



**MUNICIPAL ADMINISTRATION
AND WATER SUPPLY DEPARTMENT**

**POLICY NOTE
2021-2022**

DEMAND No. 34

K.N. NEHRU

Minister for Municipal Administration

©
Government of Tamil Nadu
2021

6. TAMIL NADU WATER SUPPLY AND DRAINAGE BOARD

Board of Directors

The visionary, the then Hon'ble Chief Minister, Muthamizh Arignar Dr. Kalaignar, realized the importance of water supply and constituted Tamil Nadu Water Supply and Drainage Board (TWAD) through an Act of the State Legislative Assembly on 14.04.1971 as a statutory body to provide protected water supply to the people of Tamil Nadu and for implementing Under Ground Sewerage Schemes (UGSS).

TWAD Board has recently completed 50 years of its successful functioning. The Board has been performing its functions of providing protected water supply to the public and safe disposal of used water for the past 5 decades.

CHAIRMAN	
1	Additional Chief Secretary to Government, Municipal Administration and Water Supply Department
DIRECTORS	
2	Additional Chief Secretary to Government, Public Works Department
3	Principal Secretary to Government, Health and Family Welfare Department
4	Principal Secretary to Government, Rural Development and Panchayat Raj Department
5	Managing Director, Chennai Metro Water Supply and Sewerage Board
6	Commissioner of Town Panchayats
7	Additional Secretary to Government, Finance Department
8	Director of Municipal Administration
9	Director of Rural Development and Panchayat Raj
10	Managing Director, TWAD Board
11	Joint Managing Director, TWAD Board
12	Finance Director, TWAD Board
13	Engineering Director, TWAD Board

TWAD Board is having Regional Offices at Vellore, Thanjavur, Coimbatore and Madurai, headed by a Chief Engineer. Under these Regions, 17 Circle Offices, 85 Divisional Offices and 259 Sub-Divisional Offices are functioning towards design, implementation of small and major Combined Water Supply Schemes (CWSS), urban stand-alone schemes and Under Ground Sewerage Schemes, besides maintenance of CWSS.

6.1 Activities of TWAD Board

- Planning and implementation of protected water supply schemes in rural and urban areas of Tamil Nadu.
- Planning and implementation of Under Ground Sewerage Schemes (UGSS) in urban areas.
- Operation and Maintenance (O&M) of CWSS.
- Testing and monitoring the quality of water supplied
- Implementing measures towards sustainability of drinking water sources.
- Research and training activities.

6.2 Vision of TWAD Board

- Implementation of stand-alone, combined water supply schemes for providing Functional house hold tap connections (FHTCS).
- Enhancing the present per capita water supply of 40 LPCD in rural areas to 55 LPCD in all the existing CWSS.
- Sustainability of the water supply schemes through strengthening of sources, recharge structures, check dams and reducing the wastage of water.

6.3 Water Supply Schemes

6.3.1 Operation and Maintenance of Combined Water Supply Schemes

Combined Water Supply Schemes (CWSS) covering more than one local body are being maintained by TWAD Board as per G.O. (Ms) No.84, Municipal Administration and Water Supply Department, dated 10.03.1994 and

adequate safe water is being supplied to the public.

At present 558 CWSS covering 8 Corporations, 66 Municipalities, 337 Town Panchayats and 48,948 rural habitations are being maintained by TWAD Board.

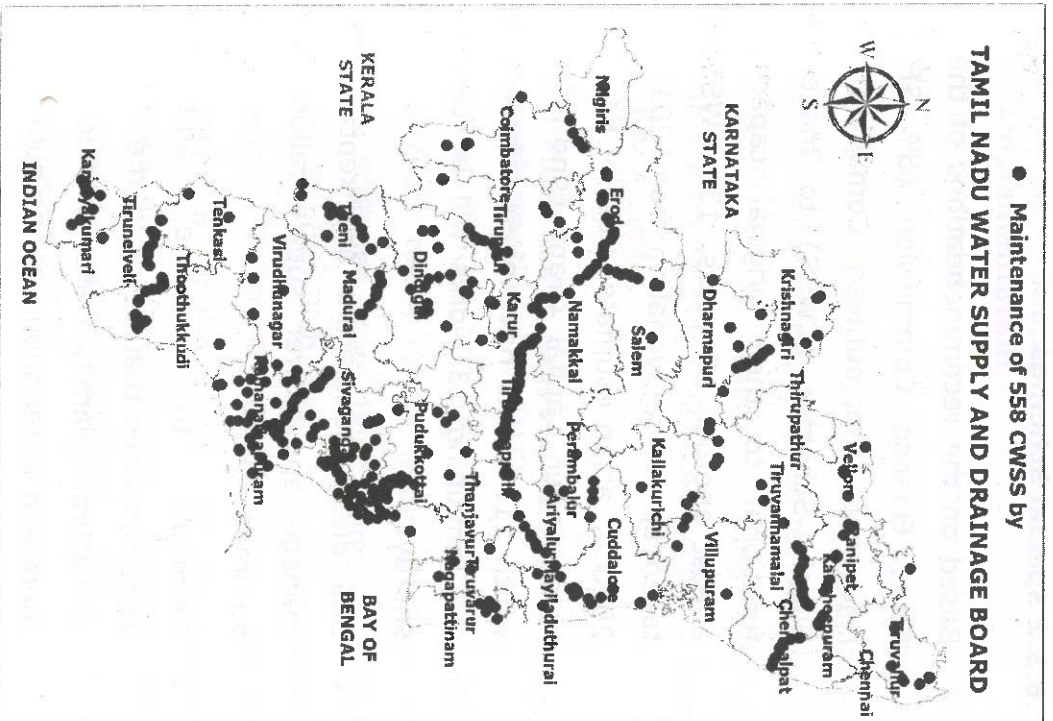
On an average 1,935 million liters of water is supplied daily through the above 558 CWSS to a population of nearly 4.26 crore as detailed below in Table 6.1.

Table 6.1

Sl. No.	Beneficiaries/ Local Bodies	Nos.	Designed Quantity (MLD)	Average Supplied Quantity (MLD)
1	Corporations	8	308	254.82
2	Municipalities	66	292	252.20
3	Town Panchayats	337	390	331.14
4	Rural Habitations	48,948	1,100	1,041.50
5	Industries/Commercial Organizations	562	68	55.32
Total		49,921	2,158	1,935 (90%)

TAMIL NADU WATER SUPPLY AND DRAINAGE BOARD

● Maintenance of 558 CWSS by



6.3.2 Special Schemes

- Based on the recommendations of the Fifth State Finance Commission (5th SFC) to rejuvenate the outlived Combined Water Supply Schemes (CWSS) to make them functional to their original capacity for atleast another 15 years, 130 CWSS were taken up for rejuvenation from 2017-18 to 2020-21 at an estimated cost of Rs. 290.80 crore under Capital Grant Fund (CGF), of which 117 works have been completed and the remaining 13 works will be completed shortly.
- 365 diesel generators are kept ready to manage any power supply failure during summer.
- Damages to pipeline and other appurtenances that occur in the CWSS due to natural calamities are rectified then and there and water supply to the public restored immediately.

222

6.3.3 Water Supply Schemes under Implementation

TWAD Board is implementing 53 water supply schemes with a designed quantity of 1,116.63 MLD to benefit 172.27 lakh population, of which 36 schemes are targeted for completion during 2021-22, 16 schemes during 2022-23 and one scheme during 2023-24 and bring them to the use of public.

(i) Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

Under AMRUT scheme, 9 Water Supply Schemes were taken up for implementation of which, 4 schemes have been completed and 5 Water Supply Schemes for Rajapalayam Municipality, Nagercoil Corporation, Vellore Corporation, 8 Added Areas of Coimbatore Corporation and Water Supply Improvement Scheme to Coimbatore Corporation (Pillur - III) are at various stages of implementation.

223

(ii) Jal Jeevan Mission

Under Jal Jeevan Mission, 7 CWSS covering 2,312 rural habitations and 3 Town Panchayats in Erode, Karur, Tirupathur, Thanjavur, Tirunelveli and Tenkasi Districts are under various stages of implementation at an estimated cost of Rs.1,347.05 crore. These schemes are designed to supply 65.73 MLD of water which will benefit 10.88 lakh population.

The details of the schemes are given below in Table 6.2.

Table 6.2

Sl. No.	District	Name of Scheme	Estimate Cost (Rs. crore)	Population (in lakh)	Water Supply (MLD)
1.	Thanjavur	CWSS to 67 rural habitations in Kumbakonam, Thirupannandal and Thiruvaidainarudur Unions and 2 hamlets in Veppathur and	117.09	1.02	5.97

Sl. No.	District	Name of Scheme	Estimate Cost (Rs. crore)	Population (in lakh)	Water Supply (MLD)
2.	Tenkasi and Tirunelveli	Thiruvaidainarudur Town Panchayats			
2.	Tenkasi and Tirunelveli	CWSS to 48 rural habitations in Alangulam and Pappakudi Unions in Tenkasi District and 1 hamlet in Mulakkudal Town Panchayat	50.50	0.56	3.54
3.	Tirupathur	CWSS to 759 rural habitations in Tirupathur, Jolarpet, Netrampalli & Kandhili Union of Tirupathur District	182.09	2.91	13.99
4.	Karur	CWSS to 756 rural habitations in K.Paramathi and Aravakurichi Unions	440.63	2.09	16.29
5.	Erode	CWSS to 442 rural habitations of Modakurichi Union	412.12	3.16	20.50
6.	Erode	CWSS to 144 rural habitations of Kodurnudi Union	87.68	0.50	3.13

Sl. No.	District	Name of Scheme	Estimate Cost (Rs. crore)	Population (in lakh)	Water Supply (MLD)
7	Erode	CWSS to 96 rural habitations in Gobichempalayam and Nambiyur Unions	56.94	0.64	2.31
		Total	1,347.05	10.88	65.73

In addition to above, 2 CWSS covering 64 rural habitations in Erode and Salem Districts at an estimated cost of Rs. 26.46 crore to benefit a population of 0.73 lakh, are at tender stage.

(iii) Combined 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 per capita water supply from 40 LPCD to 55 LPCD in

rural areas and to provide 135 LPCD in Urban areas.

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

At present 30 CWSS covering 12 Municipalities, 49 Town Panchayats and 9,837 rural habitations in Tiruppur, Karur, Tirunelveli, Dindigul, Krishnagiri, Tiruchirappalli,

Coimbatore, Perambalur, Nagapattinam, Thanjavur, Cuddalore, Namakkal, Salem, Kanyakumari, Erode, Theni and Sivagangai Districts are at various stages of implementation at an estimated cost of Rs. 6,393.99 crore. The total designed capacity of these schemes is 538.24 MLD, which will benefit 91.17 lakh people.

The details of these schemes are given in Table 6.3 below:

Table 6.3

Sl. No.	District	Name of Scheme	Estimate Cost (Rs. crore)	Population (lakh)	Water Supply (MLD)
1	Trichirappalli	CWSS to 293 rural habitations in Musiri, Thathaiyanganpetal, Thuraiyur and Uppiliyapuram Unions.	140.22	1.68	9.87

Sl. No.	District	Name of Scheme	Estimate Cost (Rs. crore)	Population (lakh)	Water Supply (MLD)
2	Sivagangai	CWSS to 8 Town Panchayats and 2452 rural habitations in 11 Unions with bulk provision to 3 Municipalities.	1,752.73	16.11	86.42
3	Tenkasi and Virudhunagar	CWSS to Sankarankoil, Puliyankudi Municipalities, Thiruvendakarn Town Panchayat in Tenkasi District and Rajapalayam, Sivakasi, Thiruthangal Municipalities in Virudhunagar District.	543.20	6.20	61.98
4	Virudhunagar	CWSS to Aruppukottai, Sattur and Virudhunagar Municipalities.	444.71	2.60	26.94
5	Kanyakumari	CWSS to Eraniel Town Panchayat and 319 rural habitations and improvements to	174.00	3.44	35.12

Sl. No.	District	Name of Scheme	Estimate Cost (Rs. crore)	Population (lakh)	Water Supply (MLD)
6	Theni	Padmanabapuram CWSS and Kattathurai CWSS.			
		CWSS to 250 rural habitations in Kadamakikundu - Myadumparai, Andipatti and Theni Unions.	162.43	1.78	10.70
7	Cuddalore	CWSS to Thitakudi, Pennadam, Mangalampettai, Vadalur, Kurinjipadi and Gangaikondan Town Panchayats and 625 rural habitations in Mangalore, Nallur and Vidhachalam Unions in Cuddalore Districts	479.00	7.92	41.40
8	Salem	CWSS to Tiampillai, Attayampatti, Panamarathupatt.	652.84	6.03	61.73

230

Sl. No.	District	Name of Scheme	Estimate Cost (Rs. crore)	Population (lakh)	Water Supply (MLD)
9	Namakkal and Salem	CWSS to Sankari, Alampalayam, Padaveedu Town Panchayats and 669 rural habitations in Pallipalayam and Truchengode Unions.	399.46	6.61	32.65
10	Erode and Tiruppur	CWSS to Perundurai and 7 other Town Panchayats including 547 rural habitations.	224.00	5.47	25.39
11	Coimbatore and Tiruppur	CWSS to Annur, Moopenpalayam and Avinashi Town Panchayats and bulk provision to 155	241.00	1.26	16.70

231

Sl. No.	District	Name of Scheme	Estimate Cost (Rs. crore)	Population (lakh)	Water Supply (MLD)
12	Coimbatore and Tiruppur	rural habitations in Palladam and Tiruppur Unions. Augmentation of water supply to 708 habitations in Annur, Avinashi and Sullur Unions with bulk provision to 165 rural habitations in Tiruppur Union.	362.20	6.43	36.15
13	Tiruchirappalli	CWSS to 138 rural habitations in Thottiyam Union.	49.95	0.64	3.57
14	Thanjavur	CWSS to 134 rural habitations in Kumbakonam Union.	91.13	0.97	5.45
15	Nagapattinam	Source augmentation to existing CWSS to 893 habitations.	42.46	7.03	14.93
16	Perambalur	CWSS to 73 rural habitations in Veppur Union	22.84	0.87	4.05

232

Sl. No.	District	Name of Scheme	Estimate Cost (Rs. crore)	Population (lakh)	Water Supply (MLD)
17	Tirunelveli	CWSS to Keelapavoor Town Panchayat and 163 rural habitations in Pappakudi Kadayam and Keelapavoor Unions	46.55	2.00	9.27
18	Tirunelveli	CWSS to 170 rural habitations in Manur and Palayamkottai Unions	32.40	1.45	6.18
19	Krishnagiri	CWSS to Uthangarai Town Panchayat and 50 other rural habitations in Uthangarai Union	28.24	0.63	2.35
20	Krishnagiri	CWSS to Sigaralappalli and 143 rural habitations in Bargur Union	31.82	0.41	1.46
21	Krishnagiri	CWSS to Nengondapalli and 27 other	8.10	0.20	0.55

233

Sl. No.	District	Name of Scheme	Estimate Cost (Rs. crore)	Population (lakh)	Water Supply (MLD)
22	Krishnagiri	habitations in Hosur Union CWSS to Rayakottai and 28 habitations in Kelmangalam Union	8.46	0.25	0.65
23	Krishnagiri	CWSS to Vejalathall and 39 other rural habitations in Krishnagiri Union	9.90	0.12	0.41
24	Krishnagiri	CWSS to Ennegollu and 122 other rural habitations in Veppanapalli Union	31.00	0.54	2.44
25	Cuddalore	CWSS to 35 rural habitations in Panruti and Annagraram Unions	9.21	0.48	2.20
26	Karur	CWSS to 274 rural habitations in Thanthori Union	81.41	0.86	5.31

234

Sl. No.	District	Name of Scheme	Estimate Cost (Rs. crore)	Population (lakh)	Water Supply (MLD)
27	Tiruppur	CWSS to 5 Town Pandravezis and 318 rural habitations in Madathukkulam and Udumalpet Unions	85.75	4.07	8.83
28	Tiruppur	CWSS to 155 rural habitations in Palladam and Tiruppur Unions	99.24	2.94	15.42
29	Coimbatore	CWSS to 212 rural habitations in Pollachi (South), Pollachi (North) and Kinathukadavu Unions	69.31	0.85	4.92
30	Tiruppur	CWSS to 165 rural habitations in 10 village pandravezis of Tiruppur Union	70.43	1.34	5.70
		Total	6,393.99	91.17	538.24

235

(iv) Urban Stand-alone Water Supply Schemes

TWAD Board is implementing stand-alone water supply schemes for Corporations, Municipalities and Town Panchayats as a project implementation agency. On completion, the schemes are handed over to the respective urban local bodies for operation and maintenance.

Presently, 11 Water Supply Improvement Schemes (WSIS) for 1 Corporation, 6 Municipalities and 3 Town Panchayats in Tirunelveli, Theni, Madurai, Kanyakumari, Dindigul, Thiruvallur, Namakkal and Erode Districts are at various stages of implementation at an estimate cost of Rs. 776.29 crore which on completion will supply 124.02 MLD of water to benefit a population of 12.96 lakh.

The details of the schemes are given in Table 6.4 below:

Table 6.4

Sl. No	District	Name of Scheme	Est. Cost (Rs. crore)	Population benefitted (in lakh)	Water Supply (MLD)
1.	Tirunelveli	WSIS to Tirunelveli Corporation	230.00	6.88	50.00
2.	Theni	WSIS to Bodinayakanur Municipality.	76.15	1.00	15.82
3.	Theni	Dedicated Water Supply Scheme to Bodinayakanur Municipality.	30.00		
4.	Theni	WSIS to Thenkarai Town Panchayat.	9.54	0.28	2.00
5.	Madurai	WSIS to Usilampatti Municipality.	73.03	0.64	9.98
6.	Madurai	WSIS to Anaiyur Municipality.	8.97	0.72	5.40
7.	Kanyakumari	WSIS to Kuzhithurai Municipality	30.94	0.31	4.83
8.	Dindigul	WSIS to Balasamudram Town Panchayat	9.62	0.18	1.92
9.	Thiruvallur	WSIS to Tiruthani Municipality	109.68	0.85	9.44

Sl. No	District	Name of Scheme	Est. Cost (Rs. crore)	Population benefited (in lakh)	Water Supply (MLD)
10.	Namakkal	WSSIS to Namakkal Municipality.	185.24	1.84	22.09
11.	Erode	WSSIS to Sivagiri Town Panchayat	13.12	0.26	2.54
		Total	776.29	12.96	124.02

6.4 Under Ground Sewerage Schemes

Under Ground Sewerage 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), German Development Bank (KfW) assisted Sustainable Municipal Infrastructure Financing-Tamil Nadu (SMIF-TN-II-2), Housing Urban Development Corporation (HUDCO), Tamil Nadu Urban Development Project-III (TNUDP-III), Tamil Nadu Urban Development Fund (TNUDF).

6.4.1 AMRUT

UGSS to Velankanni Town Panchayat in Nagapattinam District has been completed. Four Under Ground Sewerage Schemes, at an estimated cost of Rs.1,082.49 crore, to benefit a population of 9.63 lakh covering Coimbatore Corporation and 3 Municipalities are at various stages of implementation as given in Table 6.5.

Table 6.5

Sl. No.	District	Name of ULB	Estimate Cost (Rs. crore)	Beneficiary Population (lakh)	Treatment capacity (MLD)
1	Ramanathapuram	Rameshwaram Municipality	57.60	0.43	4.08
2	Tiruppur	Ambur Municipality	182.55	1.83	16.71
3	Virudhunagar	Rajapalayam Municipality	251.20	2.20	21.85

Sl. No.	District	Name of U/B	Estimate Cost (Rs. crore)	Beneficiary Population (lakh)	Treatment capacity (MLD)
4	Coimbatore	Kurichi and Kunjyanthur areas of Coimbatore Corporation	591.14	5.17	30.53
		Total	1,082.49	9.63	73.17

6.4.2 Under Ground Sewerage Schemes under Other Schemes

A total of 15 Under Ground Sewerage Schemes covering 2 Corporations, 6 Municipalities and 7 Town Panchayats are at various stages of implementation at an estimated cost of Rs.1,479.32 crore. On completion of these schemes, 124.73 MLD of used water will be collected and treated as per standards benefiting 11.50 lakh people.

The details of the schemes are as given in Table 6.6.

Table 6.6

Sl. No.	District	Name of U/B	Estimate Cost (Rs. crore)	Beneficiary Population (lakh)	Treatment capacity (in MLD)
1.	Tiruchirappalli	Manadhanalur Town Panchayat	30.11	0.36	4.16
2.	Tiruchirappalli	S. Kannanur Town Panchayat	19.45	0.18	2.25
3.	Thanjavur	Vallam Town Panchayat	34.51	0.20	2.35
4.	Sivagangai	Karakudi Municipality	140.53	1.39	16.00
5.	Kanyakumari	Negercoil Corporation.	120.01	1.54	17.66
6.	Thoothukudi	Thoothukudi Corporation.	95.00	2.65	23.85
7.	Vindhunagar	Sattur Municipality	48.39	0.36	4.63
8.	Theri	Melachokkanathapuram Town Panchayat	41.72	0.22	1.90
9.	Villupuram	Villupuram Municipality (Part)	263.00	0.60	6.91
10.	Villupuram	Tindivanam Municipality	268.00	1.00	11.44
11.	Thiruvalur	Ponneri Town Panchayat	54.78	0.57	6.52

Sl. No.	District	Name of U/B	Estimate Cost (Rs. crore)	Beneficiary Population (lakh)	Treatment capacity (in MLD)
12.	Chengalppet	Thiruppurur Town Panchayat	42.00	0.33	4.02
13.	Erode	Perundurai Town Panchayat	51.50	0.33	3.14
14.	Coimbatore	Mettpalayam Municipality	100.10	0.77	8.65
15.	Coimbatore	Pollachi Municipality	170.22	1.00	11.25
		Grand Total	1,479.32	11.50	124.73

6.5. Preparation of Detailed Project Reports and Investigation for New Schemes

6.5.1. Water Supply Schemes

During the year 2020-21 administrative approval has been accorded for the following two CWSS covering 3 Municipalities, 10 Town Panchayats and 979 rural habitations in Villupuram and Namakkal Districts at an estimated cost of Rs.2,435.52 crore as given in Table 6.7. Now, action is being taken to arrange funds for these schemes.

Table 6.7

Sl. No.	District	Name of scheme	Estimate Cost (Rs. crore)	Beneficiary Population (lakh)	Water Supply (MLD)
1	Namakkal	CWSS Rasipuram Municipality, 8 Town Panchayats and 523 rural habitations in Rasipuram, Vennandur, Namagiripetlai and Pudukotai unions.	932.80	4.36	86.04
2	Villupuram	Setting up of 60 MLD capacity Desalination Plant at Koornedu in Villupuram District and conveyance of product water to Villupuram, Tindivanam Municipalities, Metrakam, Vikravandi Town Panchayats and 456 rural habitations.	1,502.72	7.33	60.00

Detailed Project Reports have been prepared for 3 CWSS covering 1 Corporation, 2 Municipalities, 11 Town Panchayats and 1,796 rural habitations in Ramanathapuram, Thoothukudi, Dindigul and Pudukkottai Districts at an estimate cost of Rs.2,629.41 crore.

The Detailed Project Reports are under preparation for 12 CWSS covering 6 Municipalities, 33 Town Panchayats and 11,519 rural habitations in Thiruvavur, Tiruchirappalli, Thanjavur, Nagapattinam, Thiruvannamalai, Vellore, Tirupathur, Ranipet, Krishnagiri, Dindigul, Tiruppur, Madurai, Tirunelveli, Namakkal and Kallakurichi Districts.

6.5.2. Under Ground Sewerage Schemes

TWAD Board is implementing Under Ground Sewerage Schemes in selected towns based on the priority fixed by Director of

Municipal Administration and Commissioner of Town Panchayats.

Board has also prepared DPR for 3 UGSS covering 2 Corporations and 1 Municipality in Chengalpattu, Krishnagiri and Coimbatore Districts at a cost of Rs.920.14 crore. Further, the DPR for providing UGSS to Thoothukudi Corporation (part) is under preparation.

6.6 Research, Design, Training and Project Management Centre

The following tasks are carried out to reduce the cost in operation and maintenance of the CWSSs maintained by TWAD Board.

- Automation of the operation of 100 Pumpsets of upto 5 HP capacity has been carried out during 2020-21 resulting in an annual saving of Rs.174.50 lakh in the maintenance expenditure.

- It is proposed to carry out automation of the operation of another 500 pumpsets at an estimated cost of Rs.10 crore which is expected to reduce the annual operation & maintenance cost by Rs.9.38 crore.
- A study is being carried out by an Energy Service Company (ESCO) for increasing the efficiency of pumpsets in Water Treatment Plant at Vellankadu in Pillur-I CWSS, which is expected to reduce the energy consumption.
- It is proposed to install sensors based on Internet of Things (IoT) for online monitoring the performance of two CWSS.

Training Activities

TWAD Board is having 4 training centers at Chennai, Coimbatore Tiruchirappalli and Madurai. Training and capacity building programmes are organized for the technical and other staff of the Board and Local Bodies through these centres.

During 2020-21, two training programmes were organized benefiting 200 personnel. During 2021-22, it is proposed to conduct training for 1,100 field Engineers, Water Analysts and Hydro-geologists of TWAD Board and field Engineers of Rural Development Department under JJM support activities.

6.7. Material Quality Control Laboratory

Four Material Testing Laboratories are functioning at Madurai, Tiruchirappalli, Coimbatore and Tindivanam. Two of these laboratories namely Madurai and Coimbatore are NABL accredited.

The following materials are being tested in these Laboratories:

- Pipes - Poly Vinyl Chloride (PVC), High Density Poly Ethylene (HDPE), Galvanized Iron (GI), Ductile Iron (DI) and Stoneware

- Concrete design mix
- Construction material like cement, reinforcement steel, sand, coarse aggregates, bricks and concrete
- Filter media, hollow blocks, paver blocks
- Electric cables

During the year 2020-21, 10,669 samples were tested. It is proposed to test 11,000 samples during the current year 2021-22.

6.8. Hydro-geological Activities

Sustainable water sources are identified scientifically for various water supply schemes following geophysical survey method.

The remote sensing and Geographical Information Systems (GIS) are extensively utilized and District-wise Block ATLAS have been prepared and shared with all the local bodies for locating sustainable water sources.

Technical guidance is given to public and Government Organizations for water management and construction of Rain Water Harvesting (RWH) structures.

During the year 2020-21, 1,188 number of Geophysical Survey works were carried out and earned revenue of Rs. 35.47 lakh.

6.9 Rain Water Harvesting Structures

TWAD Board has taken up Sustainable Water Security Mission ("SuWaSem") scheme at a cost of Rs. 20 crore to ensure water security by creating various RWH structures in urban areas. TWAD Board provides technical assistance and acts as a Nodal Agency for implementing this Project. This project is implemented through Directorate of Municipal Administration and Commissionerate of Town Panchayats.

TWAD Board also extends its technical support to rejuvenate the water bodies, install recharge structures and RWH structures in urban areas to make Water Resilient Cities as per the Vision of the MA&WS Department.

6.10. Water Quality Testing and Surveillance

To ensure protected water supply to public, TWAD Board has established one state level, 31 district level, 56 sub-district level and 25 block level laboratories. Through these laboratories, testing of basic chemical and bacteriological quality parameters and quality monitoring activities are carried out in rural and urban areas. The state level water testing laboratory of TWAD Board is a NABL accredited laboratory, which has been recognized as State Referral Institute for Tamil Nadu by the Union Government.

In 2020-21, 3,45,550 water samples were tested. Revenue of Rs. 7.38 lakh was realized through testing of water samples and sale of Field Water Testing Kits (FTKs).

During the year 2021-22, it has been proposed to test the quality of around 4,50,000 water samples in the state and district level laboratories with JJM and state funds. Further, it is proposed to give training for 63,000 grass-root level functionaries and Panchayat clerks for using Field Water Testing Kits.

It is also proposed to obtain NABL Accreditation for existing 31 District Laboratories and NABL Recognition for 56 Sub-Divisional laboratories and 25 Block level laboratories under JJM.

6.11 Financial Position

The total revenue expenditure as per the Revised Estimate for the year 2020-21

(Tentative) is Rs. 1,332.35 crore whereas the total income is Rs.942.18 crore.

The details of income, expenditure, surplus/deficit and cumulative deficit for the year 2018-19 to 2020-21 are given in Table 6.8.

Table 6.8

(Rs. in crore)

Sl. No.	Particulars	FY 2018-19	FY 2019-20	FY * 2020-21 (Tentative)
I.	Revenue Income			
1	Centage charges	167.57	182.47	199.02
2	Water charges	613.12	649.52	543.12
3	Other income	116.85	81.94	43.45
4	Grants	571.96	449.26	156.59
	Total	1,469.50	1,363.19	942.18

Sl. No.	Revenue Expenditure	FY 2018-19	FY 2019-20	FY * 2020-21 (Tentative)
1	Salary	136.03	127.51	108.11
2	Pension and retirement benefits	357.09	412.07	309.70
3	Maintenance of CWSS	911.93	924.74	896.20
4	Other expenditure	26.19	25.61	18.34
	Total	1,431.24	1,489.93	1,332.35
	Surplus/ Deficit	38.26	(-)126.74	(-)390.17
	Cumulative Deficit	(2,183.89)	(2,310.63)	(2,700.80)

*Annual accounts for the year not yet finalized.

The details of amount payable, receivables and amount payable including outstanding of Loan as on 31.03.2021 are given below in Table 6.9.

Table 6.9

(Rs. In crore)

Sl.No	Particulars	Amount as on 31.03.2021 (Tentative)
I Payable		
1	TANGEDCO	1,518.59
2	Retirement benefits to the Board pensioners	182.40
3	CWSS - O&M contractors.	271.17
4	Contractors payment (Scheme funds)	522.46
5	Others	395.64
	Total	2,890.26*
II Receivable (Water charges)		
1	Corporations	261.05
2	Municipalities	10.09
3	Town Panchayats	10.82
4	Village Panchayats	202.14
5	Private Beneficiaries	121.43
	Total	605.53*
III Outstanding of LIC Loan		
	a) Principal	107.23
	b) Interest	1.59
	Total	108.82*

*Unaudited figures