contribution for water supply and UGSS projects has been arranged under ADB/KfW/TNSUDP/IUDM/CGF assistance. The Mission period has been extended upto March 2023. The summary of ongoing projects are as given in Table 2.8.

Table 2.8

Sector	Number of projects	Estimate cost (Rs. crore)	Completed projects	Ongoing projects
Water Supply	14	5,870.22	8	6
Under Ground Sewerage Scheme	13	3,912.89	2	11
Green Spaces	358	194.26	358	-
Total	385	9,977.37	368	17

(iii) Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0

The Atal Mission for Rejuvenation and Urban Transformation (AMRUT 2.0) has been launched by the Union Government on 1st October 2021 for a period of 5 years. AMRUT 2.0 aims to provide complete water security for all cities or towns in India based on the achievements of AMRUT in 500 cities. In order to promote the circular economy of water, the mission will address water needs, rejuvenate water bodies, improve aquifer management, and explore sustainable ways to reuse the used

water through tertiary treatment. The total allocation of Union Government for project implementation under the Mission is Rs.76,760 crore of which Rs.4,935 crore is allocated to Tamil Nadu.

Funding Pattern

City / Town Population	Union Government grant on the project fund	State/ULB Contribution
More than 10 lakh	25%	75%
10 lakh to 1 lakh	33%	67%
Less than 1 lakh	50%	50%

Focus on Universal Coverage: As part of AMRUT 2.0, all households in the ULBs will have access to 100 percent water supply. The Mission will also ensure 100 percent coverage for sewage and septage management in 28 AMRUT cities.

Promotion of Public Private Partnership:

All cities with more than 10 lakh population should take PPP projects worth atleast ten percent of their total project fund allocations.

AMRUT 2.0 has a strong reform agenda that stresses the necessity of strengthening ULBs and providing cities with complete water security.

City Water Balance Plan has been prepared for all the 158 ULBs (20 corporations and 138 municipalities) under the administrative control of DMA and projects have been identified for universal coverage of water supply and sustainable management of water bodies in all ULBs and 100% coverage of UGSS in AMRUT cities.

Mission has a **reform agenda** which needs to be implemented in first four years of Mission. There will be two types of reforms

namely 1)Mandatory reforms and 2) Incentive based reforms

- **Mandatory reforms** will be on property tax and user charges.
- **Effective system for grievance redressal** will be put in place in ULBs.
- **Incentive based reforms** will be on water conservation, urban governance and energy efficiency.

(iv) Swachh Bharath Mission(U)2.0

Under SBM(U), 135 ULBs have been declared as Open Defecation Free (ODF) cities. However, it is a big challenge for the cities to maintain ODF status. The Government is committed to make all urban areas truly ODF by providing universal access to toilets.

Under the Mission, 5,07,143 Individual House Hold Latrines (IHHL), 22,337 seats of Community toilets have been constructed so far. Further, purchase of primary collection vehicles

such as battery operated vehicles, light commercial vehicles & tipper lorries, construction of Micro Composting Centers, Resource Recovery Centers and other infrastructure works have been taken up and completed.

In continuation of the Mission, Swachh Bharat Mission 2.0 has been launched on 1st October 2021 for completion of the balance works under SBM (U), institutionalizing cleanliness behavior and making it sustainable. The Mission is for a period of 5 years, i.e. upto October 2026.

Objectives of the SBM 2.0 are:

(i) Sustain Open Defecation Free status in all statutory towns, to ensure that no untreated faecal sludge or used water is discharged into the environment and all used water (including sewage and septage, grey water and black

water) is safely contained, transported and treated, along with maximum reuse of treated used water, in all cities with less than 1 lakh population.

(ii) To make all cities clean and garbage free, with 100% scientific processing of municipal solid waste, source segregation, effective management of construction & demolition waste, plastic waste management and remediating all legacy waste dumpsites

(iii) To ensure awareness creation along with large scale citizen outreach to intensify 'peoples movement' and institutionalize cleanliness behavior and to create institutional capacity.

The Fund Sharing Pattern under the Mission is as follows.

City / Town Population	GOI grant on the project fund	State/ULB Contribution
More than 10 lakh	25%	75%
10 lakh to 1 lakh	33%	67%
Less than 1 lakh	50%	50%

The Mandatory conditions to be fulfilled by States/ UTs and ULBs:

- **Aligning property tax floor rates** with market rates, with periodic revisions in line with GSDP, as recommended by 15th Finance Commission
- Levy and collection of user charges for services provided, to recover operational costs, with periodic increase, within a period of two years.
- **PFMS** adoption by all ULBs.

(v) National Urban Livelihoods Mission (NULM)

Under the National Urban Livelihoods Mission, the components of support to urban street

vendors and shelter for the urban homeless are implemented through the Directorate of Municipal Administration.

The policy of the Government is to provide night shelters with free food support in all the municipalities and corporations, so as to provide decent place for stay to the street dwellers and to make it a street dweller free. Under the shelter for urban homeless component (SUH), 229 shelters have been constructed for the benefit of street dwellers in 20 corporations and 56 municipalities.

Under the support to urban street vendors (SUSV) component, vending carts are provided free of cost to the street vendors, doing vending activities in the streets of corporations and municipalities. Sanction has been given to Madurai, Erode Corporations and Tiruvannamalai Municipality for procurement of 1,652 vending carts. Action will be taken to provide vending

carts to the street vendors located in rest of the 18 corporations and 137 municipalities under the administrative control of DMA. During the year 2021-22, a total of 2,120 vending carts have been sanctioned for 22 municipalities and 1 corporation.

The street vendors are provided with a loan of Rs.10,000 through banks with 7% interest subsidy. It has been targeted to provide loan assistance to 3,44,236 street vendors. So far, Rs.160.65 crore has been provided as loan to 1,60,653 street vendors. Action will be taken to release the loan amount to the remaining 1,83,583 street vendors.

2.6.2 State Schemes

(i) Capital Grant Fund (CGF)

As per the 5th State Finance Commission recommendation, Infrastructure Gap Filling Fund (IGFF) has been renamed as Capital Grant Fund

and allocation has been increased from 7% to 15% of the aggregate devolution intended for urban local bodies. This fund has three parts corresponding to each tier of ULBs. It is being utilized to support capital works linked to basic functions and services in the urban local bodies.

Under CGF, during the year 2021-22, various basic infrastructure works have been taken up (including in GCC) at a cost of Rs.453.52 crore.

(ii) Operation and Maintenance (O & M) Gap Filling Fund

As per 5th State Finance Commission recommendations 5% of the total devolution for urban local bodies is provided to the Operation and Maintenance Gap Filling Fund. Financial assistance is provided to urban local bodies where fund is required for the operation and maintenance of basic infrastructure facilities such as water supply, UGSS and payment of

dues towards water charges and current consumption charges etc.

During the year 2021-22, an amount of Rs.151.17 crore has been sanctioned under O & M Gap Filling Fund, so as to cater to the need of various agencies.

(iii) Tamil Nadu Urban Roads Infrastructure Programme (TURIP)

Roads that are damaged during the execution of water supply and sewerage projects, and by natural calamities are being taken up for restoration under the Tamil Nadu Urban Roads Infrastructure Project.

Under the TURIP, during the year 2021-22, 1,810 road works have been taken up in 13 corporations and 21 municipalities at an estimated cost of Rs.250 crore of which 37 works have been completed at a cost of Rs.17.84 crore and the balance works are at various stages of implementation. Steps are

being taken for the early completion of balance works.

2.7 Externally Aided Projects

The Government of Tamil Nadu is implementing many infrastructure projects funded through external agencies.

2.7.1 German Development Bank (KfW) assisted Sustainable Municipal Infrastructure Financing – Tamil Nadu (SMIF-TN) Program

With financial assistance of German Development Bank (KfW), 35 schemes viz., road improvement works, storm water drains, rejuvenation of water bodies, water supply improvement, combined water supply scheme, development of parks and play fields and underground sewerage schemes have been taken up in 37 urban local bodies, at a cost of Rs.3,049.48 crore. Out of these, 25 schemes at an estimated cost of Rs.1783.70 crore have been completed and put

into public use and the remaining schemes are at various stages of implementation. The Government is taking steps to expedite the pending works and put to public use at the earliest.

During the current year, with financial assistance under kfw grant fund, it is proposed to take up 30 numbers of water body improvement works in 17 ULBs at an estimated cost of Rs.29.73 crore and bio-mining projects in 9 ULBs at an estimated cost of Rs.55 crore.

Pipeline projects are under finalization for availing new line of credit from kfw assisted SMIF-TN-3 to the tune of Euro 500 Million (Approximately Rs.4,250 crore).

2.7.2. World Bank assisted Tamil Nadu Sustainable Urban Development Project (TNSUDP)

The World Bank assisted Tamil Nadu Sustainable Urban Development Project

(TNSUDP) is being implemented at a cost of Rs.3,831 crore. The project implementation period is 7 years and scheduled to be closed on 31st March 2022.

This project consists of 3 components viz., Urban Governance Component, Urban Sector Technical Assistance Component and Urban Investment Component.

Of the above three components, the Urban Governance (Model City) Component and Urban Sector Technical Assistance Component are being implemented by the Directorate of Municipal Administration. The Urban Investment Component is being implemented through Tamil Nadu Urban Infrastructure and Financial Services Limited.

(i) Urban Governance (Model City) Component

The main objective is to demonstrate effective models of Urban Management. These Model Cities are envisaged to become role

models for ULBs across Tamil Nadu in terms of Urban Management and Governance.

Erode, Vellore and Hosur have been selected as Model Cities under this component. A sum of Rs.383.10 crore has been earmarked for the entire project period of 7 years to improve urban management practices in these Cities. A sum of Rs.356.48 crore has been released to the 3 Model Cities towards their achievements upto 2021-2022.

(ii) Urban Sector Technical Assistance (TA) Component

Under the Urban Sector Technical Assistance (TA) component, the sub components of municipal e-governance / PFM & GIS and knowledge and institutional strengthening are being implemented.

a) e-Governance in ULBs

The Government of Tamil Nadu is providing major thrust to

e-governance systems in municipal administration. 29 municipal e-governance modules have been identified for providing quick and better services to the citizens. To achieve this goal, a major e-governance project namely "Centralized Web Based Software Application for all Urban Local Bodies" was taken up for implementation under TNSUDP at a cost of Rs.18.31 crore. All the 29 municipal e-governance modules have been rolled out in all corporations and municipalities. The Government has taken steps to make effective use of this facility.

Further, the following new modules / additional provisions have been made under UTIS software for implementation of the guidelines issued by the Government of Tamil Nadu.

- (i) Modification / addition into UTIS software has been made to facilitate the ease-of-doing business.

- (ii) Integration of 10 modules with e-district portal has been made to provide multi-services from various departments through Common Service Centres (CSC)
- (iii) Provision for collection of internal plumbing charges has been incorporated in water supply and UGD modules.
- (iv) New module has been developed for collection of solid waste management user charges.
- (v) Additional features have been provided in building plan approval module for according quick approval for construction of residential buildings having less than 1,200 sq.ft built area
- (vi) Development Control Regulation (DCR) scrutiny software has been integrated with the single window Portal of Guidance Bureau for improving the ease of doing business in the state.

Assets

- ✓ In Urban Tree Information system software, accounts and bill process in the corporations and municipalities are mandated and all the payment vouchers are prepared online. After making the final payment, details of the assets are automatically updated in the respective registers. Once the asset registers are updated, they will be maintained online, providing real time information about assets.
- ✓ A new module for monitoring / reviewing the status of implementation of various infrastructure schemes has been developed along with graphical dashboard and the implementation of schemes are being monitoring through this module.

The Government have launched, "Namadhu Sevayil Nagaratchi & Makkal Sevayil

Managaratchi" to ensure delivery of all urban services at the door-steps of the citizens. The objective of the e-Governance in Municipalities is to bring home all the services provided to the people by the local bodies with the help of information and telecommunication technology in a simple manner, in real time. This will increase people's participation in governance and pave the way for better transparency and better implementation, besides improving ease of doing business.

b) Knowledge and Institutional Strengthening

Under the "Knowledge and Institutional Strengthening" sub component, training and capacity building programs have been completed at a cost of Rs. 9.28 crore, benefiting 37,819 staff and officers of ULBs.

This Department has taken action to extend project period for one year i.e. from 01.04.2022 to 31.03.2023. The World Bank has accepted to

extend the project period upto 31.03.2023. During the extended period of TNSUDP, the following activities will be undertaken:

- (i) Capacity building training to the officers and staff of ULBs and newly elected representatives of municipalities and city municipal corporations
- (ii) GIS survey in 14 ULBs at an estimated cost of Rs.9.58 crore; and
- (iii) Establishing a Public Finance Management Reform Cell in the Directorate of Municipal Administration to provide strategic inputs and technical support to the Directorate for implementing and sustaining public finance related reforms in the ULBs.

2.8 Financial Management

2.8.1 State Finance Commission

The details of allocation and release of grants to the municipal corporations and

municipalities, as per the recommendations of the 5th State Finance Commission are as given in Table 2.9.

Table 2.9 (Rs. crore)

	2021-22		2022-23	
	Allocation	Released	Allocation	Released
Corporations				
SFC	1485.74	1485.74	1756.00	
CGF	287.95	262.91	329.25	
O&M Gap Filling	95.98	87.64	109.75	
Municipalities				
SFC	1063.41	1063.41	1273.10	
CGF	208.76	190.61	238.71	-
O&M Gap Filling	69.58	63.54	79.57	-

2.8.2 Sixth State Finance Commission

The Sixth State Finance Commission constituted vide G.O.Ms.No.50, Finance Department, 6th March 2020 has submitted its report to the Government and it is under active consideration of the government. The Award period of the Commission commences from 1st April 2022.

2.8.3 Central Finance Commission (CFC)

The 15th Finance Commission was constituted under Article 280 of the constitution of India to make recommendations for devolution of central taxes to state Governments and local bodies. The period of 15th Finance Commission is from 2020-21 to 2025-26.

The 15th Finance Commission has divided the ULBs into two categories, viz, Million Plus Cities and Non-Million Plus Cities. The Corporations of Greater Chennai, Coimbatore, Madurai & Tiruchirappalli are under the category of Million Plus Cities and all other corporations, municipalities, town panchayats and Cantonment Boards of St. Thomas Mount & Wellington are under the category of Non-Million Plus Cities.

On the basis of 15th Finance Commission recommendations, the Union Government

provides tied and untied grants to ULBs. The 15th Finance Commission has recommended grants on population basis for the cantonment boards also. The details of funds released for the years 2021-2022 are furnished below in Table 2.10.

Table 2.10 (Rs.crore)

Type of Grant	2021-22	
	Allocation	Released
Million plus cities (tied)	420	117
Non Million plus cities (tied)	369.70	369.70
Non Million plus cities (untied basic grants)	246.46	246.46

Million Plus Urban Agglomeration Cities

Larger cities will have tendency to grow faster and grants are provided with special emphasis on meeting the challenges of improving the measures of ambient air quality, improving conservation of ground water and efficient solid waste management and sanitation. Fifteenth Finance Commission

has recommended only tied grants for million plus cities, which are disbursed on fulfilling certain criteria.

Government of India has appointed the Ministry of Housing and Urban affairs (MoHUA) and Ministry of Environment Forest and climate change as the nodal ministries for recommending the grants for water, sanitation, solid waste management and ambient air quality. These ministries have developed target for recommending disbursement of grants to such cities.

During the year **2021-22**, 126 works at an estimated cost of Rs.146 crore have been sanctioned out of 15th Finance Commission grants. Of which, 22 works have been completed and other works are at various stages of implementation.

Non-Million Plus Cities

For Non million plus cities, 50% of the grants are **tied** and can be used for the basic services of (a) sanitation and maintenance of open defecation free (ODF) status and (b) supply of drinking water, rain water harvesting and water recycling. The local bodies shall as far as possible, earmark one half of these tied grants each to these two critical services. However, if any local body has fully saturated the needs in one category it can be utilize the funds for other category.

Other half of the basic grants are **untied**, which may be used for any component, for location-specific development like, regulation of land use, urban planning, fire services, water supply, public health sanitation, roads, drains and culverts, burial grounds' improvements, slaughter house and tanneries regulations, public amenities

including street lighting, parking spaces, bus stops etc., except for salary or other establishment expenditure.

During the year 2021-22, so far 1,743 works at an estimated cost of Rs.613.07 crore have been sanctioned. Of which, 117 works have been completed and other works are at various stages of implementation.

Urban Health and Wellness Centre and City Public Health Lab

15th Finance Commission, in order to strengthen the public health infrastructure and service delivery for rural and urban population has provided component specific grants..

With a focus on comprehensive primary health care, 15th Central Finance Commission has sanctioned support for diagnostic infrastructure in sub centres and public health

centres in rural areas and for urban PHCs as well. Following works have been sanctioned and are at various stages.

Sl. No	Component	No. of works sanctioned	Estimate amount (Rs. crore)
1.	Wellness Center	453	113.25
2.	City public Health Lab	22	4.84
Total		475	118.09

2.9 Tamil Nadu Institute of Urban Studies (TNIUS)

The Tamil Nadu Institute of Urban Studies (TNIUS), Coimbatore was established in 1981, with a view to achieve greater efficiency in the functioning of the administration of urban local bodies. The following are the objectives of the Institute:

- To create awareness on latest management techniques in various branches of municipal administration.

- To disseminate knowledge on urban issues and urban development through training programmes, seminars, conferences, publications etc.,
- To conduct research studies and consultancy services in urban development, municipal administration and related disciplines.
- To assist in the development of urban infrastructure.

The annual contributions collected from the municipal corporations, municipalities and town panchayats constitute a major source of revenue for the operations of TNIUS.

2.10 Corporations under the Administrative purview of Directorate of Municipal Administration

I.MADURAI CORPORATION			
Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs. crore)
01.05.1971	148.00	14,70,755	432.00
Major projects taken up during the year 2021-22			
<ul style="list-style-type: none"> • Pursuant to the announcement made by Hon'ble Chief Minister, DPR preparation is under progress for providing UGSS in left out areas under AMRUT 2.0 • It has been announced that Vandiyur Lake and Sellur Lake will be renovated, to make it usable by public. Restoration of 119 number of roads, at a cost of Rs.20 crore under TURIP • Restoration of 379 number of roads, at a cost of Rs.50 crore under Capital Grand Fund (CGF) • An amount of Rs.46 crore has been sanctioned 			

under 15th Finance Commission grants for improving ambient air quality and for sanitation, water supply & solid waste management.

- Construction and renovation of school buildings under NamakkuNammeThittam at a cost of Rs.2.25 crore (Government & Public Contribution)
- An amount of Rs.1.46 crore has been sanctioned under NagarpuraVelaivaippuThittam.
- The implementation of water supply improvement scheme under AMRUT will be expedited.

II. COIMBATORE CORPORATION

Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs.crore)
01.05.1981	257.04	16,04,925	998.11

Major projects taken up during the year 2021-22

- It has been proposed to take up roads in 5 missing links at an estimated cost of Rs.144 crore to connect important roads and decongest the city.
- UGSS has been announced to cover the left out areas

of Vellakinaru, Chinnavedampatti and Saravanampatti.

- Establishment of "SemmozhiPoonga" in Gandhipuram at a cost of Rs.200 crore in two phases has been announced.
- Renewal of BT surface of 89 damaged roads, to a length of 17.87 KM, under TURIP 2021-22 at a cost of Rs.10.01 crore.
- Restoration of damaged BT surface of 204 roads, to a length of 51.35 KM, under TNSUDP at a cost of Rs.34.93 crore.
- Retrofitting of 10 community and public toilets, under operation and maintenance gap filling fund 2021-22, at a cost of Rs.55.37 lakh.
- Construction of 63 urban health and wellness centers and 3 city public health laboratories, under 15th Finance Commission grants 2021-22, at a cost of Rs.16.41 crore.
- An amount of Rs.1.93 crore has been sanctioned for 6 works under NamakkuNaameThittam.
- An amount of Rs.4.43 crore has been sanctioned for purchase of 5 Nos. of 14 cu.m. capacity compactor vehicle and 500 nos. of compactor bins under 15th

Finance Commission grants 2021-22.

- An amount of Rs.5.36 crore has been sanctioned for provision of 192 nos. of electromagnetic flow meters with SCADA system for water supply system under 15th Central Finance Commission grants 2021-22.
- 6 works taken up at an estimated cost of Rs.19.05 crore under Smart Cities Mission.

III. TIRUCHIRAPPALLI CORPORATION

Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs. crore)
01.06.1994	167.23	9,15,869	722.84

Major projects taken up during the year 2021-22

- Integrated Bus terminus at Panjapur has been announced at a cost of Rs.350 crore and the preliminary works are in progress.
- It has been announced to take up UGSS for the left over areas of Trichy at an estimated cost of Rs.210 crore.

- An amount of Rs.30 crore has been sanctioned to restore 156 number of damaged roads of length 50.623 KM under TNUDF (Loan)2020-21.
- An amount of Rs.20 crore has been sanctioned to restore 140 number of damaged roads of length 24.267 KM under TURIP 2021-22.
- An amount of Rs. 3 crore has been sanctioned for construction of two new gasifier crematoriums, under Capital Grants Fund 2021-22.
- An amount of Rs.42 crore has been sanctioned for 51 number of works including, construction of micro composting centers, e-charging stations, purchase of BOVs, desilting vehicles, water sprinkler, super Sucker, drain desilting machines, establishment of Continuous Ambient Air Quality Monitoring Station (CAAQMS) and laying of end-to-end paver roads, under 15th Finance Commission grants 2020-21.
- An amount of Rs.33 crore has been sanctioned for 9 number of works including bio-remediation, purchase of JCB, tipper, construction of e-charging station and laying of end-to-end paver roads, under 15th Finance Commission grants 2021-22.

- An amount of Rs.9.44 crore has been sanctioned for construction of 36 wellness centers and 2 laboratories under National Urban Health Mission 2021-22.
- An amount of Rs.2.96 crore has been sanctioned for 15 works under Namakku Naame Thittam 2021-22.
- An amount of Rs.42.50 crore has been sanctioned for 10 works, including construction of professional consulting office and knowledge centre and laying of damaged roads, under smart city mission.

IV. TIRUNELVELI CORPORATION

Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs. crore)
01.06.1994	108.65	4,74,838	164.42

Major projects taken up during the year 2021-22

- Revised project cost of Rs.295 crore has been sanctioned for implementation of water supply scheme in Tirunelveli Corporation from Ariyanayakipuram Dam catchment area under KfW,

being executed by TWAD Board. The works are in progress and will be completed shortly.

- Implementation of UGSS phase II, under AMRUT, at a cost of Rs.296.11 crore is under progress and will be completed during 2022-23.
- An amount of Rs.1 crore has been sanctioned under NULM, for construction of 2 special shelters for urban homeless. The works are under progress and will be completed during 2022-23.
- An amount of Rs.4.50 crore has been sanctioned for the construction of 18 Urban Health and Wellness Centers, under National Urban Health Mission for the year 2021-22.
- An amount of Rs.0.44 crore has been sanctioned for the construction of 2 public health laboratories, under National Urban Health Mission for the year 2021-22.

V. SALEM CORPORATION			
Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs.crore)
01.06.1994	91.34	8,29,267	235.00
Major projects taken up during the year 2021-22			
<ul style="list-style-type: none"> • UGSS for the left out wards has been announced at an estimated cost of Rs.530 crore • It has been announced that an amount of Rs.158 crore will be allotted for effecting 24x7 water supply in 2 wards. • An amount of Rs.10 crore has been sanctioned for restoration of 74 damaged roads, to a length of 9.677 KM, under TURIP 2021-22. • An amount of Rs.6.15 crore has been sanctioned for temporary restoration of 65 roads, to a length of 28.32 KM and 15 damaged water supply works, under SDRF 2021-22. • An amount of Rs.3 crore has been sanctioned for construction of 2 new gasifier crematoriums under Capital Grant Fund 2021-22. 			

- An amount of Rs.75.42 crore has been sanctioned for 110 number of works, including construction of micro composting center and basic amenities in slum areas under 15th Finance Commission grants 2021-22.
- An amount of Rs.8.44 crore has been sanctioned for construction of 32 UPH additional building and 2 laboratories, under 15th Finance Commission grants 2021-22.
- An amount of Rs.2 crore has been sanctioned to 4 additional buildings at urban health centers, under National Urban Health Mission.
- An amount of Rs.3.02 crore has been sanctioned for 10 works under Namakku Naame Thittam.
- 5 projects were taken up at a project cost of Rs.36.30 crore, under smart city mission.

VI. ERODE CORPORATION			
Date of formation	Area (SqKM)	Population (2011 census)	Average Annual Income (Rs.crore)
01.01.2008	109.52	4,98,121	194.23
<p>Major projects taken up during the year 2021-22</p> <ul style="list-style-type: none"> • 21 works taken up at a cost of Rs.8.84 crore for solid waste management and water supply components, under 15th Finance Commission grants (2020-21). • Road restoration works for a length of 30.215 KM, at an estimated cost of Rs.20 crore, under 15th Finance Commission grants (2021-22). • Rs.4.93 crore sanctioned for purchasing vehicles for solid waste management. • Construction of 20 urban health wellness centers and 2 laboratories at an estimated cost of Rs.5.44 crore under National Urban Health Mission (2021-22) 			

VII. TIRUPPUR CORPORATION			
Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs. crore)
01.01.2008	159.35	8,77,778	234.835
<p>Major projects taken up during the year 2021-22</p> <ul style="list-style-type: none"> • 237 road works at a cost of Rs.18 crore under 15th Finance Commission grants 2021-22. Out of these, 85 works have been completed and remaining 152 works are under progress. • 51 road works at a cost of Rs.10.20 crore have been taken up under TURIP 2021-22. Out of these, 36 works have been completed and remaining 15 works are under progress. • 4 works at a cost of Rs.1.59 crore under Namakku Naame Thittam and all the works are under progress. • 3 works have been taken up at an estimated cost of 			

New Projects

- New Bus Stand at Solar, at a cost of Rs.63.50 crore.
- New Bus Stand at Kaniravuthar Kulam area on Sathy Road at a cost of Rs.130 crore including land cost.

Rs.6.80 crore under Capital Grant Fund 2021-22. Out of these, 2 works are under progress and one is under tendering stage.

- 6 works at an estimated cost of Rs.24.34 lakhs have been taken up under the Operation & Maintenance Gap Filling Interest Fund 2021-22. Out of these, 2 works have been completed and the balance 4 works are under progress.

VIII. THOOTHUKUDI CORPORATION

Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs. crore)
05.08.2008	90.66	3,72,408	115.00

Major projects taken up during the year 2021-22

- An amount of Rs.10.39 crore has been sanctioned for restoration of 277 damaged roads, to a length of 56.91 KM and other flood relief works, under SDRF 2021-22.
- An amount of Rs.12.51 crore has been sanctioned for undertaking formation of 98 new roads to a length of 15.25 KM, under CGF 2021-22.

- An amount of Rs.3.72 crore has been sanctioned for construction of 14 urban health wellness centers and one laboratory under 15th Finance Commission grants.
- An amount of Rs.1.12 crore has been sanctioned under Tamil Nadu Nagarpura Velaivaippu Thittam.
- An amount of Rs.2.20 crore has been sanctioned under National Urban Health Mission for construction of urban primary health care center.
- Under Smart Cities Mission, 23 Projects at a project cost of Rs.482.03 crore were taken up during the year 2021-22.

IX.VELLORE CORPORATION

Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs.crore)
01.08.2008	87.915	5,04,079	130.71

Major projects taken up during the year 2021-22

- An amount of Rs.11.95 crore has been sanctioned for restoration of 50 damaged roads, to a length of 20.550 KM, under TNSUDP.

- An amount of Rs.28.60 crore has been sanctioned for restoration of 247 damaged roads, to a length of 32.588 KM under TNSUDP.
- An amount of Rs.69.74 crore has been sanctioned for restoration of 12 damaged roads to a length of 7.967 KM under model city.
- An amount of Rs.10 crore for 84 damaged roads, to a length of 14.868 KM under TURIP2021-22.
- An amount of Rs.0.345 crore has been sanctioned for 7 toilet renovation works under O&M Fund 2021-22.
- An amount of Rs.45.90 crore has been sanctioned for 23 works, including purchase of solid waste management vehicle, water supply and road works, under 15th Finance Commission Fund 2021-22.
- An amount of Rs.5.22 crore has been sanctioned for construction of 21 urban health wellness centers and an amount of Rs.4.50 crore has been sanctioned for construction of 5 new buildings to urban primary health centers and for urban primary health centers to be upgraded into UCHC, under NUHM 2021-22.
- Under Smart City Mission, 9 projects at a project cost of Rs.52.79 crore were taken up.

- An amount of Rs.1.12 crore has been sanctioned for 6 works, under Tamil Nadu Nagarpura Velaivaippu Thittam.

X. THANJAVUR CORPORATION

Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs.crore)
19.02.2014	36.33	3,51,655	77.98

Major projects taken up during the year 2021-22

- Road works at an estimated cost of Rs.5.49 crore, under TURIP 2021-22. The works taken up in 5 packages are under Progress.
- Construction of 8 urban health and wellness centers and 1 city public health laboratory at an estimated cost Rs.2.22 crore under 15th Finance Commission grants 2021-22.
- BT road works in 5 packages have been taken up at an estimated cost of Rs.1 crore under SDRF.
- Works have been taken up under at a cost of Rs.1.50 crore under Tamil Nadu Nagarpura Velaivaippu Thittam and 1,560 job cards have been issued so far.

- Under smart city mission, 18 works have been sanctioned to the tune of Rs.60.94 crore during 2021-22. Moat redevelopment, conservation of ponds, 5D theatre & musical fountain at old collectorate, smart class rooms and amusement and attraction facilities at Rajappa park are some of the important works.

XI. DINDIGUL CORPORATION

Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs.crore)
19.02.2014	14.01	2,07,225	50.53

Major projects taken up during the year 2021-22

- An amount of Rs.11 crore has been sanctioned for restoration of 143 damaged roads, to a length of 17.592 KM under Capital Grant Fund 2021-22.
- An amount of Rs.2.50 crore has been sanctioned for the construction of knowledge center and study center under Capital Grant Fund 2021-22.
- An amount of Rs.5 crore has been sanctioned for construction of steel market under Capital Grant Fund 2021-22.

- An amount of Rs.10 crore has been sanctioned for construction of weekly market under Capital Grant Fund 2021-22.
- An amount of Rs.18.06 crore has been sanctioned for 31 number of works, including construction of micro composting center, water supply improvement works, solid waste management works and UGSS improvement works under 15th Finance Commission grants 2021-22.
- An amount of Rs.2.22 crore has been sanctioned for construction of 8 urban health wellness centers and 1 laboratory under 15th Central Finance Commission grants 2021-22.
- An amount of Rs.1.40 crore has been sanctioned for conversion of urban health center into community health center under National Urban Health Mission 2021-22.
- An amount of Rs.1.60 crore has been sanctioned to 6 works under Tamil Nadu Nagarpura Velaivaippu Thittam.
- An amount of Rs.0.51 crore has been sanctioned to 2 works under Namakku Naame Thittam.

XII. HOSUR CORPORATION			
Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs. crore)
01.03.2019	72.41	2,45,354	102.41
Major projects taken up during the year 2021-22			
<ul style="list-style-type: none"> Announcement has been made for taking up UGSS scheme at an estimated cost of Rs.454 crore and funds are being tied up under AMRUT 2.0 for 2022-23. An amount of Rs.4 crore has been sanctioned for library/knowledge center and modern crematorium under CGF 2021-2022. Formation of Myawaki forest under Namakku Naame Thittam at a cost of Rs.6 lakh. An amount of Rs. 2.22 crore has been sanctioned for 8 urban health wellness centers and 1 public health laboratory under 15th Finance Commission grants 2021-22. 			

<u>New Works</u>
<ul style="list-style-type: none"> Implementation of Under Ground Sewerage Scheme will be taken up under AMRUT 2.0 by TWAD Board. DPR has been updated and is at technical appraisal stage. Road works and rejuvenation of two water bodies under CGF.

XIII. NAGERCOIL CORPORATION			
Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs. crore)
01.03.2019	49.10	2,24,849	59.56
Major projects taken up during the year 2021-22			
<ul style="list-style-type: none"> An amount of Rs 10 crore has been sanctioned for restoration of 24 nos. of damaged roads, to a length of 12.596 KM under TURIP 2021-2022. An amount of Rs 16 crore has been sanctioned for restoration of 40 nos. of damaged roads, to a length of 21.178 KM under CGF. 			

- An amount of Rs.2.50 crore has been sanctioned for construction of library cum knowledge center under CGF 21-22.
- An amount of Rs.3 crore has been sanctioned for construction of 2 urban health wellness centers and an amount of Rs.1 crore has been sanctioned for development of 8 parks under CGF 2021-22.
- An amount of Rs.2.75 crore has been sanctioned for construction of 10 urban health wellness centers and one laboratory under National Urban Health Mission 2021-22.
- An amount of Rs. 19.50 lakh has been sanctioned for restoration of roads under Kalaingar Nagarpura Mempattu Thittam.
- Water supply improvement scheme under implementation by TWAD board at a cost of Rs.232.07 crore under AMRUT will be completed and commissioned shortly.

XIV. AVADI CORPORATION			
Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs. crore)
17.06.2019	65.00	3,44,701	145.26
Major projects taken up during the year 2021-22			
<ul style="list-style-type: none"> • An amount of Rs.10.06 crore has been sanctioned for restoration of 32 damaged roads, to a length of 9.34 KM, under TURIP 2021-22. • An amount of Rs.8.23 crore has been sanctioned for temporary restoration of 134 roads, to a length of 38.08 KM and one damaged water supply work under SDRF 2021-22. • An amount of Rs.12.50 crore has been sanctioned for construction of a new market building and one knowledge center and for one CC Road work under Capital Grant Fund 2021-22. • An amount of Rs.3.72 crore has been sanctioned for construction of additional buildings for 14 urban health and wellness centers and a laboratory under 15th Finance Commission grants 2021-22. 			

- An amount of Rs.0.90 crore including Public Contribution of Rs.0.30 crore has been sanctioned for 1 work under Namakku Naame Thittam.
- An amount of Rs.1.35 crore has been sanctioned for 9 works under Tamil Nadu Nagarpura Velaivaippu Thittam.

XV. TAMBARAM CORPORATION

Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs. crore)
03.11.2021	87.64	7,23,017	284.24

Major projects taken up during the year 2021-22

- An amount of Rs.5 crore has been sanctioned for restoration of 41 damaged roads, to a length of 6.04 KM, under TURIP 2021-22.
- An amount of Rs.10.56 crore has been sanctioned for temporary restoration of 272 roads, to a Length of 38.977 KM and 13 nos. of damaged water supply works, under SDRF 2021-22.

- Following works have been taken up under Kalaingar Nagarpura Mempoattu Thittam
 - A new gasifier crematorium at a cost of Rs.1.50
 - 2 parks at a cost of Rs.1.67 crore
 - Paver block road at a cost of Rs.0.89 crore
 - Development of daily market at Tambaram and Anakaputhur at a cost of Rs.15.02 crore
 - Improvement of one water body at Pammal at a cost of Rs.0.99 crore
- Construction of storm water drains at Tambaram and Sembakkam under Namaku Naame Thittam at a cost of Rs. 0.51 crore
- An amount of Rs. 14.65 crore has been sanctioned for purchase of vehicles for public health and UGSS, Water Supply works, under 15th Finance Commission grants 2021-22.
- An amount of Rs.2.25 crore has been sanctioned for urban health wellness centers, under 15th Finance Commission grants 2021-22.

XVI. KANCHEEPURAM CORPORATION			
Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs. crore)
21.10.2021	36.14	2,32,816	88.96
Major projects taken up during the year 2021-22			
<ul style="list-style-type: none"> Rs.1.25 crore sanctioned for 5 works including additional building for urban public health centers under 15th Finance Commission grants 2021-22. Rs.6.22 crore sanctioned for 9 works of providing / replacement of water supply pumping main and cable, at Palar river infiltration well, construction of micro composting center under 15th Finance Commission grants 2021-22 Rs.0.81 crore sanctioned for restoration of 52 damaged roads, to a length of 14.19 KM under SDRF 2021-22. Rs.35 crore sanctioned for one work under infrastructure & amenities fund 2021-22. 4 Projects at an estimated cost of Rs.13.62 crore have been taken up under Kalaignar Nagarpura Mempattu Thittam. 			

New Projects
<ul style="list-style-type: none"> Rs.30.48 crore sanctioned including infrastructure and amenities fund and other funds for the construction of bus stand. Rs.7 crore sanctioned for the reconstruction of Rajaji Market.

XVII. CUDDALORE CORPORATION			
Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs.crore)
08.10.2021	27.69	1,73,636	45.38
Major projects taken up during the year 2021-22			
<ul style="list-style-type: none"> An amount of Rs.10.73 crore sanctioned for restoration of 53 damaged roads, to a length of 12.720 KM under TURIP 2021-22. An amount of Rs.4.50 crore has been sanctioned for temporary restoration of 67 roads, to a length of 28.475 KM work, under SDRF2021-22. An amount of Rs.6.50 crore sanctioned for formation of 32 new cement concrete roads, to a length of 7.171 KM, under Capital Grant Fund 2021-22. 			

- An amount of Rs.2.13 crore sanctioned for formation of 15 new bituminous roads, to a length of 2.954 KM under KNMT.
- An amount of Rs.1.50 crore sanctioned under KNMT for construction of gasifier crematorium and Rs.1.15 crore for construction of knowledge center.
- An amount of Rs.0.75 crore sanctioned for construction of 3 numbers of additional buildings at urban health centers, under National Urban Health Mission 2021-22.

New Project

- An amount of Rs.40 crore sanctioned under infrastructure and amenities fund and loan from TUFIDCO for the construction of New Bus Stand.

- Improvement to TB Kulam at Rs.126 lakh and Thamarai Kulam at Rs.117 lakh
- Construction of modern gasifier crematorium at Anaikaranpalayam at a cost of Rs.150 lakh
- Conversion of earthen roads to paver block roads at a cost of Rs.117.50 lakh
- An amount of Rs.20 crore has been sanctioned for taking up improvements to roads damaged due to water supply and underground drainage scheme works under TURIP 2021-22.

XVIII. KUMBAKONAM CORPORATION

Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs.crore)
24.12.2021	14.68	1,55,482	51.26

Major projects taken up during the year 2021-22

- Projects Sanctioned under Kalaingnar Nagarpura Mempattu Thittam
 - Park and green spaces work at a cost of Rs.48 lakh

XIX. KARUR CORPORATION			
Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs. crore)
21.10.2021	53.26	2,14,412	82.00
Major projects taken up during the year 2021-22			
<ul style="list-style-type: none"> • An amount of Rs.10 crore has been sanctioned for restoration of 109 damaged roads, to a length of 16.90 KM, under TURIP 2021-22. • An amount of Rs.5.61 crore has been sanctioned for conversion of earthen to BT Roads, to a length of 6.12 KM, under KNMT. • An amount of Rs.4.31 crore has been sanctioned for 21 works including procurement of robotic sewer cleaning machine, pulverizer machine, construction of resource recovery center, construction of compound wall for overhead tank, construction of bus shelter, construction of animal birth control center, improvements to park and burial ground under 15th Finance Commission grants 2021-22. 			

New Projects
<ul style="list-style-type: none"> • An amount of Rs.62.5 crore has been sanctioned including infrastructure amenities fund and other funds for the construction of New Bus Stand. • An amount of Rs.68 crore has been sanctioned to take up water supply scheme for the left over areas.

XX. SIVAKASI CORPORATION			
Date of formation	Area (Sq KM)	Population (2011 census)	Average Annual Income (Rs. crore)
21.10.2021	19.89	1,26,402	41.61
Major projects taken up during the year 2021-22			
<ul style="list-style-type: none"> • An amount of Rs.1.50 crore sanctioned under KNMT for construction of a new LPG crematorium and an amount of Rs.3.565 crore for improvement to 3 water bodies. • An amount of Rs.2.035 crore sanctioned for 15 works, including construction of resource recovery center, vehicle shed, gasifier crematorium, water supply works and road improvement works, under 15th Finance Commission Fund grants 2020-21. • An amount of Rs.3.45 crore has been sanctioned for 11 works, including purchase of vehicle, water supply works and road improvement works, under 15th Finance Commission Fund grants 2021-22. • An amount of Rs.0.25 crore has been sanctioned for an additional building at urban health center, under National Urban Health Mission 2021-22. 			

3. GREATER CHENNAI CORPORATION

The Corporation of Chennai was established as a local body on 29 September 1688. It is the oldest municipal institution in the country and the second oldest in the world. The city has an area of 426 Sq KM and a population of 66.72 lakh as per the 2011 census.

The office of the Corporation was functioning in a building on Chennai Broadway Errabalu Chetty street. It was only in 1913 that the Corporation moved its offices to its present imposing structure, the Ripon Buildings, named after Lord Ripon, the Viceroy who introduced local self-government in India in the last quarter of the nineteenth century.

Until 1974, the responsibility for the planning of the city was also vested with the Municipal Corporation. After the formation of the Madras Metropolitan Development Authority

(now CMDA) in August 1974, under the Town and Country Planning Act 1972, the task of planning for the city and the greater metropolitan area was taken over by the said authority.

For administrative convenience, Greater Chennai Corporation is divided into 15 zones having 200 divisions. These 15 zones are organised into three regions.

Salient features of the Greater Chennai Corporation are given in Table 3.1

Table 3.1

Area	Population	Regions	Zones	Wards/ Divisions	Roads
426 Sq.KM	66.72 lakh (as per 2011 Census) 85.17 lakh (2019)	3	15	200	5,657 KM
Street-lights	Bridges	Stormwater Drains	Solid Waste Generation	Schools	Parks
2.90 lakh	285	2,071 KM	5,100 MT/day	281	718

Play-fields	UPHC/UHC / Maternity centres	ICDS/ Balwadis/ Anganwadis	Community Toilets	Cremation Sheds/ Burial Grounds	Sanctioned staff
220	140/16/5	1,806	1,575	211	23,917

3.1. Infrastructure

3.1.1. Roads

The Greater Chennai Corporation (**GCC**) maintains 471 Bus Route Roads, to a length of 387 KM and 34,640 interior roads, to a length of 5,270 KM, as in Table 3.2.

Table 3.2: Details of Roads in Chennai City

Sl. No	Zone	Zone Name	Bituminous Roads		Cement Concrete Roads		Other Roads	
			BRR and IRR		BRR and IRR		(Earthen and WBM)	
			Nos.	Length in KM	Nos.	Length in KM	Nos.	Length in KM
1	I	Thiruvottiyur	884	155.65	611	65.05	8	0.5
2	II	Manali	759	150.93	296	23.42	27	4.67
3	III	Madhavaram	2,409	391.51	264	25.45	152	40.17
4	IV	Tondiarpet	1,280	242.07	1,629	188.53	0	0

Sl. No	Zone	Zone Name	Bituminous Roads		Cement Concrete Roads		Other Roads	
			BRR and IRR		BRR and IRR		(Earthen and WBM)	
			Nos.	Length in KM	Nos.	Length in KM	Nos.	Length in KM
5	V	Royapuram	716	183.35	711	75.01	0	0
6	VI	Thiru. Vi. Ka Nagar	1,192	222.37	1,051	156.56	2	0.26
7	VII	Ambattur	2,934	468.50	631	56.47	23	3.19
8	VIII	Anna Nagar	1,373	294.88	1,010	107.11	0	0
9	IX	Teynampet	1,221	323.15	556	81.76	0	0
10	X	Kodambakkam	1,481	312.89	911	129.47	1	0.11
11	XI	Valasaravakkam	2,676	363.33	449	42.91	29	2.16
12	XII	Alandur	1,062	156.48	576	70.35	22	1.51
13	XIII	Adyar	1,792	360.96	1,140	114.59	2	0.17
14	XIV	Perungudi	2,446	397.52	586	50.71	41	4.79
15	XV	Sholinganallur	1,464	293.46	621	86.49	50	8.28
		TOTAL	23,689	4,317.05	11,042	1,273.88	357	65.81

The upkeep of Bus Route Roads and Interior Roads is taken up with the grants provided under Tamil Nadu Urban Road

Infrastructure Programme (**TURIP**), Singara Chennai 2.0 and GCC's capital funds.

(i) Bus Route Roads and Interior Roads

Bus Route Roads are upgraded through Tamil Nadu Urban Road Infrastructure Programme (**TURIP**) and Singara Chennai 2.0 funds. While taking up roads, GCC follows the policy of milling the previously laid roads to avoid a rise in road level.

GCC takes every effort to ensure that the roads laid are of the best quality with good road furniture. The quality of roads laid is ensured through an independent quality audit by Project Monitoring Agencies.

During 2021-22, under Singara Chennai 2.0 scheme, works are in progress for laying 59 Bus Route Roads to a length of 39.87 KM at

an estimated cost of Rs.37.58 crore and will be completed by April 2022.

Under TURIP 2021-22, works are in progress for laying 22 Bus Route Roads to a length of 13.58 KM at an estimated cost of Rs.17.38 crore, which will be completed by May 2022.

Under Capital Grant (CGF) Fund, the formation of Reinforced Cement Concrete Road at the Kodungaiyur Processing Centre to a length of 1 KM at an estimated cost of Rs.8.52 crore has commenced and will be completed within the next three months.

During 2021-22, under TURIP, laying 929 Interior Roads to a length of 148.36 KM at an estimated cost of Rs.92.23 crore is in progress and will be completed by May 2022.

Under SDRF 2021-22, the laying of 646 Interior Roads to a length of 110.90 KM at an estimated cost of Rs.65.97 crore has commenced and will be completed within the next three months.

(ii) Bus Shelters and Traffic Islands

GCC maintains 1,416 bus shelters built under various schemes, including 637 bus shelters set up under a Build Operate and Transfer (BOT) model. Further, it maintains 128 traffic islands and 173 centre medians.

3.1.2. Bridges

Greater Chennai Corporation maintains 26 major bridges (14 flyovers and 12 railway over bridges), 16 vehicular subways, five pedestrian subways, 4 foot over bridges and 234 minor bridges. The following major projects are currently under execution.

Table 3.3

Sl. No.	Name of Work	Source of Fund	Estimate cost (Rs. crore)
1	Bridge across Puzhal surplus water canal at Vadaperumbakkam	CMCDM	19.33
2	Bridge across Puzhal surplus water canal at Amullavoyal	CMCDM	15.90
3	Bridge across Puzhal surplus water canal at Burma Nagar	CMCDM	14.33
4	Skywalk with escalators from Mambalam Railway station to T. Nagar Bus Terminus	SMART CITY	28.45
5	ROB in place of the existing LC-1 at Kolathur - Villivakkam (Near ICF Gate)	CGF	61.98
6	Reconstruction of a ROB at Elephant Gate Road (GCC Portion only)	CGF	30.78
7	Demolition and reconstruction of a bridge at Stephenson Road across Otteri Nullah	CGF	43.46
8	Doubling the carriageway of bridge across Cooum at Arunachalam Road	CGF	9.55
9	Steel foot-over-bridge across Nungambakkam subway	CGF	5.42
10	Retrofitting and rehabilitation of Parthasarathy bridge	O & M Gap Filling Fund	8.48
11	Retrofitting and rehabilitation of Vaidyanathan bridge	O & M Gap Filling Fund	5.01
Total			242.69

To facilitate the free flow of traffic and provide sustainable traffic management for future requirements, GCC has taken up the construction of flyovers/subways in the following 3 locations at an estimated cost of Rs.286.41 crore under the Infrastructure and Amenities (I & A) Fund and Capital Grant Fund. Tenders for the construction of these bridges have been called and are due in April, 2022.

Table 3.4

Sl. No.	Name of Work	Source of Fund	Estimate cost (Rs.crore)
1	Construction of flyover over the existing subway at Ganesapuram	I & A Fund	142.00
2	Construction of flyover along South Usman Road and CIT Nagar 1st Main Road	I & A Fund	131.00
3	Construction of limited use subway at the level crossing (LC) No.11A at Bojaraja Nagar	CGF	13.41
Total			286.41

3.1.3 Stormwater Drains

Greater Chennai Corporation maintains a 2,071 KM long stormwater drain network comprising 8,835 stormwater drain structures, as in Table 3.5.

Table 3.5

Sl. No.	Zone No.	Zone Name	No. of SWDs	Length of existing SWDs (KM)
1	I	Thiruvotriyur	422	73.13
2	II	Manali	216	47.00
3	III	Madhavaram	263	75.69
4	IV	Tondiarpet	383	115.49
5	V	Royapuram	339	104.87
6	VI	Thiru Vi Ka Nagar	485	130.21
7	VII	Ambattur	846	212.25
8	VIII	Anna Nagar	587	163.25
9	IX	Teynampet	628	161.31
10	X	Kodambakkam	716	196.88

11	XI	Valasaravakkam	1,445	256.35
12	XII	Alandur	943	193.22
13	XIII	Adyar	516	132.09
14	XIV	Perungudi	863	172.14
15	XV	Sholinganallur	183	37.14
Total			8,835	2,071.02

GCC also maintains 30 canals to a length of 48.78 KM, as in Table 3.6.

Table 3.6

Sl. No.	Zone No.	Name of the Zone	Name of the Canal	Length (KM)
1	I	Thiruvotriyur	Thamaraikulam Canal	0.50
2	II	Manali	Old Napalayam Canal	1.29
3			Thulasi Nagar Canal	2.04
4			Manali Pudur TNHB Canal	1.12
5			PeriyaEatchankuzhi Canal	0.26
6			Kadapakkam Lake Surplus Canal	0.95
7			Madhavaram - Manali Lake Canal	1.27

Sl. No.	Zone No.	Name of the Zone	Name of the Canal	Length (KM)
8	IV	Tondiarpet	Captain Cotton Canal	3.04
9			Kodungaiyur Canal	5.28
10			Link Canal	0.40
11			Vyasarpadi Canal	1.27
12			Jawahar Canal	0.76
13	VI	Thiru Vi Ka Nagar	Ekingipuram Canal	1.53
14			TVS Canal	0.91
15	VII	Ambattur	Nolambur Canal	1.25
16			Ambattur SIDCO Canal	2.19
17			Padikuppam Canal	2.77
18	IX	Teynampet	Nungambakkam Canal	0.90
19	IX & XIII		Mambalam Canal & Nandanam Canal	6.86
20	X	Kodambakkam	Reddykuppam Canal	0.50
21	X		MGR Canal	1.80
22	X		Jaffer khanpet Canal	0.60
23	X		Trustpuram Canal	1.51
24	XI & XII	Alandur	Nandambakkam Canal	1.47
25	XII		Adambakkam Canal	0.92

Sl. No.	Zone No.	Name of the Zone	Name of the Canal	Length (KM)
26	XIII	Adyar	Rajbhavan Canal	1.20
27	XIII	Adyar	Chellammal College and Guindy Industrial Estate Canal	2.26
28	XIV	Perungudi	Pallikaranai Canal	0.34
29	XV	Sholinganallur	Secretariat colony Canal	1.08
30	XV		Semmencherry Canal	2.51
Total				48.78

The Kosasthalaiyar Basin Integrated Stormwater Drainage (ISWD) project addresses the long-pending demand for stormwater drains in North Chennai (Chennai) to mitigate the hazard risk of flooding during monsoons.

The construction of Integrated Stormwater Drains in the Kosasthalaiyar basin for a length of 768 KM is in progress under the Asian Development Bank (**ADB**) funding at an estimated cost of Rs. 3,220 crore. So far, 16.40% of the work has been completed. Efforts

will be made to finish this project expeditiously. About 30 lakh people living in Ambattur, Manali, Madhavaram and Thiruvotriyur will benefit from this project.

Construction of Integrated Stormwater Drains in **Kovalam Basin**, at an estimated cost of Rs.1,714 crore, is divided into M1,M2 and M3 components. The work has been carried out to a length of 52 KM in the M3 package at an estimated cost of Rs. 270 crore. In M1 and M2 areas, procurement is underway for an estimated cost of Rs.150.45 crore for a length of 27.25 KM. About 9 lakh people living in Perungudi, Sholinganallur and part of Alandur zones will benefit.

The GCC is constructing additional stormwater drains missing links under the Tamil Nadu Sustainable Urban Development Project

(**TNSUDP**) at an estimated cost of Rs.120 crore, for a length of 44.88 km.

Construction of stormwater drains under the Infrastructure and Amenities Fund, at an estimated cost of Rs.26.28 crore for a length of 9.81 KM is in progress.

During the 2021 North East Monsoon, major water stagnation locations were identified. Works have been taken up to construct stormwater drains to a length of 40.79 KM at an estimated cost of Rs. 184.65 crore under Singara Chennai 2.0.

Restoration and rejuvenation of 47 Water bodies were undertaken under CMCDM, out of which 33 ponds were restored; the restoration works are in progress in 14 ponds.

3.1.4. Special Projects

(i) Chennai City Partnership Programme

Chennai City Partnership Programme will focus on enhancing the resilience of Chennai city and improving service delivery in the Greater Chennai Metropolitan Area for key services. It is a USD 1 Billion (nearly Rs.7,500 crore) Programme to be executed in 3 phases. GCC happens to be one of the major stakeholders in this programme.

In phase I, the Government of Tamil Nadu would receive USD 300 million (nearly Rs.2,250 crore) from the World Bank over a period of 5 years starting from 2021. GCC would receive around USD 90 million (nearly Rs.675 crore) over a period of 5 years on the successful completion of 4 DLIs (Disbursement Linked Indicators). In addition to the 4 DLIs, GCC would also have to achieve the Result

Framework Indicators (RFI) as agreed to with the World Bank.

The 4 DLIs are reduction in vacancy rates in professional cadres of GCC; enhanced efficiency and transparency of public procurement of GCC; strengthening GCC's health system, and increased annual own-source revenue in GCC. The RFIs are reduction in women feeling unsafe in buses and public spaces; increased availability of pedestrian-friendly multi-utility streets; improved SWM efficiency; citizen and customer feedback for improved accountability of service delivery institutions.

Mega Streets Programme

A key component of the City Partnership Program is mega streets. To further its efforts in creating high-quality and equitable streets for all, GCC has launched the Mega Streets

Programme to re-imagine the city's arterial roads as "complete streets," taking into account the needs of all street users and uses. The new designs would include continuous footpaths, streamlined carriageways, organised on-street parking and well-planned underground utilities. The design also integrates bus stops, street vending and all other street furniture, locating them carefully such that they do not hinder the walking experience of pedestrians. The first phase of this programme is taken up as a project spanning over 70 Sq KM covering a road length of 111 KM.

(ii) Installation of Chennai Metropolitan Area Intelligent Transport Systems

The Chennai Metropolitan Area Intelligent Transport Systems project is being implemented at an estimated cost of Rs.904.88 crore with loan assistance from the Japan International Co-operation Agency (JICA). The project is

expected to create an efficient traffic management system to meet increasing traffic demands in the Chennai Metropolitan Area. Procurement is underway for the selection of the system integrator. Major components proposed include

- 1) Adaptive Traffic Signal Control System
- 2) Chennai Traffic Information and Management System
- 3) City Bus System

(iii) Smart Cities Mission

Under the Smart City initiative, 37 works have been completed at the cost of Rs.606 crore. Eleven works at an estimated cost of Rs.470 crore are under progress.

3.1.5. Buildings

The Greater Chennai Corporation maintains 2,802 buildings such as schools,

hospitals, community centres etc., as given in Table 3.7.

Construction of 12 UPHCs at an estimated cost of Rs.42.45 crore is being carried out and will be completed in 2022-2023.

It is proposed to construct classrooms and refurbish existing school buildings in 22 Schools in 11 locations, at an estimated cost of Rs.50.66 crore under Singara Chennai 2.0.

Refurbishment of crematoria is proposed at 2 locations. Additional construction of crematoria is proposed at 8 locations at an estimated cost of Rs.6.13 crore under Singara Chennai 2.0.

It is proposed to construct 2,020 aspirational toilet seats and 700 urinals under the Swachh Bharat Mission (U) 2.0, Nirbhaya fund and GCC's funds. In the first

phase, sanctions have been accorded for the construction of toilets in 366 locations having 918 seats and 671 urinals for Rs.36.34 crore. Procurement is underway.

The aspirational toilets are to be provided in all zones except zone-5, 6 & 9 (Marina area), where public convenience toilet lounges are proposed to be taken up under a Design, Build, Operate and Transfer (DBOT) model for a value of Rs.221.02 crore under Swachh Bharat Mission (U) 2.0 under public-private partnership.

Table 3.7

Sl No	ZONE	UHC	UPHC	EOC	School Buildings	Community Centre	Night Shelter	Office buildings	Other buildings	Total
1	Thiruvotriyur	1	6			1	2	14	176	200
2	Manali	1	2			1	1	7	56	68
3	Madhavaram	1	4			3	2	14	144	168

Sl No	ZONE	UCHC	UPHC	EOC	School Buildings	Community Centre	Night Shelter	Office buildings	Other buildings	Total
4	Tondiarpet	1	15		46	4	6	16	122	210
5	Royapuram	1	13	1	42	7	16	38	194	312
6	Thiru-Vi-Ka Nagar	1	14		51	8	3	19	184	280
7	Ambattur	1	9	1	-	1	2	8	122	144
8	Anna Nagar	1	15		28	8	5	8	223	288
9	Teynampet	1	16		53	13	8	18	34	143
10	Kodambakkam	1	15	1	37	6	2	18	190	270
11	Valasavakkam	1	5		-	1	2	12	19	40
12	Alandur	1	5		-	4	1	14	179	204
13	Adyar	1	11		24	3	3	6	326	374
14	Perungudi	1	5		-	4	-	12	51	73
15	Solinganallur	2	5		-	2	2	13	4	28
TOTAL		16	140	3	281	66	55	217	2,024	2,802

3.1.6. Electrical

Streetlights

The Greater Chennai Corporation provides uniform street lighting in all the bus route roads and interior roads for the safety of commuters. All bus route roads and interior roads are provided with adequate streetlights. The Corporation maintains 2.90 lakh streetlights. All are energy-efficient LED lights. Four hundred thirty-two high mast lights have been erected at vital locations such as major road junctions, beaches and parks, as in Table 3.8.

Table 3.8

Sl. No	Zone	Name of Zone	No. of streetlights	No. of high mast lights
1	I	Thiruvotriyur	13,459	22
2	II	Manali	11,498	8
3	III	Madhavaram	19,333	39
4	IV	Tondiarpet	18,647	28

5	V	Royapuram	15,155	35
6	VI	Thiru-Vi-Ka-Nagar	17,760	32
7	VII	Ambattur	26,411	49
8	VIII	Anna Nagar	20,485	28
9	IX	Teynampet	22,258	52
10	X	Kodambakkam	23,772	36
11	XI	Valasaravakkam	20,623	17
12	XII	Alandur	15,769	24
13	XIII	Adyar	23,043	32
14	XIV	Perungudi	23,121	20
15	XV	Sholinganallur	19,163	10
TOTAL			2,90,497	432

In general, streetlights in Chennai are provided at a distance of 25m. New streetlight poles will be provided in the newly developed locations in the extended areas and in locations that require additional lighting under the Nirbhaya Fund at an estimated cost of Rs.60.84 crore.

3.1.7. E-Governance

Online services include revenue (including property tax etc.), works management, town planning, legal case management system, personnel management system, pension management, public grievance redressal, Namma Chennai App, birth and death registration, 1913 call centre, WhatsApp services, etc.

Geographical Information System (**GIS**) infrastructure establishment (Phase-II), including the server room and GIS application centre, has been taken up at the cost of Rs.21.47 crore under the World Bank assisted TNSUDP.

3.1.8. Parks & Playfields

Greater Chennai Corporation maintains 718 parks, 102 centre medians, 110 traffic islands and 163 roadside parks. Out of these 718 parks, 547 parks are maintained by private

contractors, and 111 parks are maintained by way of adoption by citizen groups. GCC also maintains 872 playgrounds and other sports facilities, as in Table 3.9.

Table 3.9

Zone	Name of the Zone	No. of Parks	No. of Playfields	No. of Children Playgrounds
I	Thiruvotriyur	8	-	-
II	Manali	24	8	28
III	Madhavaram	34	9	2
IV	Tondiarpet	53	25	37
V	Royapuram	26	10	-
VI	Thiru-Vi-Ka Nagar	42	22	3
VII	Ambattur	63	7	1
VIII	Anna Nagar	41	42	9
IX	Teynampet	39	13	5
X	Kodambakkam	57	17	50
XI	Valasaravakkam	79	6	6
XII	Alandur	69	2	4
XIII	Adyar	64	50	29

Zone	Name of the Zone	No. of Parks	No. of Playfields	No. of Children Playgrounds
XIV	Perungudi	56	8	4
XV	Sholinganallur	63	1	22
TOTAL		718	220	200

(i) Ongoing Works:

During the financial year 2021-22, it is proposed to create new parks in the vacant OSR lands vested with Greater Chennai Corporation. Open-air gym equipment is installed in most of the parks under development. All the newly developed parks are designed as differently-abled friendly. Further, the new parks will have minimal concretisation and plentiful greenery so that they act as sponges in the rainy season.

Under the Chennai River Restoration Trust (**CRRT**), the formation of a new park and playfield at the Adyar river bank, Kotturpuram, is under progress at an estimated cost of

Rs.9.41 crore. It will be completed by April 2022.

In continuation to this, the formation of a playground and a dense urban forest is in progress at the cost of Rs.1.99 crore at canal bank road, Kotturpuram and Adyar (abutting Patrick college).

Under the Singara Chennai 2.0 Scheme, 28 parks and 18 playfields works have been sanctioned at the cost of Rs. 24.43 crore and Rs.12.57 crore, respectively. Seventeen parks and five play fields' works are in progress. For the remaining 11 parks and 13 playfields, tender evaluation is in progress.

(ii) Centre Medians

Existing centre medians on main arterial roads will be given a facelift and beautified with ornamental plants by dovetailing Namakku

Naame Thittam as well as through adoption by citizen groups.

(iii) Tree Planting

Greater Chennai Corporation has made sustained efforts to increase the green cover in Chennai city and planted native tree saplings in various parts of the city. Over 1,23,429 trees have been planted in the past nine months. It is proposed to continue to take up tree planting with community participation in coordination with the Residential Welfare Associations.

3.2 Health and Sanitation

3.2.1. Solid Waste Management

On average, 5,100 MT of solid waste is generated daily in Greater Chennai Corporation. It is collected at the household level. The source segregated wet and dry waste are channelised to the decentralised processing facilities, and the

remaining waste is transferred to the processing sites at Perungudi and Kodungaiyur.

At present, solid waste management activities are being carried out in five out of fifteen zones by Greater Chennai Corporation and in the remaining ten zones through private concessionaires.

(i) Infrastructure

Solid Waste Management involves collection of waste at the point of waste generation, transportation to the respective processing centres, and further processing.

For carrying out these activities, the GCC operates 670 battery-operated vehicles, 97 battery operated tricycles, 2,114 tricycles, 125 HMV/LMV compactors, 16 HMV/LMV tippers, 16 mechanical sweepers etc. Likewise, the private concessionaires operate 3,136 battery-

operated vehicles, 124 HMV/LMV compactors, 83 HMV/LMV tippers and 40 mechanical sweepers.

The GCC employs 5,510 permanent, 503 NMR workers and 4,316 contract workers under NULM for solid waste management activities. And the private operators have 9,035 workers for carrying out these conservancy operations.

(ii) Wet and Dry Waste Processing

In line with SWM Rules 2016, the Greater Chennai Corporation initiated decentralised facilities to process the source segregated wet and dry waste. At present, there are 256 wet waste processing facilities such as micro composting centres, windrow composting centres, bio-gas plants, biomethanation plants, bio-CNG plants, having 1,217 tonnes per day (TPD) capacity as in Table 3.10. There are

194 dry waste centres, such as material recovery facilities, resource recovery centres, incinerators etc., having 842 TPD capacity. From the wet waste processing units, presently, 400 MT of manure is produced every month.

In addition to this, the non-recyclable combustible dry waste of 50 MT is sent to cement industries for co-processing every week.

Additional six bio-CNG plants, having a capacity of 600 TPD, are being set up to process the wet waste. They are under various stages of construction.

Further, there are proposals for dry waste disposal centres (**incinerators, pyrolysis units**) with a capacity of 45 TPD. On completion of these facilities, the total capacity of decentralised facilities will be around 2,700 TPD, which will result in a reduction of waste being sent to the processing and disposal centres.

Table: 3.10

Sl.No.	Method Of Processing	Total Number	Capacity in MT
1	Micro Compost Yards	208	583
2	Biogas plants	34	13
3	Bio-methanation plants	6	21
4	Windrow method	2	100
5	Garden Waste Processing Centres(Rs.660/MT)	5	400
6	Bio-CNG at Chetpet	1	100
	Total	256	1217

(iii) Processing and Disposal Centres
a. Perungudi

The Perungudi site is located in the southern part of the city, spread over an area of 225.16 acres and has been in use for more than 35 years as a disposal site. Solid waste from zones 9 to 15 is sent to the Perungudi site.

The estimated volume of legacy waste above ground level is around 34.02 lakh cubic metres. The Greater Chennai Corporation has initiated reclamation of the Perungudi disposal site through the bio-mining process under 6 Packages, at a project cost of Rs.350.65 crore, sanctioned under the Swachh Bharat Mission. Bio-mining work has commenced, and the project is expected to be completed in three years. So far, around 2.14 lakh cubic metres of legacy waste has been processed.

b. Kodungaiyur

The Kodungaiyur site is located in the northern part of the city, has an extent of 257.50 acres and has been in use for more than 40 years. Zones 1 to 8, use this facility.

The estimated volume of legacy waste above ground level is around 65 lakh cubic metres. A detailed feasibility report to reclaim

the land through bio-mining is under preparation. Upon completion of DFR, this project will be taken up for implementation under SBM (U) 2.0 during 2022–23.

(iv) Construction and Demolition (C & D) Waste Management

Presently the C & D waste collection in Chennai is around 800 TPD. To improve the service delivery, the collection and transportation of C & D waste have been outsourced, and operations have commenced.

GCC has set up two facilities for processing C & D waste on a PPP basis, one each at Kodungaiyur and Perungudi, which have started processing. An average of 250 MT of C & D waste is processed in each location daily. Final products such as coarse and fine aggregates will be used in construction activities.

(v) Mechanical Infrastructure

The mechanical engineering department of the GCC has a total fleet strength of 1,790 vehicles which includes vehicles for operations and transportation of C & D waste, such as compactors, battery-operated vehicles, HMT/LMT tippers, 21 front end loaders, two bulldozers, 14 hydraulic excavators etc. Additionally, the GCC has special equipment such as two amphibian vehicles and four robotic multipurpose excavators for clearing floating garbage in canals and seven vehicle-mounted suction cum jetting machines with a water recycling facility for clearing stormwater drains. In addition, the GCC has 16 mechanical sweepers for sweeping roads.

(vi) Sanitation – Community Toilets / Public Toilets

The Greater Chennai Corporation was declared as an '**Open Defecation Free**' corporation on 31.01.2018 and further recertified as 'Open Defecation Free' on four occasions. However, it remains a challenge before the GCC to maintain the city truly ODF. Continuous efforts are required to be made for this. There are 816 conventional community toilets in GCC, having 7,344 seats. Existing toilets will be modernised, and additional toilets will be added in a phased manner utilising GoI, GoTN grants and GCC funds. New toilets will be taken up after assessing the need. Adequate provision for maintenance will also be made. Construction and maintenance of the toilets through Public-Private Partnership and Corporate Social Responsibility (**CSR**) initiatives will be encouraged.

3.2.2. Public Health

The Public Health Department provides preventive and promotive treatment services and various citizen-centric services to the people of Chennai city.

The Public Health Department has a spectrum of services, including healthcare services, vector control, implementation of various national programs, registration of births and deaths and shelters for the urban homeless. It has the regulatory function to implement CCMC Act and TN Public Health Act for disease prevention and public health. The details of the services are given below.

(i) Health Infrastructure

The Greater Chennai Corporation has a well-established health infrastructure that provides comprehensive health care services,

such as antenatal and postnatal care, child health care, basic diagnostics, and treatment for communicable and non-communicable diseases under one roof.

The following health care services are provided through a network of 140 Urban Primary Health Centres (UPHC), 16 Urban Community Health Centres (UCHC) and 3 Emergency Obstetric Centres (EOC):

- Provision of treatment for minor ailments and minor surgical services
- Treatment of fever cases and other infectious diseases like TB, Dengue and Malaria
- Diagnosis and management of communicable and non-communicable diseases, including cervical and breast cancer screening
- Basic laboratory services
- Provision of antenatal and postnatal care
- Conduct of deliveries in UCHCs – normal and cesarean (24x7)

- Provision of newborn care
- Immunisation of children under five and growth monitoring
- Provision of Permanent Family Welfare procedures
- IEC activities
- Treatment for other gynaecological minor ailments
- Implementation of National Programmes

The GCC is running six dialysis centres, namely, at Thiruvottiyur UCHC, Lakshmipuram UPHC, Chinnaporur UCHC, Perungudi UCHC, Nungambakkam Diagnostic Centre and Injambakkam UCHC.

There are 40 Polyclinic centres in GCC which provide specialist medical care for early detection and treatment of diseases to the citizens, especially from economically weaker sections.

Communicable Diseases Hospital, Tondiarpet

The Greater Chennai Corporation has an exclusive Communicable Diseases Hospital at Tondiarpet, which was established in 1914. It is a 360 bedded hospital with OPD, IP and various diagnostic services. This hospital has played a major role in the control of pandemics/epidemics such as smallpox, cholera and swine flu. This centre also has a well-furnished PCR lab facility. Regular courses for ANM and Lab Technicians are being conducted in this institution. This institution also trains undergraduate and postgraduate medical students.

(ii) Services

a) Birth and Death Registration

For the convenience of the public, obtaining birth and death certificates has been made online, free of cost, on www.chennaicorporation.gov.in since

07.09.2008. All the birth and death records since the year 1930 have been computerised in Greater Chennai Corporation.

b) Vector Control Activities

The Greater Chennai Corporation controls vector-borne diseases through anti larvae and anti-mosquito activities.

Anti-mosquito activities, i.e. fogging operations, are carried out using 68 vehicle-mounted fogging machines and 251 handheld fogging machines. Additionally, 224 handheld spraying machines and 128 power sprayers are used to spray larvicide in stormwater drains, open drains, and canals. Gambusia fish is also introduced into water bodies to control larvae breeding.

The Greater Chennai Corporation has engaged 3,463 workers for vector control

activities. Larvicide, medicines and nilavembu kudineer are stocked sufficiently in all UPHCs/ UCHCs for the management of outbreaks of vector-borne diseases.

c) Shelter for Urban Homeless

In order to provide special care to the homeless, Greater Chennai Corporation has established 55 shelters. Out of which, 42 shelters are for the urban homeless, and 13 are for attenders of the in-patients in Govt Hospitals (special shelters).

All these shelters are being run in coordination with Non-Governmental Organisations. Additionally, 28 shelters are under construction.

d) Indian Medicine

Greater Chennai Corporation provides services through various Indian systems of

Medicine (Ayurveda, Unani, Siddha and Homeopathy). GCC has nine standalone Ayush/Siddha clinics and three integrated Ayush clinics.

e) Veterinary Care Animal Birth Control Programme

As per the Animal Birth Control (Dogs) Rules, 2001, stray dogs are caught based on the complaints received from the public; the stray dogs are caught, sterilised and immunised against rabies and released in the same area from where they were caught.

The Greater Chennai Corporation is running 3 Animal Birth Control (ABC) centres to control the population of stray dogs at Pulianthope, Lloyds Road, and Kannammamet.

Animal Birth Control centres will be expanded further in GCC.

During the year 2021-2022 (upto February 2022), 13,141 stray dogs have been sterilised.

Slaughter Houses

For the purpose of providing clean and hygienic meat to the people of Chennai, slaughterhouses are functioning at four places, namely, Perambur, Villivakkam, Saidapet, and Kallikuppam, under the direct supervision of the Greater Chennai Corporation.

Pet Clinics

Pet clinics of GCC are functioning at Nungambakkam, TVK Nagar, Meenambakkam and Kannamapettai. Pet animals are treated here. Besides, pets are issued licences after anti-rabies vaccine administration. Pet owners are educated about zoonotic diseases and their prevention. During 2021-22 (till February 2022), 17,186 cases have been treated, and 595 licenses have been issued.

Cattle Depot

Stray cattle depots are functioning at Perambur and Pudupet. Stray cattle caught in zones are impounded, maintained and released to cattle owners after they pay an impounding charge and produce an affidavit stating that they will not let the animals go stray again. During 2021-2022 (till February 2022), 1,823 cattle have been caught, and Rs.27.64 lakh has been levied as impounding charges.

f) National Urban Health Mission

The health care service delivery mechanism has been reorganised according to the guidelines of the National Urban Health Mission. The services under National Urban Health Mission include engaging human resources, logistics, special outreach camps, UHN days, quality assurance, Patient Welfare Society, MAS and infrastructure. NUHM supports

140 UPHCs, 16 UCHCs and three maternity hospitals.

g) Health and Wellness Centres

In order to strengthen the health care delivery system in urban areas, the Fifteenth Finance Commission has provided grants to establish Health and Wellness Centres. These centres will be attached to the existing Urban Primary Health Centres and provide health care services at the nearest possible place to the people. These centres will improve access to healthcare and ensure that healthcare services are utilised by people. These centres are aimed at reducing out of pocket expenditure on healthcare services.

The GCC will establish 140 urban Health and Wellness centres and other facilities under the 15th FC grant at the cost of Rs.88.30 crore.

h) District Blindness Control Society

The Greater Chennai Corporation implements the Blindness Control Programme through District Blindness Control Society. GCC has started eye screening activities in 43 UPHCs. The aim is to reduce the prevalence of blindness to 0.25% by 2025. Free spectacles for refractive errors are being provided to the students in Corporation's Chennai Schools, Government and Government aided schools.

In the year 2021-22, 9,079 free cataract surgeries have been performed, and 1,408 eyeball collections through eye banks have been done.

i) National Tuberculosis Elimination Programme

- The National Tuberculosis Elimination Programme aims at eliminating TB by 2025.

Presently, 36 TB Units, 162 Designated Microscopy Centres, 13 CBNAAT and 13 Truenaat sites are functional in Chennai.

- GCC offers free CBNAAT and Truenaat services for all patients.
- GCC owns seven mobile vans with X-ray facilities. These Mobile Diagnostic Units are used for screening the vulnerable population for TB.
- In 2021, 13,172 TB cases were notified. Presently, the number of cases notified from Jan 2022 to 15 March, 2022, is 2,448.

(iii) Prevention and Control of COVID-19

The first case of COVID-19 was reported in Chennai on 17 March, 2020. Samples from GCC are collected from UPHCs/ UCHCs and static sample collection centres.

The Greater Chennai Corporation (GCC) has taken up several innovative measures to control the third wave of the COVID-19 pandemic. These measures include the following.

- Symptomatic management of COVID cases
- Single-window dissemination of lab results
- Triaging at doorsteps by doctors
- Special ambulances
- Zonal tele-counselling centres to follow all the home-quarantined patients
- Mandatory notification to Greater Chennai Corporation by private hospitals/ clinics, private CT scan centres in order to enable quicker care of patients
- Vaccination drives

GCC engaged 1,535 COVID volunteers to do house to house, doorstep care of patients and to provide drug kits to patients under home isolation. In addition to this, they provided

essential items at their homes. They also mobilised people for the Mega Vaccination campaigns.

GCC has established 21 screening centres and 21 COVID care centres with 952 Oxygen Concentrators for the management of cases during the 2nd wave. Twenty-one screening centres and 5 COVID care centres were established during the 3rd wave.

(iv) COVID-19 Vaccination

As of 16.03.2022, a total of 1.02 crore doses have been administered by GCC in Chennai City. Of them, 54,37,891 eligible persons have received their 1st dose vaccination, 44,63,509 have received their 2nd dose vaccination. Steps taken for promoting vaccination are:

- A special vaccination drive was conducted for differently-abled persons and people in shelter homes by the Corporation.
- In order to improve coverage among elderly people older than 80 years, vaccination was done at the doorsteps.
- A special drive was conducted to improve the coverage among antenatal and postnatal mothers.
- Every week, static and mobile vaccination camps are being conducted in 1,600 locations. So far, 24 camps have been conducted, and 35,38,583 beneficiaries have benefited.
- Vaccination for the age group 15-18 years started on 3 January, 2022. So far, 3,36,963 beneficiaries in this age group have received their vaccination.

- The COVID-19 precautionary dose for Frontline Workers and the 60+ age group with comorbidities started on 10 January 2022. So far, 1,27,409 beneficiaries have received their precautionary vaccination dose.

The above activities enabled Greater Chennai Corporation to reduce the daily caseload from 8,987 (as of 16-01-2022) to around 200 within 35 days. The test positivity rate has also decreased from 29.71% to 0.5%. Currently, around 20-30 cases are being reported every day.

3.3. Revenue

It is essential to have adequate resources to implement schemes and programmes to improve the liveability of the city and enhance the quality of life for the citizens. Keeping this in mind, GCC takes various efforts to improve revenue

collection by enhancing efficiency through innovation and technological solutions.

GCC has a budget of nearly Rs.6,300 crore. The actual budget numbers for Financial Year 2020-21 are given in Table 3.11.

Table 3.11

Sl.No.	Account Head	Actuals 2020-2021 (Rs. crore)
REVENUE ACCOUNT		
1	Receipts	2891.08
	Expenditure	3014.33
CAPITAL ACCOUNT		
2	Receipts	1875.68
	Expenditure	1242.97

A breakup of the different sources of income/revenue receipts and revenue expenditure are given in pie-diagrams

3.3.1. Revenue Department is responsible for the collection of property tax, professional tax,

company tax, entertainment tax, trade license fee and rent on shopping complexes.

Category-wise demand is given in Table 3.12.

Table 3.12

S.No.	Category	Half-yearly demand (Rs. crore)
1	Property tax	396
2	Profession tax	215
3	Company tax	0.60
4	Entertainment Tax	Due to COVID-19, entertainment tax collection is minimal. Rs.13.00 crore was collected in FY 2020-21
5	Trade License fee	11.13 Yearly
6	Rent on shopping complexes	19.32 (FY 2021-22)

3.3.2 Improving Collection Efficiency through Technology

Despite the strain on finances due to old tax rates and the economic downturn precipitated by COVID-19, GCC is making

various efforts to improve tax collection efficiency through new and innovative solutions. The Geographical Information System (GIS) and Drone Survey project (Phase-I) was initiated by Greater Chennai Corporation under the World Bank-funded TNSUDP at the cost of Rs.6.44 crore (Phase-I) and is expected to be completed by March 2023.

One of the objectives is to identify unassessed and under assessed buildings. Field surveys are completed for 180 wards out of 200 wards, and the GCC is making all efforts to improve the financial position by bringing all under/unassessed properties into the property tax net.

3.3.3 Financial Position of GCC - Property tax is the main source of revenue for urban local bodies. The GCC is facing a severe shortfall in revenue receipts on the item of property tax

collection in the present scenario because of deferment of the General Revision of Property Tax rates and the COVID-19 pandemic.

Additionally, GCC has an outstanding loan amount of Rs.2,591.83 crore (including Rs.550 crore overdraft drawn from State Bank of India), pending contractor payments of Rs.279.43 crore and Rs.373.51 crore payable to various Government agencies.

Apart from this, the GCC is expected to incur an additional expenditure towards implementing the solid waste management project in 11 Zones, i.e., collection and transportation of solid waste implemented in PPP mode. The monthly outgo to the concessionaires is about Rs.53 crore.

3.4 Education

The Education Department of Greater Chennai Corporation strives to provide quality education enriched with life skills to the children through the Chennai Schools.

The GCC has 281 schools and 2,731 teachers under its administration, as in Table 3.13.

Table 3.13

Type of School	Number
Primary School with KG Section	119
Middle School with KG Section	92
High School	38
Higher Secondary School	32
TOTAL	281

3.4.1 Students Enrolment

During the academic year 2021-2022, enrolment has seen an uptick. The GCC has taken various innovative measures for increasing

enrolment, which has risen to 1,15,580. The enrolment has crossed the one lakh mark after a decade.

3.4.2 Public Examination Result

Chennai Schools have been producing good results in public examinations both in the 10th and 12th standards, as seen in Table 3.14. The GCC strives to improve these numbers every year through various interventions.

Table 3.14

Academic Year	10th Public Examination			12th Public Examination		
	Appeared	Passed	%	Appeared	Passed	%
2016 - 2017	6,302	5,865	93.07	6,423	5,700	88.74
2017 - 2018	5,908	5,516	93.36	5,788	5,139	88.79
2018 - 2019	5,730	5,297	92.44	4,837	4,377	90.49
2019 - 2020	5,988	5,988	100	4,648	3,988	85.80
2020 - 2021	6,580	6,580	100	5,130	5,130	100

3.4.3 Model and Smart Chennai Schools under the CITIIS fund

The Model and SMART Chennai Schools project under the CITIIS (City Investments to Innovate, Integrate and Sustain) challenge initiative is being implemented in 18 campuses covering 28 schools for Rs.95.25 crore, of which, Rs.76.2 crore is funded by AFD (French Development Agency) while Chennai Smart City Limited is contributing Rs.19.05 crore. This project comprises hard and soft infrastructure.

3.4.4 Other Interventions

Under the Safe City Project under Nirbhaya Fund, several interventions are being taken up. Toilets for girls across 132 schools are to be renovated at the cost of Rs.18.87 crore. Female students in 67 High and Higher Secondary Schools are to be provided self-defence training at the cost of Rs.6.99 crore. Menstrual hygiene management will be made

robust in 159 Chennai Schools at the cost of Rs.4.79 crore. Also, CCTV Cameras will be provided in 159 Chennai Schools at the cost of Rs.5.47 crore.

Under the Singara Chennai 2.0 Scheme, this year, it is proposed to renovate and refurbish 22 schools in 11 locations at an estimated cost of Rs.67.83 crore.

Two residential model schools, to enable students studying in Government and Chennai Corporation Higher Secondary Schools to join premier higher education institutions and excel in competitive examinations, have been started at the cost of Rs.3.59 crore. They are co-located on the following campuses:

- i. Chennai Boys Higher Secondary School, Nungambakkam.
- ii. Government Boys Model Higher Secondary School, Saidapet.

3.4.5 Community Colleges and ITI

The Greater Chennai Corporation runs an Industrial Training Institute at Zone-9, affiliated with the National Council of Vocational Training (NCVT) and provides various courses for skilling students as plumbers, fitters, mechanics, electricians, motor mechanics and computer operators. After the completion of these courses, the trainees are provided with job opportunities in various industries by the institute.

There are three Community Colleges run by Greater Chennai Corporation at C.V.Raman Street, Alwarpet; Sundaram Street, Purasaiwakkam; and NaattuPillayar Koil Street, especially for the students who are unable to continue their education after school. Various skill development courses like computer software, paramedical courses, baking and confectionery making and jute bag-making are taught at these community colleges.

3.5. Namakku Naame Thittam (NNT)

The Government's flagship "Nammaku Nammae Thittam" scheme is being implemented in the Greater Chennai Corporation for the development of public assets and increasing public participation in the creation and maintenance of civic infrastructure, including OSR lands, schools, hospitals, etc.

An amount of Rs.49.10 crore has been allotted by the Government to Greater Chennai Corporation under "Namakku Naame Thittam".

Under "Namakku Naame Thittam", GCC has granted sanctions for 110 works at the cost of Rs.11.48 crore, wherein the public contribution is Rs.9.22 crore and the share of the Government is Rs 2.26 crore.

The works taken up include renovation of 2 water bodies, improvement of 27 parks and

playgrounds and planting of trees, improvement to 30 Chennai Schools, 19 beautification works, improvement of 15 public toilets, improvement of 2 burial grounds and crematoria, improvement works of 15 centre medians, stormwater drains, hospitals, roadside platforms and providing rainwater harvesting structures are in progress.

The GCC will implement these projects expeditiously to put them to public use in a short time.

3.6 Nagarpura Velaivaippu Thittam

Under the Nagarpura Velaivaippu Thittam, in Greater Chennai Corporation, two zones - Zone 4 (Tondiarpet) and Zone 6 (Th.Vi.Ka. Nagar) - have been selected on a pilot basis. A sum of Rs.5 crore has been allocated for each zone.

Under this scheme, a daily wage of Rs.382/- has been fixed for the people working in the Greater Chennai Corporation.

So far, the Greater Chennai Corporation has surveyed 1,97,000 households across the two zones. Of these, 57,000 people have been identified as eligible beneficiaries to work in the Greater Chennai Corporation through this scheme. Job cards have been issued to 28,000 beneficiaries.

Works are in progress for an estimated amount of Rs.16.50 lakh for the desilting of stormwater drains in Zone 4 (Tondiarpet) and Zone 6 (T.V.K. Nagar).

3.7 Training Needs and Capacity Building Activities

Greater Chennai Corporation imparts training to the employees through Anna

Administrative Staff College and Tamil Nadu Institute of Urban Studies (TNIUS), Coimbatore.

TNUIFSL has taken up consulting service for the preparation of a Training Needs Assessment study for conducting capacity building and training programmes for various urban local bodies in Tamil Nadu. Building on this study, Greater Chennai Corporation has undertaken a training needs assessment of the personnel. Based on the assessment, training will be imparted to the staff of Greater Chennai Corporation.

3.8. Singara Chennai 2.0

During the year 2021-22, the Government of Tamil Nadu launched the "Singara Chennai 2.0" scheme to provide modern civic infrastructure and services in Greater Chennai Corporation. A sum of Rs.500 crore was provided during the year 2021-22.

Rs.500 crore has been provided in the budget estimates this year as well. The following projects have been taken up under the scheme during 2021-22.

Sl. No.	Name of the Project	Sanctioned		Status
		No. of works	Approved cost (Rs crore)	
1	Bus route roads	59	37.58	57 works completed; 2 works in progress.
2	Water fountains	26	1.29	19 works in progress; 7 works under procurement
3	Development/ improvements of parks	28	24.43	24 work in progress; 4 works under procurement
4	Development/ improvement of play fields	18	12.57	11 work in progress; 7 works under procurement
5	Dynamic lighting of Ripon buildings	1	1.81	Work in progress.
6	Name boards for streets	1	8.43	Work in progress.

7	Crematoria	11	8.35	3 works in progress; 7 works under procurement
8	Stormwater drain	1	184.67	8 packages in progress; 2 packages under procurement
9	Water bodies	12	9.08	2 works in progress; 10 works under procurement.
10	Schools	11	50.67	under procurement
11	Animal birth control centre	2	0.81	under procurement
Total		170	339.69	

3.9 Measures Taken for Flood Mitigation

Pursuant to the Governor's address in the Legislative Assembly on 21 June 2021, an Advisory Committee has been constituted by the Government comprising experts and headed by Thiru. V. Thirupugazh (IAS Retd), formerly Additional Secretary/ Advisor, National Disaster Management Agency. The committee is entrusted with the task of making recommendations to the Government for the mitigation of flood risk in Chennai metro.

During North East Monsoon 2021, several areas in Chennai city were affected due to flooding. The Hon'ble Chief Minister inspected the flood-affected areas and interacted with the general public and other stakeholders. The Hon'ble Chief Minister also held deliberations with the Advisory Committee to find a permanent solution to the flood problem in Chennai. The Advisory Committee presented its Interim Report to the Government on 03.01.2022. Several short and long term measures have been suggested by the committee in the report for flood mitigation in the flood-prone areas and areas severely affected during North-East Monsoon, 2021. Pursuant to the recommendations of the committee, GCC has taken action for providing stormwater drains in the severely affected locations.

In the first phase, under Singara Chennai 2.0, stormwater drain works have been taken up at an estimated cost of Rs.184.67 crore for a length of 40.80 KM. These works will be completed in the current financial year.

In the second phase, the construction of stormwater drains at an estimated amount of Rs. 70 crore for a length of 20.03 KM, will be taken up under Singara Chennai 2.0, for which estimates are under appraisal by the nodal agency, TUFIDCO.

Further, the places where motors were used for bailing out rainwater have been identified, and in those places, the construction of stormwater drains will be taken up under the special fund for flood mitigation provided in the BE 2022-23.

GCC is also coordinating with the Water Resources Department, Highways Department

and other departments for taking up infrastructural work for flood mitigation in an integrated and comprehensive manner.

3.10. Sustainable Development Goals

The Greater Chennai Corporation is giving high priority to achieving Sustainable Development Goals before 2030. Action is being taken to achieve the above-said goals through the following:

- (a)** Good Health and Well Being (Goal 3) - Greater Chennai Corporation provides comprehensive health care services such as antenatal and postnatal care, child health care, basic diagnostics, and treatment for communicable and non-communicable diseases under one roof. As part of the NUHM and World Bank-funded Chennai City Partnership Programme, the physical and human

infrastructure in the health sector will be revamped and upgraded.

- (b)** Quality Education (Goal 4) - Classrooms are being transformed into Smart Classrooms by equipping them with electricity, network connectivity, a desktop computer, smartboard, tablets and furniture.
- (c)** Gender Equality (Goal 5) - The GCC is implementing a slew of projects under the Nirbhaya scheme for the benefit of women, such as access to modern toilets, livelihoods, safety etc. A gender lab will also be established in GCC to look into gender issues and come up with solutions.
- (d)** Clean Water and Sanitation (Goal 6) - Restoration of water bodies have been taken to raise the water table in the

vicinity of water bodies and to beautify the surrounding area. Rainwater harvesting structures are erected in all newly laid stormwater drains. Many individual and community wells have been converted into recharge structures. GCC is currently undertaking a modernisation drive for all the existing public and community toilets.

- (e)** Affordable and Clean Energy (Goal 7) - All existing streetlights in Chennai have been converted into energy-efficient LED lights. The GCC is also encouraging a shift to non-motorised transport such as walking, cycling as well as E-bikes to promote the general well-being of citizens.
- (f)** Sustainable Cities and Communities (Goal 11) - Make cities and human settlements inclusive, safe, resilient and sustainable.

The GCC has taken up measures to reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal waste management

- (g)** Partnerships for Goals (Goal 17) - The Government of Tamil Nadu and the World Bank have proposed to engage in the Chennai City Partnership Programme for achieving various disbursement linked indicators covering multiple sustainable development goals.

4. COMMISSIONERATE OF TOWN PANCHAYAT

In the context of urban development, town panchayats assume significance as they act as a buffer for bigger cities. Therefore, it is imperative to provide quality civic amenities to these towns which will help in checking migration to bigger urban centers. In Tamil Nadu, there are 490 town panchayats consisting of 7,621 wards. The total population of the town panchayats as per 2011 census is 69,24,178. Town panchayats are the local bodies in transit from village Panchayats to municipalities.

4.1. Administration

Town panchayats come under the administrative purview of the Commissioner of Town panchayats in Municipal Administration and Water Supply Department. There are 17 Zonal Offices functioning under the control of Assistant Director of Town panchayats. The District

Collectors monitor the activities of the town panchayats.

Town panchayats are governed by the Tamil Nadu District Municipalities Act 1920. Town panchayats are classified in to 4 categories based on their annual income as detailed in Table 4.1

Table 4.1

Classification	Annual Income	Number
Special Grade	Exceeding Rs 200 lakh	47
Selection Grade	Exceeding Rs 100 lakh and upto Rs 200 lakh	187
Grade I	Exceeding Rs 50 lakh and upto Rs 100 lakh	194
Grade II	Below Rs 50 lakh	62
	Total	490

4.2. Functions of the Town Panchayats

Town panchayats are providing basic civic services such as water supply, sanitation, solid waste management, maintenance of streetlights construction and maintenance of roads, disposal of rainwater and used water,

providing community halls, shopping malls, crematoriums, parks and playgrounds; and construction and maintenance of bus stands and markets. Issuing building licence and building permits are other important functions of the town panchayats.

4.2.1. Revenue Sources

Taxes and non-taxable items such as property tax, professional tax, lease rent, water charges etc. are the own sources of revenue. Town Panchayats also receive revenue through assigned revenue for income, such as stamp duty, devolution from the state Government and 15th Finance Commission (CFC) grant.

4.2.2. Water Supply

In order to give protected water supply to the people, newschemes are being implemented by the Government besides rejuvenation and improvement of existing water supply schemes.

The Government is committed to provide 70 litres per capita per day (LPCD) water in all town panchayats 135 LPCD in the town panchayats where under ground sewerage schemes (UGSS) has been implemented.

Out of 490 town panchayats, 102 town panchayats are covered by stand-alone water supply schemes, and 373 are covered by 127 CWSS schemes maintained by TWAD Board. Remaining town panchayats are served from local sources.

In Town panchayats only 38% of households are having house service connections. In order to provide 100% functional house service connections to all households, as a first phase, in the year 2021-22, 16,686 connections have been provided.

In order to provide house service connections to all households city water balanced plan and city water action plan has been prepared for all the town panchayats and action has been initiated to formulate schemes to augment water supply based on the assessed demand supply gap.

During 2021-22, as per G.O. (Ms.) No 44, Municipal Administration and Water Supply (WS.1) dated 14.03.2022, administrative sanction has been accorded to implement water supply scheme for Rasipuram Municipality, 8 town panchayats and 424 rural habitations at a cost of Rs 854.37 crore by dovetailing funds under AMRUT 2.0 and Jal Jeevan Mission. Nearly 1,17,000 population in 8 town panchayats namely Vennandur, Athanur, Pillanallur, Namagiripettai, Pattanam, Seerapalli, R.Pudhupatty and Mallasamudram will benefit from the scheme.

4.2.3. Roads

Roads play an important role in improving the economy of town panchayats by connecting them to nearby villages and cities.

A total length of 20,419KM of various types of roads are being maintained in 490 town panchayats as given in Table 4.2

Table 4.2

Sl.No	Road Classification	Length (in KM)
1	Black top roads	11,157
2	Cement concrete roads	5,121
3	Paver block	1,037
4	Water Bound Macadam roads	127
5	Gravel Roads	57
6	Earthen roads	2,920
	Total	20,419

The Government is committed to convert the existing 2,977 KM of earthen and gravel roads into black top (BT) roads or cement concrete (CC) roads and paver block roads. During the year 2021-22, under KNMT, CGF and

TURIP, 824 works for a length of 529 KM has been taken up at an estimated cost of Rs.368.43crore. Out of which 182 works have been completed and the remaining 642 works are in progress at various stages.

4.2.4. Streetlights

One of the major responsibilities of the town panchayats is the maintenance of streetlights. In total, 3,89,960 streetlights are maintained in the town panchayats with 2,251 high mast lights, 830 mercury vapour lamps, 16,513 sodium vapour lamps, 1,93,584 tube lights, 88,796 CFL lamps, 84,923 LED lights and 3,063 solar lights.

Action is being taken to convert the conventional streetlights in the town panchayats into energy efficient fittings which will help in reducing electricity consumption leading to reduced current consumption charges.

4.2.5. Modernisation of Bus Stands

Out of 490 town panchayats, 199 town panchayats have bus stand. Action is being taken to modernize all bus stands with modern facilities.

In the first phase, during 2021-22 administrative sanction has been accorded to modernize the 10 bus stands located in following towns under KNMT at an estimated cost of Rs.44.69 crore as given in Table 4.3 and work is in progress at various stages.

Table 4.3

S.No.	Name of the District	Name of the Town Panchayat
1	2	3
1	Dindigul	Kannivadi
2	Villupuram	Gingee
3	Theni	Thevaram
4	Ranipet	Thimiri
5	Tirunelveli	Vadakkuvalliyur

S.No.	Name of the District	Name of the Town Panchayat
1	2	3
6	Dindigul	Keeranur
7	Tiruchirappalli	Thottiam
8	Cuddalore	Kurinjipadi
9	Tiruchirappalli	Thathiengarpet
10	Sivagangai	Ilayangudi

4.2.6. Shandies

The weekly markets located in the town panchayats play an important role for the economy of the towns as well as for the nearby rural areas by providing platform for buying and selling of agriculture and agro-based products. In addition, it also provides livelihood opportunities for small and micro businesses and local people. In total 646 shandies are maintained by the town panchayats. During 2021-22, 15 shandy development works have been taken up at an estimated cost of Rs. 51.84 crore under the Kalignar Nagarpura Mempattu Thittam (KNMT) and 3 works under

the Capital Grant Fund at an estimated cost of Rs.6.00 crore. Further, 2 market maintenance works have been taken up under the Operation and Maintenance Gap Filling Fund at an estimated cost of Rs.0.40 crore. These works are at various stages of implementation.

4.3. Sanitation

Providing quality sanitation facilities to the citizens and maintaining cleanliness is one of the basic duties of town panchayats. Government is committed to improve sanitation in all town panchayats. To achieve this, individual household toilets will be provided on need basis under SBM 2.0. City sanitation plans have been prepared for all town panchayats under SBM 2.0 and community toilets and public toilets will be provided in town panchayats based on this plan. Special emphasis is being given to maintenance of the community / public toilets.

4.3.1. Solid Waste Management

Town Panchayats are following the Solid Waste Management Rules 2016. Accordingly, various activities are being taken up for effective implementation of the Solid Waste Management Plan. Approximately 1,805 MT of solid waste is generated daily in town panchayats, of which 890 MT is compostable waste and the rest is non-compostable waste.

Currently, 96 per cent of town panchayats carry out door-to-door garbage collection. Compostable waste is being processed in micro – composting centres as well as through the decentralized compostable pits. Dry waste is either recycled through resource recovery centres or sent to cement factories for co-processing.

Solid waste management in town Panchayats is looked after by 5,366 department workers and 11,923 self help group (SHG)

members. Workers involved in door to door collection have been provided tricycles / battery operated vehicles. Battery operated vehicles are environment friendly. Therefore, during the year 2021-22 an amount of Rs.49.13 crore has been sanctioned for procuring 1,909 battery operated vehicles and 98 light motor vehicles under the Kalaignar Nagarpura Membattu Thittam. Action is being taken to procure the vehicles early.

Legacy waste dumped at 42 sites in the state has been remediated through bio-mining system at a cost of Rs.26.80 crore. The legacy waste dumped at remaining places will be remediated through bio-mining under Swachh Bharat Mission 2.0. State High Power Committee (SHPC) under SBM 2.0 has given approval for bio-mining of legacy waste in 23 town panchayats at an estimated cost of Rs 16.81 crore.

Home composting / roof top garden is being promoted as a way to reduce the solid waste load of the town as the compostable waste is converted into compost at the household level and used for gardening. Solid waste is being segregated in about 61,000 homes in various town panchayats and wet waste is converted in to compost in a decentralized manner.

4.3.2. Liquid Waste Management

Steps are being taken to prevent the mixing of used water in water bodies, which leads to pollution. As a first step, the SHPC of Swachh Bharat Mission 2.0 has approved the construction of decentralized used water treatment systems at an estimate cost of Rs 6.16 crore in Kallidakurichi, Veeravanallur, Mukkudal, Cheranmadevi, Pathmadai, Melaseval, Gopalamaduram, and Naranammalpuram town panchayats.

4.3.2.1 Under Ground Sewerage Scheme (UGSS)

Safe disposal of the sewage is essential to protect the health and environment. Under ground sewerage schemes, though capital intensive and require long time to implement, are effective in safe collection, conveyance and treatment of the domestic sewage. Under ground sewage schemes are functional in 9 town panchayats namely Mamallapuram, Thirumazhisai, Orathanadu, Palanichettipatti, Velankanni, Mannachanallur, S.Kannanur, Perundurai and Vallam. In 3 town panchayats UGSS is under implementation. This work will be expedited and the schemes will be commissioned during 2022-23.

4.3.2.2 Faecal Sludge and Septage Management

Faecal Sludge and Septage Management is an alternative way to transport, treat and dispose the faecal sludge/ septage in an environment friendly manner. Faecal sludge is removed from the septic tanks / cess pools in individual houses and community / public toilets through desludging tankers by private operators and taken to a Faecal Sludge Treatment Plant (FSTP) for treatment and disposal. This system was implemented on pilot basis in Karunghuzhi town panchayat of Chengalpattu district and Periyanaickenpalayam town Panchayat of Coimbatore district at an estimated cost of Rs.5.18 crore and Rs.2.02 crore respectively. These plants are functioning successfully.

In continuation, faecal sludge and septage management works have been taken up in 8 town panchayats namely Mudukulathur,

Jalakandapuram, Pennagaram, Kaveripattanam, Chengam, Kurumbalur, Pennadam and Alangayam at an estimated cost of Rs. 22.79 crore by town panchayats. Further, at 48 locations it has been taken up on cluster basis with 52 municipalities.

4.3.3. Crematoriums

In total 1,920 burial grounds are maintained in town Panchayats. It is the endeavour of the Government to provide modern gasifier crematoriums and burial grounds with basic amenities in all the town Panchayats. Already 25 modern crematoriums are functioning in town panchayats. Further, during 2021-22, 15 modern crematoriums have been sanctioned under the Kalaignar Nagarpura Mempoattu Thitttam at an estimated cost of Rs.21.96 crore, 11 under the Capital Grant Fund at an estimated cost of Rs.16.50 crore and work is in progress.

After completing the construction, these crematoriums will be put to public use during 2022-23.

4.4. Environmental Development

It is imperative to maintain the environment in our towns in order to enable them to offer healthy living conditions. Steps are being taken to transform, town panchayats into green towns by planting trees, rehabilitating water bodies, setting up parks and creating and maintaining rainwater harvesting structures.

4.4.1. Rejuvenation of Water Bodies

In total 2,212 water bodies are being maintained by 490 town panchayats. Out of these, 1,182 water bodies have already been rejuvenated. During 2021-22, 358 waterbodies have been taken up for rejuvenation under various schemes, at an estimated cost of

Rs.109.30 crore. The remaining 672 water bodies will be restored and rejuvenated in a phased manner.

Open spaces and vacant land available in the town panchayats will be developed as green spaces.

4.4.2 Rainwater Harvesting

It is mandatory to construct rainwater harvesting structures in all buildings in the town panchayats. Awareness will be created among the people to maintain rainwater harvesting structures through people's involvement and they will be encouraged to rejuvenate rainwater harvesting structures in their premises before the onset of monsoon.

4.4.3 Parks

There are 536 parks in the town panchayats. During 2021-22 Rs. 56.22 crore have been sanctioned under 15th Finance

Commission (CFC) grant for development of 364 parks and the work is in progress at various stages.

Further, 3 works for improvement of parks have been taken up under Capital Grant Fund at an estimated cost of Rs.2.89 crore and 2 under the Kalaignar Nagarpura Membattu Thittam at an estimated cost of Rs.0.98 crore and work is in progress.

4.5 Schemes under implementation

4.5.1 Swachh Bharat Mission 2.0

Under this Mission, survey has been carried out to assess the requirement of individual toilets, community / public toilets, and urinals. A requirement of 7,295 individual toilets, 100 community toilets and 450 urinals have been assessed. These works will be taken up over next two years. Further all the 490 town panchayats are open defecation free (ODF)

including 350 ODF+ town panchayats. For the remaining 140 town panchayats, ODF+ certification is under the review by the committee set up by the Ministry of Housing and Urban Affairs (MoHUA), Government of India.

4.5.2 PMAY (U)-Housing for All

The Tamil Nadu Urban Habitat Development Board is implementing Prime Minister's AwasYojna (Urban) as a state level nodal agency. One of the component of the PMAY (U) namely Beneficiary Led construction (BLC) is being implemented by Commissionerate of Town Panchayats. Under the scheme subsidy of Rs.2.10 lakh is provided to every beneficiary – Rs.1.50 lakh by Government of India and Rs.0.60 lakh by the state Government. Additional cost is borne by the beneficiary.

So far, 84,818 houses have been sanctioned under this scheme of which 60,845 houses have been completed and remaining

23,973 dwelling units are in progress and will be completed during 2022-23. Subsidy is directly credited to the beneficiary's account through Electronic Clearance Systems (ECS) after the house is geo-tagged on the portal created by the MoHUA for this purpose.

4.5.3 National Urban Livelihood Mission (NULM)

(i) Shelter for the Homeless Urban Poor

Under NULM, 37 shelters for the attendants for the inpatients in Government hospitals in the town panchayats and 2 shelters for urban homeless have been approved at a cost of Rs.16.24 crore. Out of which construction of 38 shelters have been completed and put into use. The remaining 1 work in Velankanni town panchayat is in progress and will be completed during 2022-23.

(ii) Improving Infrastructure Facilities for Street Vendors

In order to improve the livelihood of street vendors in Velankannitown panchayat, Nagapattinam district 228 pushcarts have been provided to street vendors at a cost of Rs.1.88 crore during the year 2020-21. During current year also pushcarts will be provided to street vendors in town panchayats based on requirement.

(iii) PM-SVANidhi, AthmaNirbar Fund to Street Vendors

Micro credit of Rs.10,000 at subsidised interest rate is extended to street vendors under PM-SVANidhi. Out of 61,611 street vendors, 57,299 street vendors have been uploaded in the PM-SVANidhiwebsite. Credit facility has been provided to 30,371 street vendors. During the year 2022-23 action will be taken to extend this credit to more street vendors and also to extend

second and third tranches of loan to needy street vendors.

4.6 State Government Schemes

4.6.1 Kalaignar Nagarpura Mempattu Thittam (KNMT)

In order to fulfill the infrastructural gaps in all Urban Local Bodies, Kalaignar Nagarpura Mempattu Thittam (KNMT) is introduced by the Government in 2021-22 in all municipalities and town panchayats and allocated Rs.1,000 crore for the scheme.

During the year 2021-22, 798 works have been sanctioned in 446 town panchayats at a cost of Rs.449.74 crore. These works include conversion of earthen roads to cement concrete (CC), black top (BT) and Paver Block Roads, Improvement of weekly shandies, purchase of battery operated vehicles, library / knowledge centers, modernization of bus stand in urban areas etc. These works are at various stages of

implementation. The details are given below at Table 4.4.

Table 4.4

Sl.No	Name of Project	Sanctioned	Amount (Rs in crore)	Progress	
		No. of works		Completed Nos.	Ongoing Nos.
1	2	3	4	5	6
1	Roads	656	251.43	154	502
2	Drain & culvert	44	12.80		44
3	Metal Beam Crash Barrier	33	5.06	17	16
4	Crematorium	15	21.96		15
5	Knowledge Centre	11	17.58		11
6	Markets/ Shandy	15	44.35		15
7	Bus stands	10	35.68		10
8	Community Hall	1	1.96		1
9	BOVs	1	38.43		1
10	LCVs	1	6.57		1
11	Ponds /Water Bodies	9	12.94		9
12	Parks	2	0.98		2
	Total	798	449.74	171	627

4.6.2 Namakku Naame Thittam (Urban)

In order to improve the self-support mechanism of public and to enhance increased public participation in creating and maintaining community infrastructure and also bring the sense of ownership, the Government introduced

“**Namakku Naame Thittam (Urban)**” in the year 2021-22.

Under this scheme, works such as rejuvenation of water bodies, play grounds, tree plantation, improvement to school buildings, health centers, roads and street lights etc., can be taken up with the public contribution. Under this scheme minimum public contribution is one-third of the project cost.

During the year 2021-22 administrative sanction has been accorded for 134 works at an estimated cost of Rs. 12.76 crore, out which 14 works are complete and remaining 120 works are under implementation at various stages.

4.6.3 Tamil Nadu Urban Employment Scheme

Dr.C.Rangarajan Committee has recommended a Special Programme to improve the livelihood of the urban poor and for creation of public assets by providing job opportunities

for the willing persons. Accordingly, guidelines were issued vide G.O. No. 69, Municipal Administration and Water Supply (NS) Dept, Dt: 13.09.2021. In the year 2021-22, under this scheme Rs.75 crore has been allotted for creation and maintenance of public assets like parks, play fields, storm water drains, roads, buildings and rejuvenation of water bodies.

This scheme is being implemented in 37 town panchayats on pilot basis at the rate of one town panchayat in each of the 37 districts.

Accordingly, 37 townpanchayats have been selected and 1,53,096 households have been surveyed. Among this, 83,757 willing beneficiaries have been identified and jobcards have been issued to 81,507 beneficiaries. 192 works have been selected in 37 town panchayats at an estimated cost of Rs. 27.75 crore. Depending on the demand from

the willing beneficiaries works are taken up under the scheme.

4.6.4 NABARD – National Bank for Agricultural and Rural Development

Construction of roads and bridges intown panchayats have been taken up under the financial assistance from NABARD.

During 2020-21, 105 road works were taken up in 86 town panchayats at an estimated cost of Rs.93.88 crore. Out of which, 96 works have been completed and the remaining 9 works are under progress. Action is being taken to complete the works early.

Further in the year 2021-22, 192 road works for 292.66 KM length in 147 Town Panchayats at an estimated cost of Rs.181.30 crore and 11 bridge works in 7 Town Panchayats at an estimated cost of

Rs.19.40 crore i.e. 203 works at an estimate cost of Rs.200.70 crore, have been sanctioned.

4.6.5 Capital Grant Fund

In urban local bodies basic infrastructure improvement works such as water supply works, solid waste management, storm water drain, slaughter houses, crematoriums, community halls, shandies, bus stands etc., are taken up under Capital Grant Fund. Further, the ULB contribution to TWAD Board for the water supply works is also made from this fund.

In 2020-21, 229 works were taken up at an estimated cost of Rs.244.77 crore, out of which 154 works have been completed and the remaining 75 works are in progress at various stages.

During 2021-22, 160 works have been taken up at an estimated cost of Rs.298.99 crore, out of which 17 works have been completed and the

remaining 143 works are in progress at various stages.

4.6.6 Operation and Maintenance Gap Filling Fund

Operation and Maintenance Gap Filling Fund is allocated to the town panchayats for bridging the gap in maintenance of infrastructure such as water supply and underground drainage schemes and for the payment of current consumption charges and water charges.

During the year 2020-21, 164 works were taken up at an estimated cost of Rs.69.57 crore. Out of which 156 works have been completed and the remaining 8 works are in progress.

Further, during 2021-22, 349 works were taken up at an estimated cost of Rs.60.48 crore and all the works are in progress at various stages.

Action is being taken to complete the above works early.

4.6.7 Tamil Nadu Urban Road Infrastructure Programme (TURIP)

The Tamil Nadu Urban Road Infrastructure Programme is being implemented with a view to upgrade the roads in urban local bodies by constructing platforms and storm water drains along the roads.

During the year 2021-22, 175 road works have been taken up in 67 town panchayats for a length of 122.72 KM at an estimated cost of Rs.82.99 crore. Of which 28 works have been completed and the remaining 147 works are in progress. Steps are being taken to complete these works expeditiously.

4.6.8 Special Road project (SRP)

In order to restore the damaged roads, due to implementation of UGSS / water supply

schemes, a sum of Rs.1,000 crore was raised by TUFIDCO as loan from banks / financial institutions on behalf of urban local bodies during 2020-21.

Under this scheme 262 road works have been taken up for 302.33 KM at an estimated cost of Rs.150 crore in 182 town panchayats. Out of which 164 road works are complete and the remaining 98 works are at various stages. These works will be completed during 2022-23.

4.7. e-Governance

The National Informatics Centre has developed the software to provide the requisite e-taxation services to the public in town panchayats. In the first phase, the software is being developed for five modules i.e. for levy and collection of property tax, professional tax, trade licence, water charges and non-tax items. Initially, it is proposed to implement this system

in 17 town panchayats of Kancheepuram, Chengalpet and Thiruvallur districts on pilot basis. Necessary hardware and server is being purchased through ELCOT at an estimated cost of Rs.6.64 crore. The above work is expected to be completed by 31.05.2022. On successful implementation, the e-delivery of services will be available at ease to the citizens in town panchayats.

4.8 Financial Management

4.8.1 Fifth State Finance Commission

As per recommendations of the Fifth State Finance Commission(SFC), funds released during the year 2021-22 are given in table 4.5.

Table 4.5

Sl.No.	Type of Grant	2021-22 (Rs. crore)	
		Allocation	Released
1	SFC Grant	1,190.20	1,190.20

2	Capital Grant Fund	223.76	223.76
3	O&M Fund	74.38	74.38
	Total	1,488.34	1,488.34

4.8.2 Sixth State Finance Commission

Sixth State Finance Commission constituted by the Government on 06.03.2020 has submitted its report to the Government on 08.03.2022 and the report is under consideration of the Government. Based on the recommendations of the 6th State Finance Commission grants will be released to local bodies for five year period from the financial year 2022-23 to 2026-27.

4.8.3 15th Finance Commission (CFC)

The 15th Finance Commission (CFC) has recommended tied grant and untied grant to urban local bodies for six years from 2020-21 to 2025-26. The details of grants allocated to town

panchayats under the 15th Finance Commission award is given in Table 4.6.

Table 4.6 (Rs. Crore)

Sl. No	year	Tied Grant	untied Grant	Total	Amount Received
1	2020-21	269.23	269.24	538.47	538.47
2	2021-22	166.09	110.73	276.82	276.82
3	2022-23	172.05	114.70	286.75	—
4	2023-24	181.90	121.27	303.17	—
5	2024-25	192.69	128.46	321.15	—
6	2025-26	196.41	130.94	327.35	—
	Total	1,178.37	875.34	2,053.71	815.29

Tied Grant

As per the 15th Finance Commission guidelines 50 percent of the tied grant is used for sanitation and solid waste management works and the remaining 50 percent is used for drinking water, rainwater harvesting and water recycling.

Untied Grant

The untied grant can be used for carrying out works in furtherance of the eighteen subjects in the twelfth schedule of the Constitution on the basis of felt needs except for salaries and other establishment costs.

4.8.4 The Income and Expenditure details of the Town Panchayats are given below in Table 4.7.

Table 4.7

(Rs crore)

Sl. No.	Description	2020-21	2021-22
Income			
1	Tax Revenue	203.27	234.00
2	Non Tax Revenue	348.17	267.42
3	Assigned Revenue	166.72	132.33
4	SFC/CFC Grants	1,709.92	1,601.45
5	Capital Receipts	741.58	635.26
	Total	3,169.66	2,870.46

Expenditure

(Rs crore)

Sl. No.	Description	2020-21	2021-22
1	Establishment / Administrative charges	1,770.14	1,361.34
2	Capital Expenditure	2,899.24	1,960.36
	Total Expenditure	4,669.38	3,321.70
	Deficit	1,544.85	597.54

The details of payable charges and outstanding loan as on 31.03.2022 is given in Table 4.8.

Table 4.8

(Rs. crore)

Sl.No.	Particulars	Amount
1	Current consumption Charges	17.90
2	LIC Loan including interest	53.19
	Total	71.09

Need for Training and capacity building activities

Technology is rapidly growing and hence training and capacity building activities are very essential to upgrade the skills of the employees. It helps in grooming employees for the next level. Identifying key development areas and proper training will increase the development manifold. In the present scenario employees such as Assistant Directors, Engineers, Executive Officers, Sanitary Officers, Sanitary Inspectors, Sanitary Supervisors, Bill Collectors, Junior Assistants etc., under the administrative purview of the Commissionerate of Town Panchayats require training in various fields as given below.

- e-administration,
- Online accounting system,
- Geo-tagging of assets,
- Creation of e-records,
- Online monitoring system,

- Creation of knowledge and awareness about Acts, Rules including Tender Transparency Acts/Rules, District Municipalities Act etc.,
- Human rights
- Land matters
- Stress management
- Personality development
- Building plan approval
- Solid waste management Rules 2016
- Disciplinary procedures

At present TamilNadu Institute of Urban Studies and Anna Administrative Staff College is imparting training to the employees in some specific areas. Hence complete analysis of training is being done to impart training to the personnel of town panchayats Department.

5. CHENNAI METROPOLITAN WATER SUPPLY AND SEWERAGE BOARD

Chennai is the fourth-most populous urban agglomeration in India and 36th largest urban area by population in the world. In 1974, Chennai city and the area contiguous to it were notified as Chennai Metropolitan Area (CMA). Subsequently, during the year 1978 Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) was established as a statutory body under an Act of Tamil Nadu (Act 28) with the objective of exclusively attending to the growing needs of and for planned development and appropriate regulation of water supply and sewerage services in the Chennai Metropolitan Area with particular reference to the protection of public health and for all matters connected therewith.

The Board is managed by a full time Managing Director. The constitution of the Board of CMWSSB is as below:

Board of Directors

CHAIRMAN	
1	Minister for Municipal Administration
DIRECTORS	
2	Additional Chief Secretary to Government, Municipal Administration & Water Supply Department
3	Additional Chief Secretary to Government, Finance Department
4	Principal Secretary to Government/ Managing Director, CMWSS Board
5	Principal Secretary to Government/ Commissioner, Greater Chennai Corporation
6	Member Secretary, Chennai Metropolitan Development Authority
7	Managing Director, TWAD Board
8	Executive Director, CMWSS Board
9	Additional Secretary to Government, Finance Director, CMWSS Board
10	Engineering Director, CMWSS Board

Providing safe drinking water and ensuring safe disposal of sewage is mandatory for a healthy environment and good quality of the lives of the people. CMWSSB is providing these services at a reasonable rate to the citizens of Chennai city since its formation. At present, CMWSSB is extending its services directly to 85 lakh people spread over 426 Sq KM in Chennai city through 15 Area offices and 200 Depots. It also caters to the needs of some urban nodes adjacent to the city and industries.

Vision for the future

- Provide functional water tap connection and sewerage facility to every household in Chennai city.
- Address the demand - supply gap through source augmentation and infrastructure strengthening.

- Harness rain water by implementing and monitoring Rain Water Harvesting structures in each and every premise in Chennai city and prepare an Aquifer Management Plan.
- Rejuvenate and restore urban water bodies.
- Recycle / reuse at least 20% of used water.
- Reduce Non Revenue Water (NRW) to less than 15%.
- Provide Under Ground Sewerage Scheme (UGSS) to all added areas and sewer connection to every household in Chennai city.
- Prevent sewage outfalls into the city water ways viz Adyar, Cooum and Buckingham canal and their associated drains through short term interception and diversion

arrangements and long term infrastructure strengthening works.

- Build adequate sewage treatment capacity by constructing new STPs and rehabilitation of the existing STPs.

5.1 Water Supply Management

5.1.1 Sources of Water Supply

Providing safe drinking water in adequate quantity to the people of Chennai city and to meet the water requirements of industries is the prime and consistent endeavor of the Board. The water requirement is met out by drawing water from surface sources, ground water sources, desalination plants and TTRO plants.

(i) Surface Water Sources

Surface water is the main source of water supply to Chennai city. Water is drawn from lakes around Chennai city such as Poondi, Redhills, Cholavaram, Chembarambakkam,

Kannankottai-ThervoyKandigai and Veeranam lake in Cuddalore district besides water received from the Kandaleru reservoir under Krishna Water Supply Project.

(ii) Ground Water Sources

About 5 MLD of ground water is drawn from the aquifers at Tamaraipakkam and Poondi and 20 MLD from own sources of added areas.

(iii) Desalination Plants

There are no perennial water sources for Chennai city. City water sources are dependent on monsoon and whenever monsoon fails, the city faces drought. Further, urbanisation of the surrounding areas and the rapid growth of the industries led to drastic demand for water exerting pressure on scarce water resources. As part of drought proofing measure and taking into account the long term drinking water requirements of the city, Government has gone in for Desalination Plants.

a) Minjur Desalination Plant

Desalination plants play a vital role in fulfilling city's water supply requirements.

The first desalination plant with a capacity of 100 MLD at Minjur on Design, Build, Own, Operate and Transfer Basis (DBOOT) was inaugurated on 31.07.2010 by the then Chief Minister Dr.Kalaignar. This plant caters to the needs of the northern parts of Chennai city viz., Manali, Madhavaram, Ennore, Kathivakkam, Thiruvottiyur, Tondiarpet and Vyasarpadi benefiting a population of about 12 lakh.

b) Nemmeli Desalination Plant

Another desalination plant with 100 MLD capacity has been constructed at Nemmeli at a cost of Rs.805.08 crore with full financial assistance from Government of India. The foundation stone for the construction of this plant was laid on 23.02.2010 by the Hon'ble Chief Minister when he was Deputy Chief Minister

and Minister for Local Administration. The plant became operational from 2013 and water from this plant is being supplied to the southern parts of Chennai viz., Sholinganallur, Neelangarai, Injambakkam, Karapakkam, Semmancherry, Thoraipakkam, Perungudi, Kottivakkam, Palavakkam, Thiruvanmiyur, Velachery, Taramani, Pallipattu, Adyar, Besant Nagar, Nandanam, MRC Nagar, Raja Annamalaipuram and Mylapore benefiting a population of about 10lakh.

(iv) Tertiary Treated Water

In order to cater the needs of industries in and around Chennai city, CMWSS Board have constructed 2 Tertiary Treatment Reverse Osmosis (TTRO) Plants of 45 MLD capacity each at Koyambedu and Kodungaiyur, including pipeline to convey the treated used water to the industries in Irungattukottai, Sriperumbudur and Oragadam and in Manali–Ennore Corridor &

Manali–Minjur Corridor. Both the plants are operational and at present 23 MLD of TTRO water is being supplied from Kodungaiyur and 15 MLD from Koyambedu TTRO plant.

5.1.2 Water Treatment Plants

The existing Water Treatment capacity of the CMWSS Board is 1,494 MLD as detailed in Table 5.1. The century old first Water Treatment Plant located at Kilpauk is functioning till now catering to the drinking water needs of citizens of the city.

Table 5.1

Sl. No.	Location of the Plant	Capacity (MLD)	Year of establishment
1	Kilpauk	270	1914
2	Redhills	300	1996
3	Veeranam	180	2004
4	Chembarambakkam	530	2008
5	Surapet	14	1965 (Taken over from TWAD Board in 2009)
6	Minjur Desalination Plant	100	2010
7	Nemmeli Desalination Plant	100	2013
	Total	1,494	

5.1.3 Water Distribution

Treated water is being distributed from 16 major Water Distribution Stations and 92 subsidiary head works through a pipeline network of 5,247 KM as given in Table 5.2.

Table 5.2

Sl.No.	Water Distribution Station	Quantity supplied (MLD)
1	Patel Nagar	30
2	Anna Poonga	22
3	KannapparThidal	25
4	Vyasarpadi	35
5	Kolathur	25
6	Kilpauk	105
7	Choolaimedu	50
8	Triplicane	15
9	Southern Head works	50
10	ValluvarKottam	20
11	K.K.Nagar	32
12	Ekkattuthangal	10
13	Mylapore	40
14	Nandanam	20
15	Pallipattu	35
16	Velachery	35
17	Direct supply & other small head works	191
	Piped supply in core areas	740
18	Piped supply in added areas	175

Sl.No.	Water Distribution Station	Quantity supplied (MLD)
19	Through lorries (core+added areas)	30
20	Bulk consumers	30
	Total domestic supply	975
21	Industries	
	(i) Treated water	25
	(ii) Secondary treated used water	23
	(iii) TTRO water	38
	Total supply to industries	86
	Total supply	1,061

5.1.4 Quality Assurance

In order to ensure quality water supply, continuous surveillance, assessment and monitoring of the water quality is essential. A separate Quality Assurance Wing is functioning in CMWSS Board to ensure quality water supply. Water samples are collected every day from surface and ground water sources, water treatment plants, desalination plants, water distribution stations, subsidiary head works and city distribution system and tested for physical,

chemical and bacteriological parameters by the Quality Assurance wing of CMWSSB to ensure that water quality is conforming to the IS Standard 10500-2012. Establishment of one more NABL accredited lab for testing water and sewage is in progress and will become operational this year.

5.2. Water Supply Schemes

5.2.1 Schemes under Implementation

(i) 150 MLD capacity Desalination Plant at Nemmeli and laying of product water pipeline from desalination plant to Pallavaram

To meet the water supply demand-supply gap in Chennai city, construction of 150 MLD capacity desalination plant has been taken up at Nemmeli along the East Coast Road at South of Chennai. Government of Tamil Nadu has accorded administrative sanction at a cost of Rs.1,259.38 crore to implement the project

under AMRUT scheme and financial assistance from KfW (German Development Bank).

The construction of the plant and the work of laying product water transmission main from desalination plant to Pallavaram is in progress. The entire work is expected to be completed by April 2023. Water produced from this plant will be supplied to the southern parts of Chennai viz. Velachery, Alandur, St. Thomas Mount, Medavakkam, Kovilambakkam, Nanmangalam, Keelkattalai, Moovarasampettai, Sholinganallur, Ullagaram-Puzhuthivakkam, Madipakkam and IT corridor areas benefiting nearly 9 lakh people.

(ii) Perur Desalination Plant (400 MLD Capacity)

Chennai city's present water demand is 1,400 MLD against which nearly 1060 MLD is supplied leaving a gap of 340 MLD. In order to bridge the gap between fresh water demand and

supply, it is imperative to augment the water supply by identifying additional sources.

Accordingly, Government has accorded administrative sanction for setting up of the desalination plant of 400 MLD capacity at Perur along East Coast Road at a cost of Rs.6,078.40 crore, with financial assistance from JICA, TNIDB & State budgetary support. The project is at tendering stage. Action will be taken to implement the project expeditiously.

On completion of the project, about 23 lakh people living in Chennai city and its surrounding areas like Tambaram, Pallavaram, Madambakkam, Sembakkam, Chitlapakkam, Peerkangaranai, Perungalathur, Thirneermalai, Kundrathur, Kattankulathur and Mangadu will get adequate water supply.

(iii) Water supply schemes under progress in added areas

Water Supply schemes are under progress at a cost of Rs.460.56 crore in the added areas viz Surapet, Kathirvedu, Puthagaram, Puzhal, Edyanchavadi, Sadayankuppam, Kadapakkam, Mathur, Jalladampet, Nerkundram, Madhavaram, Ramapuram, Manapakkam, Okkiyam-Thoraipakkam, Manali, Chinnasekkadu, Madipakkam and Uthandi. Water supply schemes at Edyanchavadi, Sadayankuppam, Kadapakkam, Mathur and Jalladampet will be commissioned during April 2022 and others will be commissioned in the current year.

(iv) Water supply improvement scheme to Valasaravakkam

To ensure 24X7 equitable water supply adopting District Metered Area (DMA) concept, Valasaravakkam water supply improvement scheme is taken up as a pilot project in divisions

149 and 152 at a cost of Rs.69.64 crore. The work is in progress and is expected to be completed by during 2022-23.

5.2.2 Improvement to Existing Water Distribution Network to reduce Wastage

One of the components of the proposed desalination plant of 400 MLD capacity at Perur is improvement to existing water distribution system in core city. Most of the distribution pipes in the core city are more than 30 year old and the Project Management Consultant is preparing the Detailed Project Report for improving the existing water distribution system.

The main components of the DPR are:

- Replacement of old pipes in the Chennai core city
- Providing supplementary pipes in uncovered streets

- Hydraulic reinforcement of the existing distribution network
- Storage reinforcement by constructing underground reservoir and elevated service reservoir
- Establishment of District Metered Areas
- Service connections and water meters

Under Phase I, DPR for Kodambakkam (Area X), Adyar (Area-XIII), have been prepared and DPR for Thiru-vi-ka Nagar (Area VI) is in the final stage. DPR will be prepared for Royapuram(Area V), Tondairpet (Area IV), Anna Nagar(Area VIII) and Teynampet(Area IX) under phase II this year.The improvement works to existing water supply distribution system in entire Chennai core city is expected to be completed by 2025.

5.2.3 Proposed Water Supply Schemes in Added Areas

Revised DPR for water supply schemes for Neelangarai and Semmenchery have been

prepared at a cost of Rs.75 crore and Rs.44 crore respectively. The schemes will be taken up for implementation this year under AMRUT 2.0 and Singara Chennai 2.0. Tenders have been invited for water supply scheme to Neelangarai.

5.2.4 Rainwater Harvesting

Tamil Nadu is a pioneer in implementing rainwater harvesting (RWH) programme in the country. Tamil Nadu is the first state in India to make installation of RWH structures mandatory for both existing and new buildings.

A communication strategy was devised by CMWSSB to create awareness about the importance of rainwater harvesting and encourage consumers to build RWH structures. The campaign is to target various stakeholders by using different communication methods. The campaign is carried out every year before the onset of monsoon by sensitizing the citizens

about rain water harvesting in order to reap maximum benefits during monsoon.

To implement the RWH structures in the buildings while availing new/renewal of water and sewer connections, installation of rainwater harvesting structures has been made mandatory for all buildings irrespective of size and area.

In Chennai city about 10.94 lakh buildings are in existence with nearly 8.86 lakh RWH structures. During the year 2021-22, over 6,120 rainwater harvesting structures were constructed while effecting new/ renewal of water and sewer connections. In order to assess the impact of installation of RWH structures, CMWSSB have installed digital water level recorders (DWLR) in all the 200 Depots so as to monitor the ground water levels periodically. Readings are updated in CMWSSB website so that public can know the water levels. Observations show that there is a significant

improvement in water levels and water quality after every monsoon. Recharge potential from RWH structures is nearly 3 TMC. Also, CMWSSB have installed rain gauges in all the 15 Areas for real time monitoring.

The observations from digital water level recorders (DWLR) in all the 200 Depots reveal that the Chennai city water levels increased from 7.83 Mt to 2.83 Mt (+5.00 Mt) and similarly there is a substantial improvement in the water quality also.

Special drive on Rainwater Harvesting Campaign and Water Safety Week - 2021

The Honorable Chief Minister has launched a campaign on August 31, 2021 to create awareness about rainwater harvesting and water quality and to conduct door to door survey of from August 31, 2021 to September 9, 2021. The campaign was conducted by engaging members of women self help groups as 'Water

Volunteers' in all the 15 Areas to sensitize the public on rainwater harvesting and collected the details about total dissolved solids (TDS) in open / bore wells and taps from each and every household in the entire city.

During the survey of 10.94 lakh buildings, verification was conducted in 7.82 lakh buildings in which it is found that about 74% premises have functional rainwater harvesting structures. In the remaining premises the people were sensitized to rehabilitate the rainwater harvesting structures.

It is further noticed that out of the 7.82 lakh premises, 72% of the premises have borewells, 9.7% have open wells and 2.2% of the premises have both open/bore wells.

City Aquifer Management Plan

Conjunctive use of water – harmonious use of surface water, groundwater and rainwater is essential to ensure availability of water

without disruption and also to optimize utilization of sources. Accordingly, CMWSSB is taking up the aquifer mapping of Chennai city on the following:

- Annual ground water use in the city
- Current and future availability of ground water
- Identification of over exploitation of ground water
- Water conservation and rooftop rainwater harvesting structures

By these measures an urban aquifer management plan will be evolved and water balance plan will be made available for Chennai city. It will facilitate the Board to take concerted effort to conserve the ground water and to have control over exploitation of ground water.

5.3 Sewerage Management

Collection, treatment and safe disposal of the used water in Chennai city is one of the

primary duties of CMWSS Board. The sewerage system in the core city was installed initially in 1917 and has been divided into 5 drainage zones. These zones of macro systems covering the entire city have independent zonal collections, conveyance, treatment and disposal facilities. The sewage generated is collected in 302 sewage pumping stations through an extensive network of 4,093 KM. From these pumping stations, the sewage is conveyed to sewage treatment plants and disposed safely after treatment.

5.3.1 Sewage Treatment Plants

The present installed capacity of sewerage treatment in the city is 776 MLD as detailed in Table 5.3

Table 5.3

Zone	Location of STPs	Existing Treatment Capacity (MLD)
I & II	Kodungaiyur (80+80+110)	270
	Thiruvottiyur	31
III	Koyambedu (34+60+120)	214
IV	Nesapakkam (54+40+23)	117
V	Perungudi (60+54+12)	126
	Sholinganallur - I	18
Total		776

5.3.2 Operation and Maintenance of Sewerage System

In order to eradicate manual scavenging, Board has mechanized the operation and maintenance of the sewerage system. The obstructions in the pipeline are removed by jet rodding machines and the solid waste in the maintenance holes are removed by super sucker machines and desilting machines. At present 500 machines are being deployed to maintain the sewerage system as given in Table 5.4.

Table 5.4

Sl.No	Machinery Details	Numbers
1	Desilting Machines	282
2	Jet Rodding Machines (2KL, 6KL & 9KL)	129
3	Jetting cum Suction Machines	32
4	Super Sucker Machines	57
Total		500

To have hassle free maintenance, procurement of additional machines and equipments are done periodically based on requirement.

5.4. Sewerage Schemes

5.4.1 Schemes under implementation in added areas

Providing underground sewerage schemes in the following 8 added areas namely Nerkundram, Pallikaranai, Ramapuram, Manali, Chinnasekkadu, Manapakkam, Karambakkam and Mugalivakkam are under progress at a cost of Rs.525.77 crore.

5.4.2 Construction of new STPs and Improvements to existing STPs

The Central Pollution Control Board has prescribed revised discharge norms for discharging secondary treated effluent from sewage treatment plants vide Ministry of Environment and Forest notification dated 24.11.2015. CMWSSB has taken up construction of 4 new STPs viz. Kodungaiyur - I, Kodungaiyur- II, Perungudi and Nesapakkam and improvement works in existing STPs at a cost of Rs.811.40 crore to enhance treatment capacity and to achieve new disposal standards as given in Table 5.5.

Table 5.5

Construction of new STPs		Improvement to existing STPs	
Location	Capacity (MLD)	Location	Capacity (MLD)
Kodungaiyur Zone I	120	Kodungaiyur	110
Kodungaiyur Zone II	120	Koyambedu (120+60)	180
Nesapakkam	50	Nesapakkam(40+54)	94

Perungudi	60	Perungudi (60+54)	114
Total	350		498

5.4.3 Construction of additional 54 MLD Sewage Treatment Plant at Sholinganallur

Sewage treatment plant of 54 MLD capacity at a cost of Rs.72.54 crore at Sholinganallur with sequential batch reactor (SBR) technology along with provision for power generation in the 36 MLD unit to treat the sewage generated from added areas located along East Coast Road and Old Mahabalipuram Road at the southern parts of Chennai is under construction and this will be commissioned this year.

5.4.4 Modular Sewage Treatment Plants

As a part of CRRT works, Modular STPs are under construction at Choolaimedu (1.2 MLD), Thadandar Nagar (4 MLD) and Kotturpuram (0.6 MLD) to prevent sewage outfalls into the waterways. The installation of 1 MLD modular STP at Chetpet has been completed and is under trial commissioning.

5.4.5 Proposed Sewerage schemes in added areas

DPRs for providing UGSS for the 17 added areas viz Injambakkam, Kottivakkam, Palavakkam, Neelangarai, Okkiyam-Thoraipakkam, Jalladampettai, Nandhambakkam, Madipakkam, Puzhal, Mathur, Theeyambakkam, Vadaperumbakkam, Semmencherry, Uthandi, Edayanchavadi, Sadayankuppam & Kadapakkam and left out streets in Madhavaram have been revised and the DPR cost is Rs.2,810 crore. Of

the above, administrative approval has been accorded for Madipakkam UGSS at a cost of Rs.256.90 crore and the tenders received are under evaluation. Further, for Okkiyam-Thoraipakkam the State level High Power Steering Committee (SHPS) have approved the scheme at an estimated cost of Rs.256.91 crore under AMRUT 2.0. Further action is in process for obtaining administrative sanction. For the remaining areas, detailed project reports are under appraisal by State Nodal Agency for AMRUT.

5.4.6 Projects under Chennai Rivers Restoration Trust

Chennai Rivers Restoration Trust (CRRT) has taken up the eco restoration of the Chennai city waterways on behalf of Government of Tamil Nadu. CMWSSB along with CRRT has formulated mitigation proposals for prevention of sewage outfalls into Cooum and Adyar rivers and

Buckingham Canal. Mitigation measures for Cooum and Adyar rivers at a cost of Rs.186.19 crore and Rs.123.19 crore respectively have been taken up by CMWSSB and work is in progress.

The Government has given top priority for restoration of Chennai city waterways. Accordingly, CMWSSB has taken up the proposal of plugging of sewage outfalls in Adyar and Cooum rivers, associated drains of Cooum, Adyar, Buckingham Canal and its drains. The proposal includes interception and diversion arrangements, strengthening / refurbishment of existing sewerage infrastructure.

The Government has accorded in-principle approval for a total project cost of Rs.2,371 crore to carry out the mitigation proposals and have also accorded administrative sanction for Rs.1,001 crore under Phase-I to carry out the works. Work orders were issued for 36 works for a value of Rs.364.80 crore. Out of 36 works,

6 works have been completed and balance works are in progress.

5.5 Recycle and Reuse

Chennai is pioneer in recycling and reuse of used water. 10% of used water should be recycled and reused as per the norms of Central Public Health and Environmental Engineering Organisation (CPHEEO). As a part of water conservation measures, secondary treated sewage (23 MLD) is being supplied to the industries situated in Manali area. The secondary treated sewage is further treated by the industries through tertiary treatment and reverse osmosis (TTRO) and product water is used for industrial purposes. CMWSSB has now set up two TTRO plants for producing industrial grade water.

5.5.1 Tertiary Treatment Reverse Osmosis Plants

Two tertiary treatment reverse osmosis (TTRO) plants of 45 MLD capacity each at

Koyambedu and Kodungaiyur are operational and supplying water to industries. This ensures assured and sustainable water supply to industries and reduced the fresh water supply to the industries. Chennai is the pioneer city in India to recycle and reuse of used water.

5.5.2 Tertiary Treatment Ultra Filtration Plants

In order to ensure sustainability, CMWSSB has taken up construction of three tertiary treatment ultra filtration (TTUF) plants of 10 MLD capacity each at Perungudi, Nesapakkam and Langs Garden. The product water from Perungudi, Nesapakkam will be used to supplement the storage in Porur and Perungudi lakes and the product water from Langs Garden plant will be supplied to Southern Railways for wagon cleaning and Greater Chennai Corporation.

Preparation of DPR for using 260 MLD of recycled used water for recharging of lakes in

and around Chennai has been taken up in association with Indian Institute of Technology (IIT) and Department of Science and Technology (DST), Government of India. The detailed project reports have been prepared for Perungudi and Nesapakkam in first phase. The detailed project report aims at rejuvenating lakes which have lost their catchment due to urbanisation and also improving ground water.

5.6 Capacity Building

CMWSS Board has established its training centre in 1982 and imparts various in-house training programmes, CPHEEO sponsored training programmes and special training programmes for the Board staff as well as staff from other states. Every year around 42 course related to the day to day activities of Board and five Refresher Courses sponsored by CPHEEO are being conducted. Apart from conducting regular in-house and CPHEEO sponsored

refresher courses, many special training programmes including exclusive tailor made training programme for other Government organizations (on payment of requisite course fees) are also being conducted.

Further, as part of the initiatives taken by the Board to support entrepreneurs / start-ups, the training centre has conducted training programme in co-ordination with Entrepreneurship Development and Innovation Institute - Tamil Nadu (EDII-TN).

It has been proposed to bring all activities of training centre under End to End IT solution to introduce web based e-learning courses.

5.7 Use of Technology

5.7.1 Geographical Information System (GIS)

The work of preparation of assets and utility maps using geospatial techniques for

CMWSSB under Asian Development Bank (ADB) assisted Tamil Nadu Urban Flagship Investment Programme (TNUFIP) is being carried out through a consultant engaged by Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL).

Under this project all the underground and above ground assets and utilities are being mapped in a GIS platform for optimum management and maintenance of assets and better service delivery to the citizens. This project also covers capacity building program to the CMWSSB Engineers for managing the assets using GIS platform in future.

5.7.2 Monitoring of Water Tankers using Global Positioning System (GPS)

Water is being supplied through hired water tankers for the streets without water mains and streets with inadequate pressure either directly or by filling the HDPE tanks

erected in these localities regularly. Nearly 30 MLD of water is supplied through 3,800 lorry trips. These tankers are being monitored by GPS tracking system to have continuous vigil, thus ensuring the timely delivery of water to the right people.

5.7.3 Online Services

Consumers can avail the following online services through the Board's website <https://chennaietrowater.tn.gov.in>.

1. Public grievances and redressal system
2. Payment of water tax and charges
3. New water/sewer connection for residential premises (G+2 floor)
4. New water connection for industries
5. Azhaithal Inaippu (sewer connection – G+2 floor)
6. Booking water tanker

7. Booking for septic tank clearance
8. Provision for ground water license

5.7.4 IT Initiatives

CMWSSB in coordination with TNeGA (Tamil Nadu e-Governance Agency) is in the process of developing an End-to-End IT implementation and new ERP (Enterprise Resource Planning) solution at a cost of Rs.3.49 crore to cover all the activities/services of CMWSSB.

5.7.5 Implementation of E-tendering in CMWSSB

As a part of Chennai City Partnership Programme, in order to ensure transparency in public procurement, the Board has decided to go for e-tendering from 01.01.2022. The process of issuing notice inviting tender (NIT), downloading of bid documents, submission and its allied

works are done through e-procurement portal www.tntenders.gov.in.

5.8 Monitoring Consumers Grievances

5.8.1 24x7 Grievances' Redressal Cell

A 24x7 grievances' redressal cell is functioning at CMWSSB Head Office to receive, register and monitor the grievances of the consumers. Consumers can register their complaints / grievances either in person or by dialing 044-45674567(20 lines). The registered complaints are immediately transferred online and also by SMS to the respective Depot Engineers to rectify the defects. Accordingly, rectification of the defects is being done immediately.

5.8.2 'Metro Water' App

The CMWSSB has introduced a mobile app 'Metro Water' enabling the public/consumers to register their water / sewerage related

complaints to the concerned officers at any time, from any place through their smart mobile phones. 'Metro Water' app can be downloaded from Google Play store.

Further, public can register their details such as name, mobile number and e-mail address once and can send images / photographs related to water complaints, if any, through their smart mobile phones and inform the status. Consumers are requested to provide the details while registering their complaints. After that, an exclusive complaint number is generated and sent to the public through SMS. Status of the complaints can also be viewed through this app.

5.8.3 Open House Meeting

To improve the service delivery to the public/ consumer of Chennai city, the Board conducts open house meetings in all the Area

Offices between 10.00 A.M. and 1.00 P.M. on the 2nd Saturday of every month. The senior officers at the level of Superintending Engineers of the Board preside over these meetings. The complaints/ grievances/ suggestions received during these meetings are attended immediately.

5.9 Employee Welfare

The Board considers its employees as the major asset and therefore the Board gives due importance for their welfare.

In order to improve the personal hygiene of field workers various welfare measures such as provision of uniform cloth with stitching charges, oil, bathing soap, rain coats, shoes and safety gears are provided to the employees periodically by the Board.

The following welfare measures are also provided to the employees for efficient service delivered to the consumers.

- A dispensary with a full time Doctor and Pharmacist and Lab Technical Assistant with first aid equipments.
- Special medical camps for eye, ear, lungs and heart are being conducted from time to time for the benefit of the staff and employees.
- As per the Government rules, all the differently abled employees in the Board are provided with conveyance allowance.
- Medical reimbursement facility is being provided to the employees of the Board.
- Retirement benefits are paid to the employees on the date of retirement.

- Death benefits are settled immediately to the legal heirs of the deceased employee after receipt of the claims.
- All staff involved in frontline works are provided with all essential safety equipments.

5.10 Financial Position

The total revenue expenditure as per the Budget Estimate for the year 2021-22 is Rs.1,365 crore whereas the total income is Rs.1,081 crore.

The details of income, expenditure, surplus/deficit and cumulative deficit for the Year 2019-20 to 2021-22 are given in Table 5.6.

Table 5.6

(Rs. crore)

Sl. No.	Particulars	RE Approved	RE Approved	BE Approved	RE proposed
		2019-20	2020-21	2021-22	2021-22
I.	<u>Revenue Income</u>				
1	Sale of Water	385	355	396	361
2	Water & Sewerage Tax	192	227	247	233
3	Sale of TTRO Water/Sewerage disposal charges	89	131	176	148
4	Other Income	53	49	49	66
5	Grants	372	224	213	237
	Total	1,091	986	1,081	1,045
II.	<u>Revenue Expenditure</u>				
1	Salary & Pension	282	268	288	241
2	O&M	322	286	268	321
3	Other Expenses (Power,Desal,R&M)	578	498	528	532
4	Interest	96	87	81	82
5	Depreciation	200	200	200	200
	Total	1,478	1,339	1,365	1,376
	Surplus/ Deficit	(387)	(353)	(283)	(331)
	Cumulative Deficit	(2,229)	(2,582)	(2,865)	(3,196)

The details of amount payable, receivable and outstanding loan as on 31.01.2022 are given in Table 5.7.

Table 5.7

(Rs. in crore)

Sl.No.	Particulars	Amount as on 31.01.2022 (Tentative)
I.	Payable	
1	CMWSSB – O&M Contractors	25
2	Refundable Deposits	170
3	Contractors Payment (Scheme Funds)	62
	Total	257
II	Receivable (Water and Sewer Taxes and Charges)	
1	Local Bodies	29
2	Government Departments	74
5	Consumers	345
	Total	448
III	Outstanding of Loan	
	a) Principal (including Govt Rs.1,522 cr)	1,846
	b) Interest (Govt.due 216 crore; TUFIDCO Rs.7 crore)	223
	Total	2,069

The total revenue expenditure as per the Budget Estimate for the year 2021-22 is Rs.1,365 crore. The total income of the Board as per the Budget Estimate is Rs.1,081 crore. Of this, the income from water supply and sewerage tax is Rs.247 crore, water and sewerage charges is Rs.572 crore and other

income is Rs.49 crore. For purchase of desalinated water from Minjur desalination plant and other purposes, the Government of Tamil Nadu has provided Rs.213 crore (B.E. 2021-22) to the Board.

6. TAMIL NADU WATER SUPPLY AND DRAINAGE BOARD

Tamil Nadu Water Supply and Drainage Board (TWAD Board) was formed through an Act of the State Legislative Assembly on 14th April, 1971 as a statutory body exclusively to implement, maintain Combined Water Supply Schemes (CWSS) to the rural and urban local bodies and to implement Under Ground Sewerage Schemes (UGSS) to urban local bodies. TWAD Board has been performing above functions over the past five decades effectively.

TWAD Board Directors

CHAIRMAN	
1	Additional Chief Secretary to Government, Municipal Administration and Water Supply Department
DIRECTORS	
2	Additional Chief Secretary to Govt., Public Works Department
3	Principal Secretary to Govt., Health and Family Welfare Department
4	Principal Secretary to Govt., Rural Development and Panchayat Raj Department

5	Managing Director, Chennai Metropolitan Water Supply and Sewerage Board
6	Commissioner of Town Panchayats
7	Managing Director, Tamil Nadu Water Supply and Drainage Board
8	Additional Secretary to Government, Finance Department
9	Director of Municipal Administration
10	Director of Rural Development and Panchayat Raj
11	Joint Managing Director, Tamil Nadu Water Supply and Drainage Board
12	Finance Director, Tamil Nadu Water Supply and Drainage Board
13	Engineering Director, Tamil Nadu Water Supply and Drainage Board

TWAD Board has Regional Offices at Vellore, Thanjavur, Coimbatore and Madurai, headed by the Chief Engineers. Under these Regions, 17 Circle Offices, 85 Divisional Offices and 259 Sub-Divisional Offices are functioning for the design and implementation of Combined Water Supply Schemes (CWSS), Urban stand-alone schemes and Under Ground Sewerage Schemes (UGSS), besides maintenance of CWSS.

6.1 Vision of TWAD Board

- Design and implementation of combined water supply schemes and stand-alone water supply schemes to provide protected water supply to both rural and urban areas of Tamil Nadu.
- Operation and maintenance of combined water supply schemes covering more than one local body to provide adequate water to the people in rural and urban local bodies.
- To ensure sustainability of water supply schemes by strengthening of sources through water recharge structures.

6.2 Activities of TWAD Board

- Planning and implementation of water supply schemes to rural and urban areas in Tamil Nadu.
- Planning and implementation of underground sewerage schemes in urban areas.
- Operation and maintenance of combined water supply schemes.
- Testing and monitoring the quality of water supplied.
- Creation of recharge structures for sustainability of drinking water sources.
- Research and training activities.

6.3 Combined Water Supply Schemes

Consequent to the G.O. (Ms). No.84, Municipal Administration and Water Supply Department, dated: 10.03.1994, combined water supply schemes with more than one local body

beneficiary are being maintained by TWAD Board.

At present 554 combined water supply schemes, covering 11 municipal corporations, 72 municipalities, 349 town panchayats and 53,191 rural habitations benefiting a population of 4.53 crore are being maintained by TWAD Board through which an average of 2,091million litres of water is being supplied daily.

The details are given below in Table 6.1

Table 6.1

Sl. No.	Beneficiaries	No. of Beneficiaries	Earmarked Quantity (MLD)	Average Supplied Quantity (MLD)
1	Municipal corporations	11	290.00	263.31
2	Municipalities	72	302.48	277.10
3	Town panchayats	349	354.17	324.72
4	Rural habitations	53,191	1,279.03	1,169.76

Sl. No.	Beneficiaries	No. of Beneficiaries	Earmarked Quantity (MLD)	Average Supplied Quantity (MLD)
5	Industries / institutions /commercial organisations	567	72.00	56.00
	Total	54,190	2,297.68	2,091 (91%)

Based on the recommendations of the Fifth State Finance Commission, fund allotment was made under Capital Grant Fund (CGF) and Gap Filling Fund (GFF) for carrying out rejuvenation works in the Combined Water Supply Schemes, which were completed over 15 year back so as to make them functional to their original capacity. Under this scheme, 150 schemes have been taken up for rejuvenation from 2017-18 to 2021-22 at an estimated cost of Rs.354.39 crore, of which 124 works are complete and the remaining 26 works are under progress.

In order to temporarily restore 72 CWSSs, affected due to the North East monsoon rains, in 17 Districts, Rs. 4 crore was sanctioned under State Disaster Relief Fund (SDRF) and water supply was restored after completing the works.

Water supply schemes are implemented with financial assistance under Minimum Needs Programme (MNP), National Bank for Agriculture and Rural Development (NABARD), Capital Grant Fund (CGF), World Bank assisted Tamil Nadu Sustainable Urban Development Project (TNSUDP), KfW(German Development Bank) assisted Sustainable Municipal Infrastructure Financing – Tamil Nadu (SMIF-TN-II-2), Housing and Urban Development Corporation (HUDCO) and Asian Development Bank (ADB).

6.3.1 Water Supply Schemes completed in the year 2021-22

During 2021-22, 10 Water Supply Schemes covering Vellore Corporation, Namakkal

Municipality, 4 Town Panchayats and 1,041 rural habitations in Tiruchirapalli, Vellore, Krishnagiri, Karur, Coimbatore, Tiruppur and Namakkal districts benefiting a total population of 15.57 lakh have been completed and inaugurated by Hon'ble Chief Minister at a cost of Rs.1,136.33 crore for providing protected water supply of 59.58 MLD.

The details of the schemes are given below in Table 6.2

Table 6.2

Sl. No.	District	Name of the Scheme	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)
1.	Tiruchirapalli	CWSS to 293 rural habitations in Musiri, Thathaiyangarpettai, Thuraiyur and Uppiliyapuram unions.	140.22	1.59	9.33
2.	Vellore	Improvement of water supply distribution system to Vellore corporation	275.11	7.20	Distribution system only

Sl. No.	District	Name of the Scheme	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)
3.	Krishnagiri	CWSS to Uthangarai town panchayat and 50 other rural habitations in Uthangarai union	28.24	0.52	1.98
4.	Krishnagiri	CWSS to Nagondapalli and 27 other habitations in Hosur union	8.10	0.17	0.45
5.	Krishnagiri	CWSS to Rayakottai and 28 habitations in Kelamangalam union	8.46	0.21	0.56
6.	Karur	CWSS to 274 rural habitations in Thanthoni union	81.41	0.73	4.50
7.	Coimbatore and Tiruppur	CWSS to Annur, Mooperipalayam and Avinashi town panchayats and bulk provision to 155 rural habitations in Palladam and Tiruppur unions.	241.00	0.94	13.00
8.	Tiruppur	CWSS to 155 rural habitations in Palladam and Tiruppur unions	99.24	1.92	8.07

Sl. No.	District	Name of the Scheme	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)
9.	Coimbatore	CWSS to 212 rural habitations in Pollachi (South), Pollachi (North) and Kinathukadavu unions	69.31	0.70	4.03
10	Namakkal	WSIS to Namakkal municipality.	185.24	1.59	17.66
		Total	1,136.33	15.57	59.58

6.3.2 Ongoing Water Supply Schemes

With an objective to provide functional household tap connections (FHTCs) to all the households in a phased manner, water supply schemes are being implemented to enhance water supply from 40 litres per capita per day (LPCD) to 55 LPCD in rural areas and 135 LPCD in urban areas.

At present **31 combined water supply schemes** covering 12 municipalities, 48 town panchayats and 11,171 rural habitations in

Sivagangai, Tenkasi, Virudhunagar, Kanyakumari, Theni, Cuddalore, Salem, Namakkal, Erode, Tiruppur, Coimbatore, Karur, Tiruchirapalli, Thanjavur, Nagapattinam, Perambalur, Tirunelveli, Tirupathur, and Krishnagiri districts, at an estimated cost of Rs.7,095.31 crore with a designed capacity of 542.02 MLD to benefit 94.12 lakh population, are under various stages of implementation with different sources of funding.

Out of the above 31 CWSS mentioned, 17 schemes covering 4 municipalities, 43 town panchayats and 8,428 rural habitations in 15 districts are at various stages of implementation at an estimated cost of Rs.4,641.94 crore under NABARD and MNP funding. The total designed capacity of these schemes is 365.73 MLD, which will benefit a population of 69.78 lakh.

The details of these schemes are given below in Table 6.3

Table 6.3

Sl. No.	District	Name of the Scheme	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)
1.	Sivagangai	CWSS to 8 town panchayats and 2,452 rural habitations in 11 unions with bulk provision to 3 municipalities.	1,752.73	16.11	86.42
2.	Kanyakumari	CWSS to Eraniel town panchayat and 319 rural habitations and improvements to Padmanabapuram CWSS and Kattathurai CWSS	174.00	3.44	35.12
3.	Theni	CWSS to 250 rural habitations in Kadamalaikundu - Myladumparai, Andipatti and Theni unions.	162.43	1.78	10.70
4.	Cuddalore	CWSS to Thittakudi, Pennadam, Mangalampettai, Vadalur, Kurinjipadi and Gangaikondan town panchayats and 625 rural habitations in Mangalore, Nallur and Vridhachalam unions.	479.00	7.92	39.43

Sl. No.	District	Name of the Scheme	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)
5.	Salem	CWSS to Ilampillai, Attayampatti, Panamarathupatti, Mallur and Edanganasalai town panchayats, 778 rural habitations in Veerapandy, Panamarathupatti and Salem unions.	652.84	6.03	53.03
6.	Namakkal and Salem	CWSS to Sankari, Alampalayam, Padaveedu town panchayats and 669 rural habitations in Pallipalayam and Tiruchengode unions.	399.46	6.61	32.65
7.	Erode and Tiruppur	CWSS to Perundurai and 7 other town panchayats including 547 rural habitations.	224.00	5.47	25.39
8.	Coimbatore and Tiruppur	Augmentation of water supply to 708 habitations in Annur, Avinashi and Suler unions with bulk provision to 165 rural habitations in Tiruppur union.	362.20	6.43	36.15
9.	Tiruchirapalli	CWSS to 138 rural habitations in Thottiyam union.	49.95	0.64	3.57

Sl. No.	District	Name of the Scheme	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)
10	Thanjavur	CWSS to 134 rural habitations in Kumbakonam union.	91.13	0.97	5.45
11	Naga pattinam	Source augmentation to existing CWSS to 893 habitations.	42.46	7.03	14.93
12	Perambalur	CWSS to 73 rural habitations in Veppur union	22.84	0.87	4.05
13	Krishnagiri	CWSS to Sigaralapalli and 143 rural habitations in Bargur union	31.82	0.41	1.46
14	Krishnagiri	CWSS to Velagalahalli and 39 other rural habitations in Krishnagiri union	9.90	0.12	0.41
15	Krishnagiri	CWSS to Ennegollu and 122 other rural habitations in Veppanapalli union	31.00	0.54	2.44
16	Tiruppur	CWSS to 5 town panchayats and 318 rural habitations in Madathukkulam and Udumalpet unions	85.75	4.07	8.83
17	Tiruppur	CWSS to 165 rural habitations in 10 village panchayats of Tiruppur union	70.43	1.34	5.70
		Total	4,641.94	69.78	365.73

Under other funding, 5 CWSS covering 8 municipalities, 2 town panchayats and 368 rural habitations in Tenkasi, Virudhunagar, Tirunelveli and Cuddalore districts are at various stages of implementation at an estimated cost of Rs.1,076.07 crore. The total designed capacity of these schemes is 106.57 MLD, which will benefit 12.73 lakh population.

The details of these schemes are given below in Table 6.4

Table 6.4

Sl. No.	District	Name of the Scheme	Source of Funding	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)
1.	Tenkasi and Virudhunagar	CWSS to Sankarankoil, Puliyanakudi municipalities, Thiruvenkadam town panchayat in Tenkasi District and Rajapalayam, Sivakasi,	TNSUDP	543.20	6.20	61.98

Sl. No.	District	Name of the Scheme	Source of Funding	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)
		Thiruthangal municipalities in Virudhunagar district				
2.	Virudhunagar	CWSS to Aruppukottai, Sattur and Virudhunagar municipalities	HUDCO	444.71	2.60	26.94
3.	Tirunelveli	CWSS to Keelapavoor town panchayat and 163 rural habitations in Pappakudi Kadayam and Keelapavoor unions	NRDWP	46.55	2.00	9.27
4.	Tirunelveli	CWSS to 170 rural habitations in Manur and Palayamkottai unions	NRDWP	32.40	1.45	6.18
5.	Cuddalore	CWSS to 35 rural habitations in Panruti and Annagramam unions	DMFT	9.21	0.48	2.20
		Total		1,076.07	12.73	106.57

6.3.2.1 Jal Jeevan Mission (JJM)

The objective of the Jal Jeevan Mission is to provide functional household tap connections (FHTCs) to every rural household to supply adequate quantity of drinking water with prescribed quality by March 2024.

Under JJM, 9 CWSS covering 2,375 rural habitations and 3 hamlets of 3 town panchayats (with Capital Grant Fund) in Thanjavur, Tenkasi, Tirunelveli, Tiruppathur, Karur, Erode and Salem districts are under various stages of implementation at an estimated cost of Rs.1,377.30crore. These schemes are designed to supply 69.72MLD of water by providing 1,28,883 FHTCs, which will benefit 11.62 lakh population.

The details of the schemes are given below in Table 6.5

Table 6.5

Sl. No.	District	Name of the Scheme	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)	FHTCs (Nos.)
1.	Thanjavur	CWSS to 67 rural habitations in Kumbakonam, Thirupanandal and Thiruvaimarudur unions and 2 hamlets in Veppathur and Thiruvaimarudur town panchayats	117.09	1.02	5.97	11,861
2.	Tenkasi and Tirunelveli	CWSS to 48 rural habitations in Alangulam and Pappakudiunions in Tenkasi district and 1 hamlet in Mukkudal town panchayat	50.50	0.56	3.54	5,053
3.	Tiruppathur	CWSS to 759 rural habitations in Tiruppathur, Jolarpet, Natrampalli, Kandhili unions	182.09	2.91	13.99	31,594
4.	Karur	CWSS to 756 rural habitations in K.Paramathi and Aravakurichi unions	440.63	2.09	16.29	32,011
5.	Erode	CWSS to 442 rural habitations of Modakurichi union	412.12	3.16	20.50	25,092

Sl. No.	District	Name of the Scheme	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)	FHTCs (Nos.)
6.	Erode	CWSS to 144 rural habitations of Kodumudiunion	87.68	0.50	3.13	7,709
7.	Erode	CWSS to 96 rural habitations in Gobichetipalayamand Nambiyurunions	56.94	0.64	2.31	9,496
8.	Erode	WSS to 55 habitations in Kavundapadi village panchayat of Bhavani union	17.55	0.59	3.00	4,299
9.	Salem	WSS to 8 habitations in Yercaud panchayat of Yercaudunion	12.70	0.15	0.99	1,768
		Total	1,377.30	11.62	69.72	1,28,883

6.3.3 New Combined Water Supply Schemes

Government accorded administrative sanction for 6 CWSS covering 1 municipality, 8 town panchayats and 1,442 rural habitations in Thiruvarur, Tiruchirapalli, Mayiladuthurai, Ranipet, Tirunelveli and Namakkal districts at an

estimated cost of Rs.2,327.53 crore under JJM and AMRUT 2.0. These schemes will be implemented during the year 2022-23 so as to provide 136.34 MLD of water through 92,420 FHTCs to benefit a population of 11.28 lakh.

The details of the schemes are given below in Table 6.6

Table 6.6

Sl. No.	District	Name of the Scheme	Estimated cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)	FHTCs (Nos.)
1	Thiruvarur	Combined water supply scheme to 667 rural habitations in Thiruvarur, Nannilam, Koradachery, Kottur, Mannargudi and Thiruthurai unions	1,127.20	3.97	32.55	43,804

Sl. No.	District	Name of the Scheme	Estimated cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)	FHTCs (Nos.)
2	Tiruchirappalli	Combined water supply scheme to 109 rural habitations in Lalgudi and Pullambadi unions	248.59	1.44	11.26	15,454
3	Mayiladuthurai	Combined water supply scheme to 32 rural habitations in Sirkazhi union	36.14	0.15	1.46	2,849
4	Ranipet	Combined water supply scheme to Sembedu and 88 other rural habitations in Kaveripakkam, Sholingur and Arakkonam unions	41.98	0.55	2.98	235
5	Tirunelveli	Combined water supply scheme to Gangaikondan and 21 other rural habitations in Manur union	19.25	0.25	2.05	1,719

Sl. No.	District	Name of the Scheme	Estimated cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)	FHTCs (Nos.)
6	Namakkal	Combined water supply scheme to Rasipuram municipality, 8 town panchayats and 523 rural habitations in Rasipuram, Vennandur, Namagiripettai and Puduchatram unions with bulk provision to 547 rural habitations in Elachi palayam, Malla samudram and Paramathi unions.	854.37	4.92	86.04	28,359
		Total	2,327.53	11.28	136.34	92,420

6.3.4 Combined Water Supply Schemes taken up for preparation of Detailed Project Reports (DPR) during the year 2021-22

During the year 2021-22, detailed project reports for 4 combined water supply schemes covering 1 municipality, 2 town panchayats and 539 rural habitations in Tiruchirapalli, Kanyakumari, Dindigul and Tiruppur districts at an estimated cost of Rs.962.62 crore to benefit a population of 5.65 lakh with a supply of 39.18 MLD, were approved in the State Level Scheme Sanctioning Committee of Jal Jeevan Mission for funding for rural component. Fund allotment under AMRUT 2.0 for the urban component is in process.

Detailed project reports have been prepared for 7 combined water supply schemes covering 5 municipalities, 17 town panchayats and 4,017 rural habitations in Tiruchirapalli, Chengalpattu, Tiruvannamalai, Tirunelveli and

Thoothukudi districts at an estimated cost of Rs.9,484.93 crore to benefit a population of 31.64 lakh with a supply of 367.40 MLD. The proposal for according administrative sanction for the above schemes is under process.

Apart from the above, the DPRs are under preparation for 15 combined water supply schemes covering 1 municipal corporation, 15 municipalities, 42 town panchayats and 15,934 rural habitations in Tiruchirapalli, Nagapattinam, Thanjavur, Ariyalur, Cuddalore, Kallakurichi, Villupuram, Dharmapuri, Krishnagiri, Ramanathapuram, Madurai, Thoothukudi, Tenkasi, Namakkal and Erode districts to benefit a population of 126 lakh.

6.4 Stand-alone Water Supply Schemes

TWAD Board implements stand-alone water supply schemes for municipal corporations, municipalities and town

panchayats as a project implementation agency. On completion, these schemes are handed over to the respective urban local bodies for operation and maintenance.

6.4.1 Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

Under AMRUT, 9 water supply schemes were taken up for implementation of which, 5 schemes have been completed and 4 schemes for Rajapalayam municipality, Nagercoil corporation, 8 added areas of Coimbatore corporation and water supply improvement scheme (WSIS) to Coimbatore corporation (Pillur-III) are at various stages of implementation at an estimated cost of Rs.1,756.48 crore. These schemes are designed to supply 388.64MLD of water which will benefit a population of 48.06 lakh.

The details of the schemes are given below in Table 6.7

Table 6.7

Sl. No.	District	Name of the Scheme	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)
1.	Virudhunagar	Water supply improvement scheme to Rajapalayam municipality	192.83	2.15	20.91
2.	Kanyakumari	Water supply improvement scheme to Nagercoil corporation	296.08	3.90	49.56
3.	Coimbatore	Water supply improvement scheme to 8 added areas of Coimbatore corporation	487.71	9.22	Distribution system only
4.	Coimbatore	Water supply improvement scheme to expanded Coimbatore corporation including newly merged areas with River	779.86	32.79	318.17

Sl. No.	District	Name of the Scheme	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)
		Bhavani as source - Pillur - III			
		Total	1,756.48	48.06	388.64

6.4.2 Externally Aided Projects (KfW-German Development Bank)

Under externally aided projects, **2 water supply improvement schemes** (WSIS) for Tirunelveli corporation and Bodinayakanur municipality are at various stages of implementation at an estimated cost of Rs.306.15 crore to supply 65.82 MLD of water to benefit a population of 7.88 lakh.

The details of the schemes are given below in Table 6.8

Table 6.8

Sl. No	District	Name of the Scheme	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)
1.	Tirunelveli	Water supply improvement scheme to Tirunelveli corporation	230.00	6.88	50.00
2.	Theni	Water supply improvement scheme to Bodinayakanur municipality	76.15	1.00	15.82
		Total	306.15	7.88	65.82

6.4.3 Other Funding Schemes

Under other sources of funding, 8 water supply improvement schemes for 5 municipalities and 3 town panchayats in Theni, Madurai, Kanyakumari, Dindigul, Thiruvallur and Erode districts are at various stages of implementation at an estimated cost of Rs. 284.90 crore which on completion will supply 46.11 MLD of water to benefit a population of 4.24 lakh.

The details of the schemes are given below in Table 6.9

Table 6.9

Sl. No	District	Name of the Scheme	Source of Funding	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Water Supply (MLD)
1.	Theni	Dedicated water supply scheme to Bodinayakanur municipality	CGF	30.00	1.00	10.00
2.	Theni	WSIS to Thenkarai town panchayat	NABARD	9.54	0.28	2.00
3.	Madurai	WSIS to Usilampatti municipality	IUDM	73.03	0.64	9.98
4.	Madurai	WSIS to Anaiyur municipality (attached with Madurai corporation)	MNP	8.97	0.72	5.40
5.	Kanyakumari	WSIS to Kuzhithurai municipality	IUDM	30.94	0.31	4.83
6.	Dindigul	WSIS to Balasamudram town panchayat	NABARD	9.62	0.18	1.92
7.	Thiruvallur	WSIS to Tiruthani municipality	IUDM	109.68	0.85	9.44

8.	Erode	WSIS to Sivagiri town panchayat	IUDM	13.12	0.26	2.54
		Total		284.90	4.24	46.11

6.5 Under Ground Sewerage Schemes

TWAD Board implements underground sewerage schemes in selected towns recommended by the Director of Municipal Administration and the Commissioner of Town Panchayats.

These schemes are implemented by TWAD Board with financial assistance from Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Integrated Urban Development Mission (IUDM), Capital Grant Fund (CGF), KfW (German Development Bank) assisted Sustainable Municipal Infrastructure Financing-Tamil Nadu (SMIF-TN-II-2), Housing and Urban Development Corporation (HUDCO), Tamil Nadu Urban Development Project-III (TNUDP-III), Tamil Nadu Urban Development Fund (TNUDF),

Asian Development Bank (ADB) and Smart Cities Mission.

6.5.1 Under Ground Sewerage Schemes completed in the year 2021-22

During 2021-22, five UGSS covering 1 corporation, 4 town panchayats in Thoothukudi, Tiruchirapalli, Thanjavur and Erode districts benefitting a total population of 3.72 lakh have been completed and inaugurated by Hon'ble Chief Minister at an estimated cost of Rs.237.47 crore so as to convey and treat 35.75 MLD of sewage.

The details of the schemes are given below in Table 6.10

Table 6.10

Sl. No.	District	Urban Local Body	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Treatment Capacity (MLD)
1	Thoothukudi	Thoothukudi corporation	95.00	2.65	23.85
2	Tiruchirapalli	Manachanallur town panchayat	34.39	0.36	4.16
3	Tiruchirapalli	S. Kannanur town panchayat	21.58	0.18	2.25
4	Thanjavur	Vallam town panchayat	35.00	0.20	2.35
5	Erode	Perundurai town panchayat	51.50	0.33	3.14
		Total	237.47	3.72	35.75

6.5.2 Ongoing Under Ground Sewerage Schemes

6.5.2.1 Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

Four underground sewerage schemes at an estimated cost of Rs. 1,060.49 crore, to benefit a population of 9.63 lakh covering part of

Coimbatore corporation and 3 municipalities to convey and treat 73.17 MLD of sewage, are at various stages of implementation.

The details of the schemes are given below in Table 6.11

Table 6.11

Sl. No.	District	Urban Local Body	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Treatment Capacity (MLD)
1	Tiruppathur	Ambur municipality	165.55	1.83	16.71
2	Virudhunagar	Rajapalayam municipality	251.20	2.20	21.85
3	Coimbatore	Kurichi and Kuniyamuthur areas of Coimbatore corporation	591.14	5.17	30.53
4	Ramanathapuram	Rameshwaram municipality	52.60	0.43	4.08
		Total	1,060.49	9.63	73.17

6.5.2.2 Externally Aided Projects – (KfW – German Development Bank)

Under externally aided projects, three underground sewerage schemes covering

Karaikudi municipality in Sivagangai district and Pollachi and Mettupalayam municipalities in Coimbatore district are at various stages of implementation at an estimated cost of Rs.410.43 crore. On completion of these schemes, 35.90 MLD of sewage will be collected and treated as per standards benefiting 3.16 lakh population.

The details of the schemes are given below in Table 6.12

Table 6.12

Sl. No.	District	Urban Local Body	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Treatment Capacity (MLD)
1.	Sivagangai	Karaikudi municipality	140.13	1.39	16.00
2.	Coimbatore	Pollachi municipality	170.22	1.00	11.25
3.	Coimbatore	Mettupalayam municipality	100.08	0.77	8.65
		Total	410.43	3.16	35.90

6.5.2.3 Under Ground Sewerage Schemes with other funding sources

A total of 8 under ground sewerage schemes covering 2 corporations, 4 municipalities and 2 town panchayats in Kanyakumari, Thoothukudi, Virudhunagar, Villupuram, Thiruvallur, Theni and Chengalpattu districts have been taken up with other funding sources and are at various stages of implementation at an estimated cost of Rs.985.99 crore. On completion of these schemes, 59.33 MLD of sewage will be collected and treated as per standards benefiting 5.16 lakh population.

The details of the schemes are given below in Table 6.13

Table 6.13

Sl. No.	District	Urban Local Body	Funding	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Treatment capacity (MLD)
1.	Kanyakumari	Nagercoil corporation	UIDSSMT	129.95	1.54	17.66
2.	Thoothukudi	Thoothukudi corporation (part)	Smart Cities Mission	120.53	0.54	6.25
3.	Virudhunagar	Sattumunicipality	UIDSSMT	48.39	0.36	4.63
4.	Villupuram	Villupuram municipality (added areas)	HUDCO	263.00	0.60	6.91
5.	Villupuram	Tindivanammunicipality	HUDCO	268.00	1.00	11.44
6.	Thiruvallur	Ponnerimunicipality	IUDM	62.82	0.57	6.52
7.	Theni	Melachokkanathapuram town panchayat	CGF	41.72	0.22	1.90

Sl. No.	District	Urban Local Body	Funding	Estimated Cost (Rs. crore)	Population Benefitted (lakh)	Treatment capacity (MLD)
8.	Chengalpet	Thiruporur town panchayat	IUDM	51.58	0.33	4.02
		Total		985.99	5.16	59.33

Apart from the above schemes, under ground sewerage scheme to 4 added areas of Coimbatore corporation namely Vadavalli, Veerakeralam, Kavundampalayam and Thudiyalur at an estimated cost of Rs.860.80 crore with Asian Development Bank (ADB) funding to benefit a population of 37.71 lakh, will be taken up for implementation during the current year.

6.5.3 UGSS taken up for preparation of Detailed Project Reports (DPRs) during the year 2021-22

During the year 2021-22, DPRs have been prepared by the Board for 4 Under Ground Sewerage Schemes covering

Hosur corporation, Thoothukudi corporation (added and omitted area), Coimbatore corporation, and Chengalpattu municipality at an estimated cost of Rs. 1,826.83 crore to benefit a population of 8.03 lakh and are in the process of obtaining administrative approval.

Apart from the above, detailed project reports are under preparation for two UGSS covering Mannargudi municipality and Aruppukottai municipality to benefit a population of 1.95 lakh.

Also, action is being taken to prepare DPRs for providing UGSS to Ranipet municipality, Kallakurichi municipality, Thiruthani municipality and Tenkasi municipality to benefit a population of 2.40 lakh.

6.6 Special Schemes

6.6.1 Hogenakkal Combined Water Supply

Scheme -Phase -II

The Hon'ble Chief Minister has announced on 20.01.2022, that detailed project report for implementing the Hogenakkal combined water supply scheme Phase -II will be prepared for enhancing the present level of supply under Hogenakkal combined water supply scheme - Phase -I.

Based on the announcement, a detailed project report for Hogenakkal combined water supply scheme Phase -II is under preparation with river Cauvery as source to provide water supply with functional household tap connections at the rate of 135 LPCD in urban areas and 55 LPCD in rural areas of Dharmapuri and Krishnagiri districts.

A total population of 41.55 lakh in Hosur corporation, Dharmapuri and Krishnagiri

municipalities, 16 town panchayats and 6,802 rural habitations in 20 unions in Dharmapuri and Krishnagiri districts will benefit from this scheme.

6.7 Research, Design, Training and Project Management Centre

6.7.1 Research and Design Unit

The research and design unit takes up the study and analysis of new products/ technologies for adoption in TWAD Board which will enhance the functional efficiency in implementation of schemes.

For effective operation and maintenance of the combined water supply schemes maintained by the Board, automation of pumpsets of capacity upto 5 HP at 600 sump locations have been carried out resulting in an annual saving of Rs.12.61 crore in maintenance expenditure.

6.7.2 Training and Capacity Building activities

- TWAD Board has a nodal training centre at Head Office and sub training centres at Trichy, Madurai and Coimbatore. Regular training and capacity building programmes are being organized for the technical and other staff of the Board and local bodies through these centres.
- During 2021-22, seven training programmes were conducted for the field Engineers, Water Analysts and Hydro-geologists of TWAD Board and field Engineers of Rural Development and Panchayat Raj department benefitting 1,100 personnel under Jal Jeevan Mission - support activity fund of Rs.1.25 crore.

In order to impart training to the employees of TWAD Board on the various activities of the

organization and as a capacity building measure, the following topics are proposed for the year 2022-23.

- Design of distribution system in the water supply scheme.
- Analysis and design of water supply and sewerage scheme using software simulation.
- Ensuring energy efficiency and carrying out energy audit in the operation and maintenance of schemes through adoption of mechanical, electrical and solar energy equipments in the schemes.
- Rainwater harvesting measures.
- Basic training on tender procedures.
- Handling of court cases and disciplinary proceedings
- Accounts, GST, TDS and PFMS software handling.

- Innovative technologies in implementation of combined water supply schemes and under ground sewerage schemes.

6.8 Material Testing and Quality Control Laboratory

Material testing laboratories of TWAD Board are functioning at Madurai (NABL accredited), Trichy, Coimbatore (NABL accredited) and Tindivanam.

In these laboratories the following materials are being tested:

- Poly-Vinyl Chloride (PVC) Pipes, High Density Poly-Ethylene (HDPE) pipes, Cast Iron (CI) pipes, Ductile Iron (DI) pipes and Stoneware pipes
- Mix design of concrete
- Construction materials like cement, steel rods, sand, coarse

aggregates, bricks and concrete cubes.

- Filter media, Hollow blocks, Paver blocks.
- Electric cables.

During the year 2021-22, 10,597 samples have been tested. It is proposed to test 12,000 samples during the year 2022-23.

6.9 Water Quality Testing and Surveillance

In order to achieve the objective of ensuring safe drinking water supply to the public, TWAD Board has established one state level water testing laboratory at Chennai, 31 laboratories at district level, 56 laboratories at sub district level and 25 water testing laboratories at block level all over Tamil Nadu. These laboratories facilitate testing of the basic chemical and bacteriological water quality parameters for surveillance and monitoring of water supply sources in rural areas.

The state level water testing laboratory at Chennai is NABL (National Accreditation Board for Testing and Calibration Laboratories) accredited and recognized as State Referral Institute for Tamil Nadu by Government of India since 2016. Further, under Jal Jeevan Mission, NABL accreditation have been obtained for 12 district level water testing laboratories (Thanjavur, Pudukottai, Tiruchirapalli, Perambalur, Krishnagiri, Thiruvallur, Dharmapuri, Coimbatore, Salem, Madurai, Ramanathapuram and Dindigul) and action is being taken to get the NABL accreditation for the remaining 19 district level water testing laboratories and NABL recognition to 56 sub district level water testing laboratories and 25 block level water testing laboratories.

During the year 2021-22, 3,86,724 water samples have been tested in state and district laboratories with JJM and state funds. A revenue

of Rs.31.73 lakh has been earned through testing of drinking water samples and sale of field water test kits (FTKs).

During 2022-23, it is proposed to test 6,50,000 water samples for chemical and bacteriological parameters using Jal Jeevan Mission and state funds.

6.10 Hydro- Geological Activities

The remote sensing and GIS (Geographical Information System) are extensively utilized in scientific source finding activities for identification of sources for various water supply schemes implemented by TWAD Board and also in the identification of suitable locations for the construction of recharge structures to be taken up for sustainability of water sources.

Toposheetwise (220Nos) water quality maps were prepared by TWAD Board which

reflects the water quality information spread over Tamil Nadu for pre- monsoon and post monsoon seasons.

Geo-tagging of drinking water assets such as source, over head tank, school andanganwadi water supply schemes have been taken-up and 37,614 drinking water assets are geo-tagged in the web portal.

During the year 2021-22, 812 number of geophysical survey works were carried out and earned revenue of Rs. 21.13 lakh.

6.11 Rain Water Harvesting Structures

TWAD Board has taken up Sustainable Water Security Mission ("SuWaSeM") for Tamil Nadu to ensure water security in the urban local bodies at a cost of Rs. 20 crore through various methods of rainwater harvesting.

The following works are being implemented through Directorate of Municipal

Administration and Commissionerate of Town Panchayats on 50:50 sharing basis between urban local body and SuWaSeM.

- Restoration and rejuvenation of water bodies
- Roof top rainwater harvesting (RRWH)
- Campus rainwater harvesting (other than roof area)
- Stormwater harvesting

TWAD Board acts as the Nodal Agency for technical assistance for this mission.

6.12. Financial Position

The total revenue expenditure for the year 2021-2022 is Rs.1,264.90 crore whereas the total income is Rs.1,092.70 crore tentatively.

The details of income, expenditure, surplus/deficit and cumulative deficit for the

year 2019-2020 to 2021-2022 are given below in Table 6.14.

Table 6.14 (Rs. crore)

Sl. No.	Particulars	FY	FY	FY
		2019-2020	2020-21	2021-22 (Tentative)
I.	Revenue Income			
1	Centage charges	182.47	197.60	227.02
2	Water charges	649.52	675.92	610.26
3	Other income	81.94	109.82	57.08
4	Grants	449.26	159.50	198.34
	Total	1,363.19	1,142.84	1,092.70
II.	Revenue Expenditure			
1	Salary	127.51	109.38	95.08
2	Pension and retirement benefits	412.07	375.14	311.20
3	Maintenance of CWSS	924.74	962.54	837.02
4	Other expenditure	25.61	28.92	21.60
	Total	1,489.93	1,475.98	1,264.90
	Surplus/ Deficit	-126.74	-333.14	-172.20
	Cumulative Deficit	2,310.63	2,643.77	2,815.97

The details of amount payable, receivables and amount payable including outstanding loan as on 31.03.2022 are given below in Table 6.15.

Table:6.15

(Rs. crore)

Sl.No	Particulars	Amount as on 31.03.2022 (Tentative)
I.	Payable	
1	TANGEDCO- CC charges	1910.40
2	Retirement benefits to the Board pensioners	20.58
3	CWSS – O&M contractors.	360.56
4	WCE-Court case -arrear payments	10.51
	Total	2302.05
II	Receivable(Water charges)	
1	Corporations	289.10
2	Municipalities	14.52
3	Town Panchayats	12.05
4	Village Panchayats	202.64
5	Private Beneficiaries	130.11
	Total	648.42
III	Outstanding of LIC Loan	
1.	Principal	87.27
2.	Interest	35.01
	Total	122.28

6.13 Jal Jeevan Mission

Jal Jeevan Mission aims to provide functional household tap connections (FHTCs) to every rural household by March 2024 with 55 LPCD of potable water on regular basis.

6.13.1 Components of Jal Jeevan Mission

- i. Creation of sustainable drinking water sources and augmentation of existing sources to ensure long-term sustainability.
- ii. To provide bulk water transfer wherever required, to construct water treatment plant(s) and to strengthen the distribution network.
- iii. Provision of in-village piped water supply infrastructure to provide tap water connection to every rural household.
- iv. Retrofitting of completed and ongoing schemes to provide FHTCs at the minimum service level of 55 LPCD in rural areas.

- v. To undertake Information Education and Communication (IEC), human resource development, training, water quality testing and surveillance activities.

6.13.2 State Nodal Department and State Nodal Officer

The Government of Tamil Nadu, vide G.O.(Ms.) No.26, MA&WS (WS.1) Department, dated: 04.02.2022, has nominated Municipal Administration and Water Supply Department as Nodal Department and the Additional Chief Secretary to Government, Municipal Administration and Water Supply Department, Secretariat, Chennai, as the State Nodal Officer for implementation of Jal Jeevan Mission in Tamil Nadu.

6.13.3 State Mission Director

The Managing Director, Tamil Nadu Water Supply and Drainage Board is the State Mission Director for Jal Jeevan Mission in Tamil Nadu. A State Project Management Unit (SPMU) has been set up in Tamil Nadu Water Supply and Drainage Board to

assist the Mission Director, JJM in the implementation of JJM activities.

6.13.4 Committees

As per G.O.(Ms.)No.33, MA & WS (WS.1) Department,dated: 15.02.2022, the following committees have been reconstituted.

i. Apex Committee

The Chief Secretary to Government is the Chairman of this committee and Additional Chief Secretary to Government, Municipal Administration and Water Supply Department is Member Secretary with 7 Additional Chief Secretaries / Principal Secretaries / Secretaries to Government, representative from Government of India and 4 other officers as members. This committee takes policy decisions and finalizes the State Action Plan.

ii. State Level Scheme Sanctioning Committee (SLSSC)

The State level scheme sanctioning committee has been constituted with the Additional Chief Secretary to Government, Municipal Administration and Water Supply Department as Chairman and 13 other members including representative from Government of India, to provide technical sanctions to the projects approved by the Apex Committee.

iii. Executive Committee

The Executive Committee is constituted with the Mission Director, Jal Jeevan Mission as Chairman and Director, RD & PR; Additional Secretary, Finance department; and 4 other officers of the State Government as members to monitor the implementation of the Mission.

6.13.5 Implementation Methodology

To achieve the objectives of the Jal Jeevan Mission, the following steps are followed.

- i. Village action plan (VAP) is prepared on the basis of drinking water requirement of each habitation in rural areas. The action plans for the habitations will be combined to form a village action plan and approval of the Grama Sabha is obtained.
- ii. The action plans of all the village panchayats in the district are merged and the District action plan (DAP) is prepared. The DAP is approved by the District Water and Sanitation Mission (DWSM) chaired by the District Collector.
- iii. The State action plan (SAP) is prepared by consolidating district action plans of all districts, combined water supply schemes and bulk water transfer in the state. The Annual action plan

(AAP) is prepared at the state level based on the financial allocation for each year.

6.13.6 Finance

Under Jal Jeevan Mission, the Union Government provides 50 percent funding and the State Government provides 50 percent funding for the implementation of piped water supply connections to rural households. For support activities and water quality monitoring and surveillance activities, Union Government provides 60 percent and the State Government provides 40 percent of the funds required.

6.13.7 Implementation

Jal Jeevan Mission is jointly implemented by the Tamil Nadu Water Supply and Drainage Board and the Rural Development and Panchayat Raj Department.

6.13.7.1 Tamil Nadu Water Supply And Drainage Board (TWAD Board)

- i. Combined water supply schemes / multi-village schemes are designed and implemented by TWAD Board to cover more than one village panchayat.

- ii. Combined water supply schemes maintained by TWAD Board will be retrofitted to augment the water sources, improve the capacity of electro mechanical equipments and pipeline modifications to enhance the water supply.

6.13.7.2 Rural Development and Panchayat Raj Department

- i. The Rural Development and Panchayat Raj Department will design and implement single village schemes (SVS). These works include the creation of water source, overhead reservoirs, in-village infrastructure and functional household tap connections (FHTCs).
- ii. In addition, the Rural Development and Panchayat Raj Department will design and implement in-village infrastructure works as well as providing FHTCs for combined water supply schemes / multi-village schemes implemented by the TWAD Board.

6.13.8 Other Special Features of Jal Jeevan Mission

- i. Third party inspection of all the Jal Jeevan Mission works to ensure quality.

- ii. Functionality assessment for quality, quantity and regularity of supplying water.
- iii. Monitoring the implementation of schemes using Integrated Management Information System (IMIS).
- iv. Water quality testing through Field Test Kits (FTKs).
- v. IEC activities for water conservation, rain water harvesting, water security, water distribution, etc.,

6.13.9 Community Contribution

To encourage people's participation, 5% of the capital cost of in-village component is collected from the public in hilly / forest areas and SC/ST habitations and 10% in other village panchayats in cash / kind / man power towards community contribution.

6.13.10 Convergence of Funds

Fifteenth Finance Commission (CFC) grant, 5th State Finance Commission grant and other grant

funds are also converged to carry out the works included in the Annual action plan approved by the District Water and Sanitation Mission.

6.13.11 Present Status of Jal Jeevan Mission

Out of 126.89 lakh households in the rural areas of Tamil Nadu, 52.99 lakh (41.76%) households have been provided with functional household tap connections (FHTCs). Single village scheme works are under progress to provide 6.37 lakh FHTCs. Action is being taken up to provide the balance 67.53 lakh households with FHTCs before March, 2024.

6.13.12 Details of works taken up during the year 2021-22

i. Single Village Schemes (SVS)

During the year 2021-22, 14.93 lakh functional household tap connections have been provided.

ii. Multi Village Schemes (MVS)

Presently, 9 combined water supply schemes / multi-village schemes are under implementation covering 2,375 habitations to provide approximately 1.28 lakh FHTCs in 7 districts namely, Erode, Karur, Thanjavur, Tirupathur, Tirunelveli, Tenkasi and Salem. It is programmed to complete these schemes by January 2023.

Further, the Government have accorded administrative sanction for 6 combined water supply schemes in Thiruvarur, Tiruchirapalli, Mayiladuthurai, Ranipet, Tirunelveli and Namakkal districts for Rs.2,327.53 crore and tenders have been invited for implementation of the work. By these schemes 0.92 lakh functional household tap connections will be given to rural households.

Action is being taken to provide the balance households with FHTCs before March, 2024 through retrofitting of existing combined water supply

schemes, implementation of new combined water supply schemes / multi-village schemes and other single village schemes.

6.13.13 Financial Status (FY 2021-22)

(Rs. crore)

Sl. No.	Description	GoI Share	GoTN Share	Total
1.	Opening balance as on 01.04.2021	389.69	372.13	761.82
2.	Fund received	630.70	826.30	1,457.00
3.	Total fund available	1,020.39	1,198.43	2,218.82
4.	Expenditure	429.05	469.72	898.78 (Tentative)
5.	Balance fund available as on 31.03.2022	591.34	728.71	1,320.04

7. TAMIL NADU URBAN INFRASTRUCTURE FINANCIAL SERVICES LIMITED (TNUIFSL)

The Government of Tamil Nadu established Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL), in November 1996, as a Public Limited Company, with private sector participation from ICICI Bank Limited (ICICI), Housing Development Finance Corporation Limited (HDFC) and IL and FS Financial Services Limited (IL and FS). The authorized capital of the company is Rs.2.00 crore and the paid-up share capital is Rs.1.00 crore, of which a sum of Rs.49.00 lakh is contributed by the Government of Tamil Nadu.

Tamil Nadu Urban Development Fund, Water and Sanitation Pooled Fund and other Government Grant Funds are managed by TNUIFSL. The company provides a spectrum of solutions towards the development of urban infrastructure, right from concept to

commissioning of the projects. The main tasks of the company include project development, project appraisal, project structuring, resource mobilization and fund management. The company has been operating on profit since its establishment and dividends are declared and paid regularly.

7.1 Tamil Nadu Urban Development Fund (TNUDF)

The Government of Tamil Nadu established TNUDF, in November 1996, as a Trust, with private sector participation from ICICI, HDFC and IL and FS.

The objective of TNUDF is to be a sustainable financial intermediary that enhances the flow of private capital to urban sector in the State of Tamil Nadu and facilitate urban local bodies to become capable and sustainable organizations, sensitive to stakeholders in providing the highest quality of urban services.

TNUDF has a mission “to contribute to the improvement in urban quality of life in Tamil Nadu by facilitating efficient urban infrastructure asset creation and provision of urban services through innovative project development, independent appraisal and sustainable financing”.

7.1.1 Objectives of TNUDF

The objectives of TNUDF are as follows:

- Finance urban infrastructure projects, which improve the living standards of the urban population.
- Facilitate private sector participation in infrastructure through joint ventures and public-private partnerships.
- Improve the financial management of urban local bodies and enable them to access debt finance from markets.

The Fund provides financial assistance to Urban Local Bodies for implementation of basic service projects such as roads, bridges, storm water drains, sewerage and sanitation, water supply, solid waste management and commercially viable remunerative projects, such as bus stands and market complexes.

The Fund is managed by a corporate trustee viz., Tamil Nadu Urban Infrastructure Trustee Company Limited (TNUITCL) and is operated by a Fund Manager viz., the Tamil Nadu Urban Infrastructure Financial Services Limited.

The total corpus of the Fund is Rs.199.60 crore, of which a sum of Rs.142.91 crore has been contributed by Government of Tamil Nadu and a sum of Rs.56.69 crore has been contributed by ICICI, HDFC and IL and FS.

7.2 Externally Aided Projects

Tamil Nadu Urban Infrastructure Financial Services Limited is operating three external lines of credit viz, the Sustainable Municipal Infrastructure Financing–Tamil Nadu - Phase-II-Part-2 (SMIF-TN-II-2) Program assisted by German Development Bank (KfW), Tamil Nadu Sustainable Urban Development Project (TNSUDP) assisted by the World Bank and Tamil Nadu Urban Flagship Investment Program (TNUFIP) Phase-I and Phase-II assisted by Asian Development Bank. Funds totaling Rs.11,929.72 crore are available under the above three lines of credit. The details are furnished in Table 7.1 below.

Table 7.1**Size of External Lines of Credit**

(Rs. crore)

Sl. No.	Components	TNSUDP	SMIF-TN - Phase-II- Part 2	TNUFIP		Total
				Phase-I	Phase-II	
1	Loan to ULBs	1,225.92	417.36	304.78	487.01	2,435.07
2	Capital Grants to ULBs	1,225.92	396.94	646.73	834.10	3,103.69
3	Grant to Model Cities	389.48	0	0	0	389.48
4	Technical Assistance Grant / performance-based incentive	344.80	22.39	148.02	120.89	636.10
5	Incremental Administrative Cost and Tax	0	0	36.33	40.32	76.65
6	Bonds, Other Grants, ULB Contribution	644.88	40.70	1,934.47	2,668.68	5,288.73
	Total	3,831.00	877.39	3,070.33	4,151.00	11,929.72

7.2.1 KfW (German Development Bank) assisted Sustainable Municipal Infrastructure Financing –Tamil Nadu (SMIF – TN) Program

The German funding agency, KfW assisted Sustainable Municipal Infrastructure Financing – Tamil Nadu Program has been launched with the objective of contributing towards the improvement of environment, preservation of natural resources and the living conditions of the urban population. The Program has two phases (Phase-I and Phase-II). The Phase-II Program has two parts i.e. Part-1 and 2. The Phase-I of the Program has been completed in December 2015 and the Phase-II-Part-1 program has been completed in December 2021.

The total outlay of the SMIF–TN-Phase-II-Part-2 Program is Rs.877.39 crore (Euro 107.75 million), of which Rs.814.30 crore (Euro 100.00 million) will be provided both as loan and capital grant to Urban Local Bodies for implementing

urban infrastructure projects. A sum of Rs.22.39 crore (Euro 2.75 million) has been allotted for enhancing the technical capabilities of the Urban Local Bodies. A sum of Rs.40.70 crore (Euro 5.00 million) has been allotted as loan for Water and Sanitation Pooled Fund to facilitate the mobilization of resources from capital market by issue of Municipal Bonds. The project implementation period of the Program is between June 2014 and December 2019. However, considering the progress of sub-projects, the Program has been extended up to December 2022.

The funding assistance of Rs.816.77 crore has been committed for 17 sub-projects under the SMIF-TN-II-Part-2 Program at a cost of Rs.1,124.75 crore. Of these, 8 sub-projects at a cost of Rs.266.37 crore have been completed and the balance 9 sub-projects are under various stages of implementation.

Under SMIF-TN-Phase-II-Part-2, a project report for providing capacity building and training covering 11 sectors with 52 courses and 8 workshops has been prepared at an estimated cost of Rs.12.98 crore. Under this program about 5,200 officials and elected representatives of urban local bodies will be trained in urban governance, project development, implementation, operation and maintenance. This program will be implemented in a period of two years.

7.2.2 World Bank assisted Tamil Nadu Sustainable Urban Development Project (TNSUDP)

The World Bank assisted Tamil Nadu Sustainable Urban Development Project has been launched with the objective of improving urban services in participating Urban Local Bodies in a financially sustainable manner and to pilot improved urban management practices in selected cities.

The total outlay of TNSUDP is Rs.3,831 crore (US\$ 600.00 million), of which the World Bank assistance is Rs.2,554 crore (US \$ 400.00 million). The contribution of the State Government and other sources being Rs.1,277 crore (US \$ 200.00 million). The project implementation period is between June 2015 and March 2022. However, considering the progress of sub-projects and consultancy assignments, the Project has been extended upto March 2023. The TNSUDP has been proposed to be restructured by reallocation of Rs.37.18crore (US \$ 5.00 million)for COVID-19 care within the components of the project with a total outlay of Rs.4,104.86crore (US \$ 609.00 million), of which World Bank assistance will be Rs.2,770.39 crore (US \$ 400.00 million)

The funding assistance of Rs.2,752.49 crore has been committed for

31 sub-projects at a cost of Rs.3,620.88 crore. Of these, 7 sub-projects at a cost of Rs.1,761.96 crore have been completed and the balance 24 sub-projects are under various stages of implementation. Further, a sum of Rs.21.07 crore has been incurred for procurement of 2000 units of Oxygen concentratorsunder TNSUDP.

7.2.3 Tamil Nadu Urban Flagship Investment Program (TNUFIP) assisted by Asian Development Bank (ADB)

The Asian Development Bank assisted Tamil Nadu Urban Flagship Investment Program has been launched with the objective of developing priority water supply, sewerage and drainage infrastructure located within strategic industrial corridors of Tamil Nadu, support innovative pilots, improve urban governance and strengthen the capacity of State and local institutions to enhance environmental

sustainability, climate resilience and urban livability.

Tamil Nadu Urban Flagship Investment Program has three phases (Phase-I, Phase-II and Phase-III). The assistance from ADB is US\$ 502 million for all the three phases.

The total outlay of Phase-I is Rs.3,070.33 crore (US \$ 477.50 million) with ADB assistance of Rs.1,099.53 crore (US \$ 171.00 million). The contribution of the State Government and other sources being Rs.1,970.80 crore (US \$ 306.50 million). The project implementation period is between November 2018 and June 2023. The funding assistance of Rs.951.51 crore has been committed for 9 sub-projects under TNUFIP Phase-I at a cost of Rs.2,794.68 crore. Of these, 8 sub-projects are under various stages of

implementation and 1 sub-project is under procurement.

The total outlay of Phase-II is Rs. 4,151.00 crore (US \$ 593.00 million) with ADB assistance of Rs.1,442.00 crore (US \$ 206.00 million). The contribution of the State Government and other sources being Rs.2,709.00 crore (US \$ 387.00 million). The project implementation period is between December 2019 and December 2025. The funding assistance of Rs.1,321.11 crore has been committed for 6 sub-projects under TNUFIP Phase-II at a cost of Rs.3,837.61 crore and all these sub-projects are under various stages of implementation.

The appraisal for the Phase-III of the program is under progress by ADB.

7.2.4 Externally Aided Projects under preparation

The following externally aided projects are under preparation

- i) KfW assisted SMIF–TN-III Program with an outlay of Euro 750.00 million (about Rs.6,375.00 crore) with KfW’s assistance of Euro 500.00 million (about Rs.4,250.00 crore) and counterpart funding from Government of Tamil Nadu of Euro 250.00 million (about Rs.2,125.00 crore),
- ii) KfW grant for SMIF–TN Program with an outlay of Euro 22.22 million (about Rs.188.87 crore) with KfW’s grant assistance of Euro 20.00 million (about Rs.170.00 crore) and counterpart funding of Euro 2.22 million (about Rs.18.87 crore) and

- iii) World Bank additional financing under TNSUDP with an outlay of US \$ 450.00 million (about Rs.3,350.25 crore) with World Bank assistance of US \$ 300.00 million (about Rs.2,233.50 crore) and counterpart funding from Government of Tamil Nadu of US \$ 150.00 million (about Rs.1,116.75 crore)

7.3 Water and Sanitation Pooled Fund (WSPF)

The Government of Tamil Nadu has created WSPF as a Trust to cater to civic infrastructure needs like water and sanitation in small and medium towns by raising resources from capital markets. This Trust has been created as a not-for-profit entity.

The objectives of WSPF are:

- To provide financial assistance for setting up infrastructure projects,
- To mobilize resources from the capital market under pooled finance structure,

- To facilitate the participation of private sector in water and used water sectors through direct investment and public private partnership,
- To enable urban local bodies to access debt finance from markets and
- To act as the Nodal Agency on behalf of Union and / or State Government for water, sanitation and / or any other infrastructure projects.

A sum of Rs.302.30 crore has been mobilized via taxable bonds and tax-free bonds by WSPF. Of the above, bonds of Rs.222.30 crore have been fully redeemed.

A sum of Rs.300.00 crore has been availed as loan from Housing and Urban Development Corporation Limited (HUDCO) for on-lending to 12 beneficiary Urban Local Bodies for

implementing Vellore Combined Water Supply Improvement Scheme.

Further, loan assistance of Rs.355.21 crore for Arupukottai Combined Water Supply Scheme, Rs.174.20 crore for Tindivanam Under Ground Sewerage Scheme and Rs.163.58 crore for Villupuram Under Ground Sewerage Scheme totalling to Rs.692.99 crore, has been sanctioned by HUDCO. A sum of Rs.35.08 crore has been availed from HUDCO for Arupukottai Combined Water Supply Scheme out of the above sanctions.

7.4 Chennai Mega City Development Mission (CMCDM)

The Government has launched the Chennai Mega City Development Mission to provide funds to Greater Chennai Corporation and Chennai Metropolitan Water Supply and Sewerage Board to implement various urban infrastructure and basic services projects like roads, storm water drains, street lighting, water supply and

sanitation in Chennai and its suburban areas. The fund is provided through budgetary provision every year by the Government. The Tamil Nadu Urban Infrastructure Financial Services Limited has been designated as the Nodal Agency for Chennai Mega City Development Mission. A sum of Rs.2,500.00 crore has been allotted to implement the scheme from 2011-12 to 2015-16. The scheme has been re-launched in the year 2018 and a sum of Rs.1,500.00 crore has been allotted to implement the scheme from 2018-19 to 2020-21.

The capital grant assistance of Rs.3,991.73 crore as well as the technical grant assistance of Rs.7.90 crore have been committed under this mission, to implement projects costing Rs.9,054.38 crore. A sum of Rs.3,236.39 crore has so far been disbursed.

8. CHENNAI RIVERS RESTORATION TRUST

The Government of Tamil Nadu is committed to improving the ecological condition of rivers and water bodies by ensuring sustainable and healthy living environment for all in urban areas. To this end, the Chennai Rivers Restoration Trust (CRRT) was set up by the Government to move forward in this direction.

Furthermore, the Government have entrusted CRRT with the prime task of planning, coordinating and monitoring the ecological restoration of rivers and water bodies viz., Cooum, Adyar, Kosasthalaiyar Rivers, Buckingham Canal along with other canals, drains, estuaries and creeks in Chennai Metropolitan Area. To achieve the goals set for it, CRRT has undertaken various initiatives by adopting an integrated approach of engaging line departments in its eco-restoration projects.

8.1. Completed Eco-Restoration Projects

8.1.1 Tholkappia Poonga - Eco-Restoration of Adyar Creek (58 acre)

The Government of Tamil Nadu conceived a pioneering initiative in urban wetland conservation in the restoration of 358 acre of the Adyar Creek and Estuary area located in the eastern side of Thiru. Vi. Ka. bridge and for this purpose Rs.100 crore has been sanctioned by the Government of Tamil Nadu in October, 2006.

Adyar creek and estuarine ecosystem was degraded due to infestation of *Prosopis juliflora*, indiscriminate disposal of sewage, solid waste and debris which subsequently resulted in the shrinking of water spread area, reduced tidal interaction and degradation of biodiversity.

Under Phase-I, the Eco-Restoration of Adyar creek (58 acre) was commenced in 2008. All restoration activities were completed in 2011

and continuous maintenance is being carried out.

The major restoration activities undertaken in Adyar creek were increasing the water spread and tidal interaction area, plantation of native plants such as Tropical Dry Evergreen Forest species, mangroves and its associates, reeds, etc., and landscaping for interactive environmental programmes.

Tholkappia Poonga now serves as a hub for Environmental Education and Research Activities. To impart knowledge on environment to the community, particularly for school children, regular environmental education programmes are being conducted. So far, 98,611 students and 4,744 teachers from 1,181 schools have visited the eco-park and have been sensitized on the significance of urban wetlands restoration. Further, Corporate Social Responsibility (CSR) funds have been

received from Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) for conducting environmental education programmes for school students at Tholkappia Poonga.

General public are allowed to visit the Tholkappia Poonga on Tuesdays, Thursdays and Saturdays to understand the efforts taken up by the Government in the restoration of coastal estuarine eco-system. Thus far, a total of 18,788 people have visited the Poonga. Now, there is a proposal to allow public for walking inside the Poonga based on the pre-registration. Tholkappia Poonga stand as a perfect example of urban wetland eco-restoration initiative of the Government.

Now, the Preparation of Redevelopment plan for Tholkappia Poonga (58 acre) for a period of next 10 year (i.e. from 2022 to 2032) is initiated as it is imperative that the

infrastructure facilities created in 2011 need to be reassessed for any improvements and also if any new initiative is required to make the Tholkappia Poonga a robust centre in the field of urban wetland ecosystem.

8.1.2 Eco-Restoration of Adyar Estuary (300 acre)

Under Phase-II, the Government of Tamil Nadu have sanctioned Rs.24.93 crore for the Eco-Restoration of Adyar creek and estuary with an extent of 300 acre of Adyar creek, estuary, islets, mudflats and surrounding area. The restoration works were taken up with the components of bund stabilization, removal of debris and plastics and removal of invasive species of *Prosopis juliflora*, which has now enhanced the tidal interaction and increased the water spread in the creek and estuary. Mangroves and Native riverine vegetation were

planted to rejuvenate and enhance the biodiversity of riverine ecosystem.

In Adyar creek and estuary (358 acre), a recent faunal survey reported around 424 species of animals such as molluscs, crabs, dragonflies, butterflies, fishes, amphibian, reptiles, birds and mammals. This figure stood at 141 before the restoration activity. The restored Adyar creek and estuary is functioning as an urban wetland bio-diversity hub.

8.2 Ongoing Eco-Restoration Projects

Under the aegis of CRRT, the Integrated Cooum River Eco-Restoration Project (ICRERP) and Adyar River Restoration Project (ARRP) have been implemented by the Government to enhance the ecological condition of city waterways.

Under the eco-restoration project, various sub-projects are being executed by concerned

line departments viz., desilting works, formation of baby canal and construction of flood protection wall by Water Resources Department; Solid waste removal, fencing, beautification of bridges, boom deployment and plantation of native species and riverfront development by Greater Chennai Corporation, Directorate of Municipal Administration and Directorate of Rural Development and Panchayat Raj in their respective areas; Laying interceptor pipelines, installing modular sewage treatment plants and underground sewerage system by Chennai Metropolitan Water Supply and Sewerage Board; Resettlement and Rehabilitation to the Project Affected Families by Tamil Nadu Urban Habitat Development Board.

8.2.1 Integrated Cooum River Eco-Restoration Project (ICRERP)

The Government of Tamil Nadu have accorded administrative sanction of

Rs.735.08 crore for the implementation of ICRERP for the stretch from Paruthipattu checkdam to the Cooum river mouth in the Bay of Bengal for a length of 32 KM. The major restoration components are interception and diversion of wastewater, solid waste management, river channel improvement, resettlement and rehabilitation, biodiversity management and riverfront development.

All restoration works are expected to be completed by December, 2022. Thus far, Rs.361.04crore has been disbursed to implementing agencies based on the work progress.

8.2.2 Adyar River Restoration Project (ARRP)

The ecological restoration of Adyar river from its origin at Adhanur lake to the river mouth for a distance of 42 KM was initiated by the Government at a cost of Rs.555.46 crore.

The major restoration worksbeing implemented are sewage management, solid waste management, river channel improvement, rehabilitation and resettlement, biodiversity management and riverfront development.

The on-going eco-restoration activities are under various stages of implementation by concerned line departments and are expected to be completed by May, 2023. So far, Rs.141.18 crore has been disbursed to implementing agencies based on the work progress.

8.3 Projects Set to Commence

8.3.1 Restoration of Buckingham Canal and its associated Drains and Drains of Adyar and Cooum River

In order to ensure a comprehensive restoration of waterways in Chennai city, the Government have sanctioned Rs.1,281.88 crore for the restoration of Buckingham Canal and its

associated drains and Major drains of Adyar and Cooum river. Preparatory works are being carried out by concerned implementing agencies.

8.3.2 Eco-Restoration of Ennore Creek

The Government have accorded administrative sanction of Rs.189.38 crore for the Eco-Restoration of Ennore Creek. Later, the Water Resources Department (WRD) proposed to take up the Sustainable River Mouth Opening component from their own source. The Habitat Restoration works will be taken up under the aegis of CRRT with the revised cost of Rs.45.99 crore.

8.4 Preparation of Detailed Project Reports (DPRs)

8.4.1 Preparation of Master Plan and Detailed Project Report for Development of SemmozhiPoonga (Garden of Classical Tamil) in Coimbatore

The Hon'ble Chief Minister has announced that Semmozhi Poonga (Garden of Classical Tamil) - a World Class Botanical Garden will be established at Coimbatore at an extent of 165 acre area within the Coimbatore Central Prison campus. The Poonga will have walking track, indoor and outdoor auditoria and other facilities which will be developed in two phases.

A consultant is engaged for the preparation of Master Plan and Detailed Project Report for development of Semmozhi Poonga in Coimbatore. The Final report is expected to be completed in July, 2022.

8.4.2 Preparation of Detailed Feasibility Report for Cooum and Adyar Rivers as Phase-I and Buckingham Canal as Phase-II

In order to ensure a holistic approach to improve the water quality of city waterways in a time bound manner, the preparation of Detailed Feasibility Report for Cooum and Adyar rivers as

Phase-I and Buckingham Canals Phase-II has been taken up.

The Government have appointed the M/s. TWIC Ltd. as consultant for the study, which include gap assessment, appropriate technological solution, financial analysis, etc., and the final report is expected to be completed in August, 2022.

8.4.3 Preparation of Feasibility Report for Identification of Potential Water Bodies in Chennai Basin for Restoration and utilizing them as an additional source of Water Supply for various Urban Local Bodies (ULBs) excluding Chennai City

Preparation of Feasibility Report will be taken up to identify water bodies with the capacity of not less than 75 MCFT and interlinked systems in Chennai basin for restoration and augmenting the potential restored water bodies as additional source of

water supply to urban local bodies(excluding Chennai) in Chennai basin.

9. TAMIL NADU URBAN FINANCE AND INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (TUFIDCO)

The decadal growth rate of India's urban population demonstrates the fast-growing demand for various infrastructures, including basic amenities in the cities. The Government of Tamil Nadu has taken proactive measures in addressing this problem by establishing Tamil Nadu Urban Finance and Infrastructure Development Corporation (TUFIDCO) on 20.03.1990 under the Companies Act, 1956 with an aim of enhancing the quality of life for urban residents by providing basic infrastructure facilities in urban local bodies.

The vision of TUFIDCO is "to develop basic infrastructure in urban local bodies to the satisfactory level of inhabitants with sustainable facilities that attracts investments for the growth of the urban local bodies".

9.1 The objectives of TUFIDCO

- To extend financial assistance for developmental schemes to urban local bodies / parastatal agencies.
- To undertake various infrastructure development schemes in collaboration with urban local bodies or with Government agencies.
- To finance various schemes such as basic services, asset creation and poverty alleviation for a better standard of living of all the people.

9.2 Mission Directorate / Nodal Agency

TUFIDCO is also acting as Mission Directorate / Nodal Agency for the following Union and State sponsored schemes:

- (i) Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) – Revolving Fund

- (ii) Smart Cities Mission
- (iii) Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
- (iv) Atal Mission for Rejuvenation and Urban Transformation 2.0 (AMRUT 2.0)
- (v) Kalaigal Nagarpura Mempattu Thittam (KNMT)
- (vi) Singara Chennai 2.0

9.3 Fund Manager

Further, TUFIDCO is also managing funds pertaining to the following schemes:

- (i) Metropolitan Infrastructure Development Fund (MIDF)
- (ii) Integrated Urban Development Mission Phase I & II (IUDM)
- (iii) TUFIDCO Infrastructure Funding Scheme (TIFS)
- (iv) Special Roads Programme (SRP)

- (v) Capital Grant Fund (CGF) and Operation and Maintenance Gap Filling Fund (O&MGFF)

9.4 Atal Mission For Rejuvenation And Urban Transformation (AMRUT)

Atal Mission for Rejuvenation and Urban Transformation (AMRUT) was launched by the Union Government during June 2015. The primary aim of the mission is to achieve (a) every household have access to a tap with assured supply of water and a sewerage connection, (b) increasing the amenity value of cities by developing greenery and well maintained open spaces, e.g. park; and (c) reducing pollution by switching to public transport or constructing facilities for non-motorized transport, e.g. walking and cycling. The mission will be phased out by the end of March 2023.

The Union Government has sanctioned implementation of AMRUT scheme in the following 28 urban local bodies in Tamil Nadu viz., 15 Municipal Corporations, 12 Municipalities and 1 Town Panchayat for.

1.	Greater Chennai Corporation	15.	Avadi Corporation
2.	Coimbatore Corporation	16.	Pallavapuram Municipality
3.	Madurai Corporation	17.	Tambaram Municipality
4.	Tiruchirappalli Corporation	18.	Cuddalore Municipality
5.	Salem Corporation	19.	Kancheepuram Municipality
6.	Tirunelveli Corporation	20.	Tiruvannamalai Municipality
7.	Tiruppur Corporation	21.	Kumbakonam Municipality
8.	Thoothukudi Corporation	22.	Rajapalayam Municipality
9.	Thanjavur Corporation	23.	Pudukottai Municipality
10.	Erode Corporation	24.	Ambur Municipality
11.	Vellore Corporation	25.	Karaikudi Municipality
12.	Dindigul Corporation	26.	Nagapattinam Municipality
13.	Nagercoil Corporation	27.	Rameswaram Municipality and
14.	Hosur Corporation	28.	Velankanni Town Panchayat

As per AMRUT guidelines, the Union & State Governments, as well as the respective urban local body, have to contribute funds for the implementation of the AMRUT projects, as per the ratio given in the Table 9.1 below.

Table 9.1

SI No	Population	Union Govt. Share – Grant	State Govt. Share – Grant	ULB's share
1	Cities with more than 10 lakh population	33.33%	20%	46.67%
2	Cities with below 10 lakh population	50%	20%	30%
3	Green space (all AMRUT cities)	50%	20%	30%

9.4.1 Details of AMRUT projects

On the basis of the approval by the Union Government on the State Annual Action Plans (I, II, III), AMRUT projects are implemented in AMRUT cities and towns. A total of 445 AMRUT project costing Rs.11,441.41 crore have been sanctioned to Tamil Nadu, as given in the Table 9.2 below. This is one of the highest allocations of funds among the States in the country.

Table 9.2

(Rs. crore)

SAAP	Total No of projects sanctioned	Approved cost	Union Govt. share	GoTN Share	ULB share
SAAP I	111	3,245.51	1,355.29	649.10	1,241.10
SAAP II	171	3,700.45	1,531.47	740.09	1,428.90
SAAP III	163	4,495.46	1,854.39	899.08	1,742.00
Total	445	11,441.42	4,741.15	2,288.27	4,412.00

422 projects at a cost of Rs.2,335.77 crore have been completed, and 23 projects at a cost of Rs.9,105.64 crore are currently in the implementation phase as in Table 9.3 below.

Table 9.3

S.No	Name of the Project	Project Cost (Rs. crore)	Date of completion as per Agreement	Expected Date of completion
1	CMWSSB- 150 MLD SWRO Desalination Plant – NEMMELI	954.00	Dec-21	Apr-23
2	CMWSSB- 150 MLD SWRO Desalination Plant – NEMMELI - Pipe Line	125.89	Mar-22	Jul-22

S.No	Name of the Project	Project Cost (Rs. crore)	Date of completion as per Agreement	Expected Date of completion
3	Coimbatore Pillur – III – Water supply	649.30	Aug-22	Aug-23
4	Implementation of 24x7 Water Supply System in the erstwhile Coimbatore Corporation	506.04	Aug-23	Mar-23
5	Dedicated Water Supply Scheme to Madurai Corporation from MullaiPeriyar River at Lower Camp.	1,020.00	May-23	Mar-23
6	Tirunelveli UGSS – Phase – III	381.86	Dec-21	Mar-23
7	Providing Comprehensive Underground sewerage scheme to Manali, Chinnasekkadu, Karambakkam and Manapakkam areas in Chennai City	223.00	Dec-21	Dec-22
8	CMWSSB– Improvement and Modification works of STP	576.76	Feb-22	Dec-22
9	Tiruppur – Water Supply	992.94	Sep-22	Sep-22
10	Rameswaram UGSS	40.33	Aug-21	Mar-23
11	Trichy – UGSS - Phase III	264.12	Apr-23	Apr-23
12	Trichy – UGSS - Phase II	344.00	Jan-22	Jun-22
13	Vellore – UGSS – Phase - II	343.69	Jan-22	Aug-22
14	Vellore – UGSS – Phase – III	248.26	Mar-22	Sep-22

15	CMWSSB-Valasaravakkam- Water Supply	67.74	Nov-20	Jun-23
16	Ambur – UGSS	129.07	Oct-21	CS-Apr -2022; STP-03/2023
17	Tiruppur- UGSS	525.92	Jul-22	Jul-22
18	Tirunelveli UGSS – Phase – II	289.01	Jul-21	Jul-22
19	Coimbatore –UGSS	442.00	Oct-21	Mar-23
20	CMWSSB- Providing Comprehensive Water Supply Scheme to Matthur, Madipakkam, Jalladampettai and Uthandi in Chennai City	184.11	Jan-21	Jun-22
21	Rajapalayam – UGSS	178.75	Mar-22	May-22
22	Nagercoil – Water Supply	223.44	May-21	May-22
23	Improvement of Water Supply Distribution System to Extended 8 Added areas of Coimbatore Corporation	395.41	Feb-21	Apr-22

9.5 Atal Mission For Rejuvenation And Urban Transformation 2.0 (AMRUT 2.0)

“Atal Mission for Rejuvenation and Urban Transformation 2.0” (AMRUT 2.0) has been launched by the Union Government on 01.10.2021. AMRUT 2.0 will benefit all the statutory towns in the country including

21 municipal corporations, 150 municipalities and 490 town panchayats in Tamil Nadu.

AMRUT 2.0 aims to achieve 100% water security in urban areas and providing functional water tap connections to all households. This will be achieved through circular economy of water by effecting water source conservation, rejuvenation of water bodies and wells, recycle / reuse of treated used water, and rainwater harvesting by involving community at large. This Mission will run as people’s program. Mission also targets to provide 100% sewage / septage management services in 500 AMRUT cities.

The key components of the AMRUT 2.0 are (a) universal coverage of water supply; (b) sewerage, septage management and recycle / reuse of treated used water; and rejuvenation of water bodies (including urban wet land) and creation of green spaces.

9.5.1. Funding for projects

The Government of India funding for various categories of ULBs are as follows.

Table 9.4

Population of the City / Town	Admissible GOI grant
Cities with less than one lakh population	50%
Cities with population one lakh to ten lakh (both included)	1/3 rd
Cities with population more than ten lakh (at least 10% of the total project allocation to be taken up in PPP mode)	25%

Under AMRUT, the total indicated outlay to Tamil Nadu is Rs.4,935 crore. The projects are to be submitted to Union Government in three tranches.

The City Water Balance Plans (CWBP) have been submitted to the Union Government, as indicated in the guidelines. Similarly, City Water Action Plans (CWAP) and State Water Action

Plan (SWAP) have also been submitted to the Union Government.

In the first tranche (FY 2021-22), a total of 570 proposals for Rs.7,041.04 crore have been approved by the Union Government as given in the Table 9.5 below.

Table 9.5

(Rs.crore)

S. No	Sector	Nos.	Tentative Project Cost	Union Govt Share	GoTN Share	ULBs Share
1	Water Supply (PPP-2P)	160	4,907.77*	1,435.13	885.19	630.31
2	UGSS (PPP-1P)	8	1,987.21**	485.50	533.16	758.54
3	Water Bodies	187	113.23	51.57	33.97	27.69
4	Green Spaces	215	32.83	16.42	9.85	6.57
	Total	570	7,041.04	1,988.62	1,462.17	1,423.11

*Tentative Project Cost includes the project cost of 2 PPP projects of CMWSSB, which have not been included in the fund sharing.

** It includes 1 PPP project of Trichrapalli Corporation, which has not been included in the fund sharing

9.6 Smart Cities Mission

The Smart Cities Mission was launched by the Union Government in June 2015 with the aim of promoting sustainable and inclusive cities that provide core infrastructure, give decent living conditions to citizens, deliver on environmental sustainability and application of 'Smart' Solutions. In Tamil Nadu, 11 cities viz., Chennai, Coimbatore, Madurai, Thanjavur, Salem, Vellore, Tiruppur, Thoothukudi, Tirunelveli, Tiruchirappalli and Erode have been included in the Mission.

Various projects have been implemented in these 11 cities based on the Smart Cities Mission guidelines, with the Union Government funding of Rs.500 crore per city and the State Government funding of Rs.500 crore per city (total Rs.1,000 crore per city).

A total of 680 projects worth of Rs. 10,804.55 crore have been taken up in the Mission Cities. Out of 680 projects, 304 projects worth of Rs.2,697.00 crore are complete, and 376 projects worth of Rs.8,107.55 crore are under implementation. The details are abstracted in Table 9.6 below.

Table 9.6 (Rs. crore)

Sl No.	Name of the Smart city	No.of Projects	Project Cost
1	Chennai	48	1,096.95
2	Coimbatore	56	979.34
3	Madurai	16	979.16
4	Thanjavur	103	974.58
5	Salem	86	968.67
6	Vellore	52	963.40
7	Tiruppur	28	985.39
8	Tirunelveli	84	965.00
9	Thoothukudi	70	965.05
10	Tiruchirappalli	83	962.17
11	Erode	54	964.84
	Total	680	10,804.55

The Union Government have informed that the Smart Cities Mission will be phased out on 30.06.2023.

9.7 Kalaingar Nagarpura Mempattu Thittam

The Government of Tamil Nadu, in order to address the infrastructure gaps in municipalities and town panchayats have launched Kalaingar Nagarpura Mempattu Thittam (KNMT) during 2021. A total of Rs.1,000 crore has been allocated for this scheme for the FY 2021-22.

The objectives of the scheme are to cover 100% household water supply tap connections, provide sewer links, sanitation, internal roads, streetlights, modernization of crematoriums, and other community infrastructure. Moreover, the scheme aims to bridge infrastructure gaps existing in backward areas and slums, as well as newly added areas in municipalities and town panchayats. The scheme also suggest modern

libraries with computers and knowledge centres to help students and job seekers.

The KNMT includes numerous urban infrastructure projects such as development of bus stands, parks and play fields, construction of shandies and markets, rejuvenation of water bodies, procurement of e-vehicles for disposal of solid waste, and construction of public toilets, etc.

A total of 1,293 projects at a cost of Rs.975.84 crore, have been sanctioned (KNMT share of Rs.917.91 crore) so far, as given in Table 9.7 below.

Table 9.7

(Rs. crore)

S.No	Name of Project	Nos of works	Approved Project Cost	KNMT Share 2021-22	ULB Share / TUFIDCO Soft loan
1	Roads	1,018	471.15	471.15	-
2	Metal Beam	33	5.06	5.06	-

3	Parks	58	31.04	31.05	-
4	Crematorium	44	65.17	65.17	-
5	Knowledge Centre	36	62.78	62.78	-
6	Bus stands	10	44.70	35.68	9.02
7	Markets/Shandy	40	173.38	129.43	43.94
8	Community Hall	1	2.80	1.96	0.84
9	Ponds /Water	51	70.63	70.63	-
10	BOVs	1	42.00	38.43	3.57
11	LCVs	1	7.13	6.57	0.56
	Total	1,293	975.84	917.91	57.93

All the above works are under various stages of implementation.

For implementation of the scheme in the year 2022-23, a sum of Rs.1,000 crore has been provided in the BE 2022-23.

9.8 Singara Chennai 2.0

With the aim of making Chennai city more liveable and vibrant, the Government of TamilNadu have launched "Singara Chennai 2.0" during the year 2021 and allocated Rs.500 crore in BE 2021-22. The scheme is being implemented by the Greater Chennai

Corporation (GCC) and Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB).

Under Singara Chennai 2.0, a total of 182 works such as road improvements, play field, street name boards, crematorium, storm water drains, construction / renovation of school buildings, streetscaping, etc." have been approved at a cost of Rs.395.32 crore for the BE 2021-22, as in Table 9.8 below.

Table 9.8

(Rs. crore)

S.No	Name of the Project	No. of works	Approved project cost	Singara Chennai 2.0 Share 2021-22
GCC				
1	Water Fountain	26	1.29	1.29
2	Park	28	24.43	24.43
3	Play Field	18	12.57	12.57
4	Dynamic Lighting system	1	1.81	1.81
5	BT- BRR	59	37.57	37.57

6	Crematorium	10	6.14	6.14
7	Name Boards for Streets	1	8.42	8.42
8	SWD	1	184.67	184.67
9	Schools	24	50.67	50.67
10	Water Bodies	12	9.08	9.08
11	Differently abled	1	1.14	1.14
12	Animal Birth Control Centre	2	0.81	0.81
	Sub Total	180	338.60	338.60
CMWSSB				
1	Neelankarai WSP	1	66.67	45.68
2	Anna Main road - Ugss	1	31.54	11.04
	Sub Total	2	98.21	56.72
	Grand total - GCC + CMWSSB	182	436.81	395.32

All the above works are under various stages of implementation.

For implementation of the Scheme in FY 2022-23, a sum of Rs.500 crore has been provided in Budget 2022-23.

9.9 Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) - Revolving Fund

In compliance with the UIDSSMT guidelines, TUFIDCO has created a Revolving Fund. Interest-free loan has been provided to 99 Urban Local Bodies for the purpose of internal plumbing for Urban Water Supply and UGSS projects, as given in the Table 9.9 below.

Table 9.9

(Rs.crore)

S.No.	Sector	No. of Municipalities / Corporations	UIDSSMT Revolving fund sanctioned
1.	Water Supply	73	169.58
2.	UGSS	26	193.22
	Total	99	362.80

The projects are under various stages of execution.

9.10 Metropolitan Infrastructure Development Fund (MIDF)

The Metropolitan Infrastructure Development Fund (MIDF) has been created by TUFIDCO in accordance with the guidelines of the Mega City Programme of the Government of India to assist urban local bodies in sanctioning projects in the Chennai Metropolitan Area.

A soft loan of Rs.1156.47 crore has been approved under MIDF to the urban local bodies / parastatal agencies for implementation of 34 projects at a cost of Rs.4342.65 crore.

29 projects have been completed and the remaining 5 projects are at various stages of implementation.

9.11 Integrated Urban Development Mission (IUDM) Phase I (2011-16)

Integrated Urban Development Mission was implemented from 2011-12 to 2016-17

(5 years). The scheme aims to provide basic infrastructure facilities such as roads, drinking water supply, street lighting, sewerage, storm water drains, sanitation, solid waste management, and improvement of bus stands and parks to all the municipal corporations (except Chennai), municipalities, and town panchayats.

A total of 13,257 projects were sanctioned under IUDM-I at a cost of Rs 10,773.22 crore (fully funded / partly funded). 13,220 of these projects have been completed, and 37 projects are being implemented.

IUDM - Phase II (FY 2018-19 – 2020-21)

The IUDM II was launched during the year 2018-19, with a fund allocation of Rs.750 crore each year. The following urban infrastructure projects were taken up by Urban Local Bodies (except Chennai) based on the sanctions accorded during the years 2018-19, 2019-20, and 2020-21 under IUDM II, as abstracted in Table 9.10 below.

Table 9.10

(Rs. crore)

S. No	Sector	No.of works	Project cost	IUDM Share			
				2018-19	2019-20	2020-21	2021-22
1	Road	1,500	1,215.19	292.77	409.26	285.76	
2	Drainage	769	263.70	94.51	51.13	86.42	
3	Water Supply	89	2,650.66	225.45	335.53	80.96	67.62
4	UGD	67	703.97	121.87	94.68	238.24	
5	Park	3	9.50	-	8.53	-	
6	Shandy	2	8.40	-	1.12	4.20	
7	Bridges	3	20.15	-	4.04	12.08	
8	Bus stand	4	12.84	-	-	10.27	
9	Street Lights	12	3.81	-	-	3.04	
10	Septage	11	31.17	11.00	20.17	-	
11	Solid Waste Management	1	8.57	-	7.71	-	
12	Others	10	9.80	4.40	5.12	-	
	Total	2,471	4,937.76	750.00	937.28	720.97	67.62

A total of 1,495 projects have been completed, 976 are being implemented.

9.12 TUFIDCO Infrastructure Funding Scheme (TIFS)

TUFIDCO Infrastructure Funding Scheme (TIFS) has been created to provide financial assistance to urban local bodies and parastatal agencies for implementation of projects. This scheme provides funding from shares, surpluses, and bank loans. The repayment period for TIFS loans is 10 years.

9.13 Special Roads Programme (SRP)

A total of Rs. 1,000 crore has been approved by the Government for taking up road works urgently needed for the development of urban areas through pooled financing raised as a loan through TUFIDCO, from banks and financial institutions. Under Special Roads Programme for the FY 2020-21, the Greater Chennai Corporation, the Commissionerate of Town Panchayats, and the Directorate of Municipal Administration have taken up the following Road

projects. The details are as given in Table 9.11 below.

Table 9.11

(Rs. crore)

Sl. No	ULBs	Number ULBs	Length in KM	Approved Project Cost	SRP Loan	ULB Contribution
1	Greater Chennai Corporation	1	256.01	150.11	150.00	0.11
2.	Directorate of Municipal Administration	102	1,349.05	804.19	700.00	104.19
3.	Commissionerate of Town Panchayats	183	302.28	150.00	150.00	0
	Total	286	1,907.34	1,104.30	1,000.00	104.30

All the projects are in various stages of implementation.

9.14 Fund Manager for the State Government Schemes

The Capital Grant Fund (CGF) and Operation and Maintenance Gap Filling Fund (O&MGFF) have been created by the Government of Tamil Nadu to enhance

infrastructure facilities in urban local bodies. TUFIDCO is Fund Manager for above Funds.

During the year 2021-22, Rs.141.49 crore and Rs.44.09 crore (total of Rs.185.58 crore) have been released under CGF and O&MGFF respectively, as per the sanctions of the Government.

10. NEW TIRUPUR AREA DEVELOPMENT CORPORATION LIMITED

In late 1990s, Tirupur and adjacent areas had witnessed a huge development of textile related business activities contributing major foreign exchange revenue to the exchequer. However, Tirupur still did not have adequate infrastructure facilities. The Government of Tamil Nadu (GoTN) mandated the erstwhile Tamil Nadu Corporation for Infrastructure Development (TACID) to formulate Tirupur Area Development Program(TADP). Accordingly, TACID had formulated the TADP, which envisaged water supply to domestic and non-domestic users, sewage treatmentetc. For this purpose, a memorandum of understanding was entered between TACID, Tirupur Exporters Association (TEA) and IL&FS on 25.08.1994 agreeing for an equal equity investment and various other general terms and conditions. Finally, New Tirupur Area Development

Corporation Limited (NTADCL) was promoted in 1995 by four members of TEA, two from IL&FS and one representing GoTN.

A Combined water supply project and a sewerage treatment plant to implement a 185 MLD water supply project expandable upto 250 MLD and 15 MLD sewage treatment plant (STP), expandable upto 30 MLD at a project cost of Rs.1,023 crore was approved. To implement this project, a concession agreement was signed on 11.02.2000 between the Government of Tamil Nadu, Tirupur municipality (now municipal corporation) and New Tirupur Area Development Corporation Limited. The approved project cost of Rs.1,023 crore was funded as Rs.613.80 crore term loan by a consortium of 19 banks and financial institutions' led by M/s IDBI, Rs.86.50 crore was funded by the promoters as subordinate loan and Rs.322.70 crore was funded by equity.

NTADCL's equity share capital of Rs.10 crore was initially funded by Government of India (GoI) in 1997-98 through TACID. Rs.105 crore was funded jointly by GoTN (Rs.55 crore) and IL&FS (Rs.50 crore) through a special purpose company (SPC) called Tamil Nadu Water Investment Company Limited (TWIC) which was promoted jointly by IL&FS and GoTN in 54 : 46 ratio. IL&FS had brought a PE investor, M/s AIDQUA Holdings Mauritius (Inc) for a 27.89% shareholding contributing Rs.90 crore investment. A Shareholders agreement (SHA) dated 12.04.2001 was adopted by the NTADCL Board and signed by the proposed investors with special rights to AIDQUA. Subsequently, the terms of SHA was incorporated in the articles of association by replacing original articles of association of the company. Apart from these investments, company obtained equity participation from EPC consortium M/s Mahindra group - Rs.45 crore

and public sector insurance companies— Rs.45 crore and Rs.32.70 crore from IL&FS directly.

The project construction commenced in the year 2002 and the water supply commenced in October 2006. The project has been supplying 38.957 MLD of drinking water to Tirupur corporation and 18.26 MLD of drinking water to 8 village panchayats and about 600 wayside rural habitations in 5 panchayat unions. The project also caters to the water supply requirements of a number of hosiery and related dyeing and processing industries in and around Tirupur. A domestic sewerage system in major parts of Tirupur municipal corporation has also been completed and functioning with 15 MLD capacity, currently collecting up to 8 MLD of sewage from 15,246 sewer connections for treatment. Low cost sanitation facilities through

31 sanitary complexes have also been provided for the urban poor.

While the project was able to meet its domestic supply to the local bodies, the non-domestic supply to the industries was far below the project estimates on average 30 MLD as against estimated 115MLD, coupled with cost overrun, the interest burden increased. The entire financial viability of the project nosedived, following the Zero Liquid Discharge (ZLD) order passed by the Hon'ble Madras High Court Order dated 30.01.2011 and resulted in closure of many dyeing and bleaching industries that severely impacted the company's water business and reduced non-domestic water supply to 8MLD, thus aggravated financial crisis. The company wasn't able to service its debt, the entire net worth was almost wiped out.

The poor financial situation of NTADCL was addressed in 2011-12 through a Corporate Debt Restructuring (CDR) package. The lenders rescheduled the debt, reduced the interest rate from 11% to 9.5% and converted 15% of the debt into equity under the CDR. GoTN infused equity share capital of Rs.150 crore and assured to purchase up to 100 MLD of water additionally for domestic usage from the company. Presently, around 65 MLD of water is being supplied additionally to Tirupur municipal corporation and wayside villages at a cost of Rs.21/KL, part of this, released directly as per G.O.(Ms) No.25, dated 16.03.2012. Further, in order to enable NTADCL to be commercially more viable, GoTN has permitted the Company to expand its water supply infrastructure and services in selected areas outside Tirupur Local Planning Area (TLPA).

With the supports from GoTN and lenders, NTADCL was able to revive itself and turn profitable from the year 2015-16 onwards and making better cash accruals thereby able to prepay three years lenders' obligation in advance. The CDR has got positive nod from the Company Law Board and Hon'ble Madras High court. However, the PE investor AIDQUA has challenged the CDR in the Hon'ble Supreme court and the case is pending before the Supreme Court of India.

LIST OF SHAREHOLDERS AND THEIR SHARE HOLDINGS PRE AND POST CDR					Shares in Crores	
S.No.	Name of the Shareholder	shares as on 31.03.2011 Pre CDR	% of share holding pre CDR	Shares allotted during CDR	Total number of shares post CDR	% of share holding post CDR
1	Tamil Nadu Water Investment Co Ltd	10.50	32.54%	6.73	17.23	28.72%
2	AIDQUA Holdings (Mauritius) Inc.	9.00	27.89%	-	9.00	15.00%
3	IL&FS	3.77	11.68%	5.15	8.92	14.87%
4	TIDC	1.00	3.10%	-	1.00	1.67%
5	Government of Tamilnadu	-	0.00%	12.37	12.37	20.62%
6	M&M Group	4.50	13.94%		4.50	7.50%

7	Insurance & Bank Group	3.50	10.85%	3.48	698	11.63%
	Total	32.27	100 %	27.73	6000	100 %

Since the company is able to service its debt ahead of the schedule, the management is taking demand assessment study for capacity expansion from 185 MLD to 250 MLD and installation of solar power captive plant for reducing power cost, which contributes to 55 % of the total cost. The company has gained good experience and want to expand the cross subsidized model of water supply to domestic and Nondomestic in future.

11. TAMIL NADU WATER INVESTMENT COMPANY LIMITED

Tamil Nadu Water Investment Company Limited (TWIC) was established in the year 2000, jointly by the Government of Tamil Nadu and Infrastructure Leasing and Financial Services Limited (IL&FS) as a special purpose vehicle under Companies Act 1956. TWIC is an investment company and promoted New Tirupur Area Development Corporation Limited (NTADCL) which has implemented first public private partnership in water sector namely New Tiruppur Area Water Project with a capacity of 185 MLD and a cost of Rs.1,023 crore.

TWIC has been actively involved in developing and implementing projects across several sectors and expertise in water and sewerage systems, recycling, desalination, river restoration, industrial effluent management and developing projects from concepts to

implementation through a model aimed at reducing life cycle costs with a sustainable framework.

TWIC provides advisory, project management consultancy (PMC) and operation and maintenance (O&M) services in the following fields:

1. Urban water and sewerage systems with focus on water reuse.
2. Desalination.
3. Industrial effluent management and recycling including Zero Liquid Discharge (ZLD).
4. Lake and river pollution abatement.
5. Capacity building and training.

TWIC has expertise in preparation of DPRs, bid management, project management and O&M of various facilities in water and sewerage sector.

Government of Tamil Nadu has nominated the Additional Chief Secretary, Municipal Administration and Water Supply Department, as Ex-Officio Chairman of this company. Senior officials representing Finance, Environment, Forests & Climate Change and Industries Departments are nominated as directors of the Company.

The Board of the company comprises of 10 directors of which 4 are from the Government of Tamil Nadu, 3 from IL&FS, and 3 independent directors. The day to day affairs of the company are managed by Chief Executive Officer.

11.1 Noteworthy Projects

11.1.1. Urban Water and Used water

1. Advisory for comprehensive water supply schemes and district metered area (DMA) : All major ULBs in Tamil Nadu under AMRUT and Smart Cities Mission.

2. Advisory for under ground sewerage scheme (UGSS) and sewerage treatment plant (STP): Thoothukudi and Visakhapatnam corporations, Pammal and Anakaputhur municipalities.
3. Advisory for demand study and preparation of water reuse grid and Water Reuse Policy for the state of Tamil Nadu.
4. Project Management Agency (PMA) for water supply and UGSS under AMRUT / Smart Cities Mission: Thanjavur, Kumbakonam, Thoothukudi.
5. Advisory for Smart City Projects: T-Nagar in Greater Chennai Corporation.
6. PMA for tertiary treated reverse osmosis (TTRO) project for used water reuse: 45 MLD capacity plant at Koyambedu, Chennai.

11.1.2 CETPs with Zero Liquid Discharge (ZLD)

1. PMA services for the development of 9 Textile CETPs with ZLD in Tiruppur with the capacity ranging from 3 MLD to 11 MLD at a cost of Rs. 540 crore.
2. PMA services for the upgradation of ZLD system in 8 CETPs through interest free loan from GoTN. On completion of the projects, TWIC is looking after O&M of these CETPs.
3. PMA services for five tannery CETPs, two at Ambur and one each at Vaniyambadi, Pallavaram and Melvisharam with a combined capacity of 11.55 MLD at cost of Rs. 143 Crore.
4. TWIC currently is an independent O&M operator for 5 Textile CETPs in Tiruppur.
5. Advisory services for establishment of water recovery system from 11 MLD used

water at TNPL factory, Kagithapuram, Karur District, including Techno-commercial feasibility cum pilot demonstration for a ZLD system with a capacity of 120 Cu.Mt./day.

6. Advisory for preparation and submission of detailed project report (DPR) for implementation of 42 MLD ZLD CETP at Panipat.
7. Consultancy services for feasibility study for establishment of combined effluent treatment plant in Konabari textile cluster in Bangladesh.

11.1.3. Sea Water Desalination

TWIC has extended advisory services for 16 sea water desalination plants with the capacity ranging from 0.5 MLD to 110 MLD (8 in Gujarat, 7 in Tamil Nadu and 1 in Odisha).

11.1.4 Restoration and Rejuvenation of Water Bodies

1. DPR for 60 water bodies in Greater Chennai Corporation area.
2. Feasibility report and proof checking for Ooty lake.
3. PMC for Zamin Pallavaram PeriyaEri and Keelkattalai Eri in Pallavaram municipality.
4. DPR and PMA for Mudasarlovalake catchment in Greater Visakhapatnam municipal corporation.

11.2 Ongoing Schemes

1. Ministry of Textile, Government of India has sanctioned 50% grant for the following projects under Integrated Processing Development Scheme (IPDS) :
 - i. PMC for textile processing park with ZLD CETP at southern district textile processing cluster at Virudhunagar.

- ii. PMA for textile processing park with ZLD CETP Kumarapalyam Green Kavery Dyeing Cluster and CETP at Green Environmental Association in Namakkal District.
- iii. PMC for CETP at NextGen Textile Park at Pali, Rajasthan.
- iv. PMC for CETP at Kakatiya Mega Textiles Park at Warangal, Telangana.
- v. TWIC has prepared DPRs for implementation of ZLD CETPs under the scheme for Rejuvenation of Cauvery and its Tributaries (Proposal stage). Under the above scheme, implementation of Sree Bhavani Dyeing Cluster, Kadayampatti Dyeing Cluster and Kumarapalayam Green Kavery Cluster projects at cost of about Rs.487 crore under Phase I is proposed to be implemented by availing financial assistance under

IPDS of Ministry of Textiles-Government of India. For the projects TWIC is also extending PMA services.

11.3 Major ongoing Projects

1. PMA for 20 MLD CETP for Jajmau Tannery Cluster, Kanpur- funded by National Mission for Clean Ganga, Government of India.
2. Advisory Services to DMA and CTP for preparation of DPRs for pollution abatement works for the selected river stretches in 9 municipalities & 18 town panchayats in Tamil Nadu (DPR Stage).
3. Sea Water Desalination Projects:
 - i. PMC services to CMWSSB for 150 MLD capacity plant at Nemmeli.
 - ii. DPR and PMC for 100 MLD capacity plant at GIDC, Dahej, Gujarat.

- iii. DPR and PMC for 60 MLD capacity plant proposed by TWAD Board at Marakkanam in Villupuram district.
 - iv. DPR and PMC for 60 MLD capacity plant proposed by SIPCOT, at Mullakadu in Thoothukudi district.
 - v. DPR and PMC for 60 MLD capacity plant proposed by TWAD Board at Kuthiraimozhi in Ramanathapuram district.
 - vi. DPR and PMC for 20 MLD capacity plant proposed by SIPCOT at Cuddalore.
 - vii. DPR and PMC for 10 MLD Capacity plant at Paradeep Port Trust, Odisha.(Tendering Stage)
4. Consultancy for preparation of DPR for improving the existing water supply distribution system based on district

- metered area (DMA) in Idappadi municipality.
- 5. Consultancy for preparation of DPR for providing underground sewerage scheme for left out areas in Avadi municipal corporation.
 - 6. PMC services for setting up 45 MLD capacity tertiary treatment reverse osmosis (TTRO) plant at Kodungaiyur, Chennai.
 - 7. PMC services for implementation of water supply improvement scheme and underground sewerage scheme for Kumbakonam municipality under AMRUT and for Thanjavur municipal corporation under Smart Cities Mission.
 - 8. PMC services for implementation of 28 MLD STP for Thoothukudi municipal corporation under Smart Cities Mission.

9. PMC for Installation Common Caustic Recovery Plant at Bithuja, Rajasthan.
10. Project Management Advisory Consultancy for Establishment of CETP at Textile Park Indrakaran, Sangareddy District, Telangana.
11. The R&D projects through grant from Indo-German Science and Technology Centre (IGSTC):
 - i. Smart and reliable water and used water infrastructure systems for the future cities of India and Germany (SMART and WISE).
 - ii. Effect based monitoring demonstrates efficiency of electrically driven water treatment processes to remove salts and micropollutants from process water.

11.4 Awards Received

1. Global Water Intelligence (GWI) Award 2014 - The Industrial Water Project of the year.
2. Water Reuse Industrial Project for the Year 2014 by the Water Reuse Association, USA.
3. The 2030 WRG Corporate Water Stewardship Award for the year 2015 by GWI, UK.

11.5 Assignments for Government of Tamil Nadu

1. Government of Tamil Nadu has nominated TWIC as Project Management Agency (PMA) for future projects relating to development and operation and maintenance of CETPs and industrial water supply through reuse of sewage water and desalination plants.

2. TWIC has also been nominated as the Project Management Agency for the Textile CETPs in Tiruppur by the Handlooms, Handicrafts, Textiles and Khadi Department, Government of Tamil Nadu.
3. The Government in Environment, Forests & Climate Change Department has nominated TWIC for carrying out the diagnostic study, preparation of DPR, facilitating financial closure and advisory on PMC and O&M for micro, small, medium bleaching and dyeing units in the districts of Namakkal, Erode, Salem and Karur.
4. TWIC has been nominated as "One City One Operator" for all the 18 CETPs in Tiruppurcluster by Handlooms, Handicrafts, Textiles and khadi department.

5. Nodal Agency for Preparation of water balance plan for ULBs in Tamil Nadu under AMRUT – 2.0
6. TWIC has been awarded by Tamil Nadu Urban Infrastructure Financial Services (TNUIFSL) for consultancy services for preparation of Detailed Feasibility Reports for Restoration of Cooum and Adayar Rivers & Buckingham Canal for Chennai Rivers Restoration Trust (CRRT).

11.6 Assignments for Government of India

TWIC is partnering with Government of India in various projects and schemes, such as

1. TWIC's technology for ZLD has been recognized by the Ministry of Textiles and has been evaluated and accepted by the Department of Science and Technology (DST).

2. TWIC is extending PMC services to Ministry of Textiles for Integrated Processing Development Scheme for implementation of textile based CETPs in India.
3. TWIC is a Consultant to National Mission for Clean Ganga (NMCG) for preparation of DPR for setting up of CETPs for various industrial clusters in the State of Uttar Pradesh. TWIC is also a Project Engineer for setting up of the Jajmau Tannery CETP in Kanpur.
4. TWIC is joint venture partner of National Institute of Ocean Technology for providing consultancy services for implementation of sea water reverse osmosis desalination plants for ports.
5. Advisory for the consultancy services for development of "framework for reuse, recycle and zero liquid discharge (ZLD) of

wastewater in India" for CPCB with Adelphi consult GmbH, Germany, under the Indo German Development Cooperation.

11.7 Financials of the Company

The turnover of the company for the year 2020-2021 was Rs.31.26 crore as against Rs.49.64 crore in 2019-20. TWIC has paid Rs.5crore during 2021 -22 to Government of Tamil Nadu towards interest against loans.

11.8 Corporate Social Responsibility

TWIC as a part of corporate social responsibility has provided Rs.17.25 lakh to M/s Indian Institute of Human Settlements (IIHS), a non profit organization for sanitization in Tambaram city municipal corporation and for sanitation and improvement of night shelter facilities in Greater Chennai corporation during the year 2021 - 2022.

12. SUSTAINABLE DEVELOPMENT GOALS

The holistic development of all citizens without compromising the needs of future generations, is the broad objective of Sustainable Development. The Vision of the Government for next 10 years coincides with achieving the targets set under SDG by 2030.

Municipal Administration and Water Supply Department has a vital role in achieving the Sustainable Development Goals in the sectors relating to providing clean water, safe disposal of solid and liquid waste, creating more green spaces and affordable housing.

- This department particularly focuses on increasing the percentage of population provided with safe and adequate drinking water within their premises.
- Providing accessible toilet-facilities to all citizens, preferably individual household

toilets and thus improve sanitation in the cities.

- To have balanced approach in withdrawal of ground water against the water availability.
- Recycling and reuse of used water.
- Provision of sewerage and septage management network including treatment plants in all urban areas.
- Increasing the number of green spaces in all Urban Local Bodies.
- Providing livable houses to all in the urban areas without compromising on their livelihood.

Municipal Administration and Water Supply Department will take every possible step for achieving Sustainable Development Goals.

13. TRAINING NEEDS AND CAPACITY BUILDING

In order to cope up with the fast-growing technologies, training and capacity building are very essential to upgrade the skills of employees and to groom them to move forward in their official capacity in an effective manner. The key development areas for training include e-administration, online services delivery, geo-tagging of assets, awareness and knowledge about the acts administered, land matters, stress management, personality development and disciplinary procedures etc. At present, Anna Administrative Staff College, Tamil Nadu Institute of Urban Studies, Coimbatore and certain other premier institutions at national level are imparting training to the employees in certain areas so as to improve their skills and capacities. As far as municipal administration is concerned, Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) has

prepared a project report for providing capacity building and training covering certain courses and workshops for municipal employees. This programme, which will be implemented in a period of 2 years, has been aimed at giving training to about 5000 employees and elected representatives of urban local bodies in urban governance and its allied activities, etc.,

14. WAY FORWARD

Plans that stemmed from the Vision for our cities have been followed through with well formulated schemes and programmes and are now poised for active implementation.

During the current year, the focus of Municipal Administration and Water Supply Department will be on implementation of these schemes and program in an efficient, effective and Citizen friendly manner.

Therefore, the planned action of Municipal Administration and Water Supply Department is in extending basic amenities of water supply and sewerage to the suburban sprawl of the burgeoning Chennai metropolis and other cities and towns; putting in place climate change mitigation measures such as greening & water body rejuvenation, recognizing that infinite growth in a finite planet is not sustainable; grounding the schemes for water supply, solid waste management and sewerage, which in essence is the core non-negotiable activity of the

department; commencing capacity building measures involving the people's representatives; ensuring that roads, bus stands, crematoria, libraries, streetlights, parks, parking facilities, markets etc. find equal focus in schemes meant for the cities and towns.

It is imperative to have an effective monitoring mechanism, feedback system and awareness among the community for successfully implementing the policies, schemes and programmes of the Government and going forward this will be the strategy of the Department.

Under the dynamic leadership of Hon'ble Chief Minister, the Municipal Administration and Water Supply Department strives to provide liveable and lively cities to the people.

K.N. NEHRU
Minister for Municipal
Administration