



**MUNICIPAL ADMINISTRATION
AND WATER SUPPLY DEPARTMENT**

**POLICY NOTE
2022- 2023**

DEMAND No. 34

K.N. NEHRU
Minister for Municipal Administration

©
Government of Tamil Nadu
2022

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

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, Tiruppathur, 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 Sular unions with bulk provision to 165 rural habitations in Tiruppur union.	362.20	6.43	36.15
9.	Tiruchirappalli	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, Thiruvankadam 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)
		Thiruthangalmunicipalities 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 PappakudiKadayam 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 Thiruvudaimarudur unions and 2 hamlets in Veppathur and Thiruvudaimarudur 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, Kandhilli 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 Kodumudi union	87.68	0.50	3.13	7,709
7.	Erode	CWSS to 96 rural habitations in Gobichetipalayam and Nambiyur unions	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 Yercaud union	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 Laigudi 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	Estimate 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 Sivagirtown 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	Mettupalayammunicipality	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	Satturmunicipality	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 Namakkaldistricts 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