



SUPREME AUDIT INSTITUTION OF INDIA
लोकहितार्थं सत्यनिष्ठा
Dedicated to Truth in Public Interest

Report of the Comptroller and Auditor General of India

Performance Audit of 'Jal Jeevan Mission'



Government of Tamil Nadu
Report No. 10 of 2025
(Civil)

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Comptroller and Auditor General of India**

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PREFACE

This Report for the year ended March 2024 has been prepared for submission to the Governor of Tamil Nadu under Article 151(2) of the Constitution of India, for being laid before the State Legislature.

The Report of the Comptroller and Auditor General of India contains the results of Performance Audit of 'Jal Jeevan Mission' in Tamil Nadu.

The instances mentioned in the Report are those, which came to notice during test audit for the period 2019-24 as well as those which came to notice in earlier years but could not be reported in the previous Audit Reports.

The Audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Jal Jeevan Mission (JJM) was launched in August 2019 with the vision *viz.*, ‘Every rural household has drinking water supply in adequate quantity (minimum 55 litres per capita per day (lpcd)) of prescribed quality on regular and long-term basis at affordable service delivery charges leading to improvement in living standards of rural communities’. JJM is a decentralised and community-managed programme.

Some of the broad objectives of the Mission are (i) to provide Functional Household Tap Connection (FHTC) to every rural household, Schools, *Anganwadi* centres and other public buildings, (ii) to prioritise provision of FHTCs in quality affected areas, etc., (iii) to monitor functionality of tap connections and to ensure voluntary ownership through local community contribution, (iv) to assist in ensuring sustainability of water supply system including source, infrastructure, Operation and Maintenance (O&M) and (v) to bring awareness on various aspects such as significance of safe drinking water.

Whenever a particular Administrative Unit *viz.*, Village Panchayat (VP)/Block/District achieves 100 *per cent* coverage in providing FHTCs, the Unit is termed as having achieved ‘*Har Ghar Jal*’ (HGJ) status.

For every household, JJM funding is provided for one tap out of three delivery points (taps), *viz.* kitchen, washing & bathing area and toilet. The Centre-State funding pattern for implementation of the Mission is 50:50 for Coverage i.e., infrastructure in terms of FHTCs provided to rural households and 60:40 for Support Activities including Water Quality Monitoring and Surveillance (WQM&S). Community contribution of up to 10 *per cent* of the capital cost in cash and/or kind or labour is collected from households for in-village piped water supply infrastructure and the remaining cost will be shared in the above mentioned ratio.

In Tamil Nadu, the implementation of JJM is done by the Tamil Nadu Water Supply and Drainage (TWAD) Board for water supply schemes that cater to multiple villages/Schemes. In cases where the scheme caters to a single VP or if the source is available within the VP, then the implementing agency is the Rural Development and Panchayat Raj (RD&PR) Department.

Considering the importance of the mission in ensuring piped water supply in rural areas, CAG took up this Performance Audit covering the activities during 2019-2024 in six selected districts. The objectives of the Audit was to assess whether the institutional framework for planning and implementation of the scheme was effective in achieving the desired objective, funds were utilised economically and assets created and water security are sustainable.

Major Audit findings

Out of 1.25 crore households in the State, only 21.76 lakh households (17.37 *per cent*) had tap water connections at the start of the Mission. At the

time of Audit (2024), the achievement was 1.05 crore (83.94 *per cent*) with 10 districts recording 100 *per cent* achievement in coverage. However, we noticed that 50 *per cent* rural households in the selected districts that were provided with tap connections were not supplied with sufficient quantity (55 lpcd) of water. A majority of FHTCs provided (96 *per cent*) were outside the house in contravention of the Guidelines.

Audit noticed that no baseline survey was conducted to confirm need assessments for inclusion in the Village Action Plan and the District Water and Sanitation Mission did not conduct the prescribed number of meetings during 2019-24 which impacted the implementation of the scheme. Test-check of JJM works sanctioned in Ramanathapuram District revealed that in one selected block, out of 12 works taken up in September 2021, eight were cancelled prior to commencement. The remaining four works were halted subsequently due to objections raised by the local community. In another instance, despite requests from the local community not to construct open wells as the groundwater in the designated area was salty and non-potable, three open wells were constructed. These wells ultimately remained unused by the Village Panchayat.

The in-village components were not taken up in synchronisation with the works executed by TWAD Board resulting in infrastructure created not being used owing to non-completion of source works, non-availability of water sources, etc. There were lapses in tendering procedure for JJM works. Issues were noticed in execution of works by TWAD Board such as delays in site identification, non-obtaining of permissions from line departments and delayed execution, etc. In respect of works executed by RD&PR Department, no penalty was levied for the delayed execution. Due to defective planning, water storage structures were constructed in habitations that had already attained sufficiency, instead of places with shortage.

With regard to the supply of the prescribed minimum quantity (55 lpcd) of water under JJM, we noticed that in the test-checked districts, none of the habitations in Nagapattinam district were supplied with 55 lpcd of water. Although Coimbatore district reported 100 *per cent* achievement in providing FHTCs, only 8.67 *per cent* of its habitations were supplied with water in accordance with the prescribed quantity norms.

We also noticed that (i) four district water testing laboratories functioned without NABL accreditation; (ii) infrastructure and equipment were found to be lacking in all the 18 laboratories (including State laboratory) at various levels across the selected districts; (iii) Water quality testing for all the 13 prescribed parameters was not adequately done by TWAD Board; (iv) there was no mechanism for referring samples that tested positive for contaminants to higher level laboratories and (v) Field Testing Kits were not utilised in any of the selected districts.

We collected water samples from 43 habitations randomly selected across six districts and had them tested in TWAD's District Water Testing

Laboratories. Of these, five samples from habitations in Coimbatore district and two samples from Ramanathapuram district did not meet the prescribed water quality guidelines (BIS 10500:2012 drinking water standards). During Joint Physical Verification in certain habitations of Viluppuram, Ramanathapuram and Theni, beneficiaries also expressed that the water supplied was not potable.

There was variance in the data on number of households as per JJM dashboard and the number of property tax assessments as per VP Tax portal. About 67 *per cent* of the community contribution were yet to be collected. Non-assessment and non-collection of water connection charges were also noticed, which would place an additional burden on the Operation and Maintenance of the asset. Inadequate monitoring and follow-up regarding maintenance of the Reverse Osmosis plants led to 55 *per cent* of the installed RO plants non-functional in three districts *viz.*, Ramanathapuram, Viluppuram and Salem, leading to non-achievement of the intended objective of providing safe drinking water to the targeted habitations.

Lapses in monitoring and verification processes of Third Party Inspection Agencies (TPIAs) were noticed. The Scrutiny Reports used by the TPIA was incomplete. Audit noticed that Information, Education, and Communication (IEC) materials remained undistributed/unused in the districts, despite a lapse of more than six months since their receipt. Geo-tagging of assets and linking of FHTCs with Aadhaar were incomplete. Social audit was not conducted in any of the six selected districts.

We conclude that though the State could achieve FHTC coverage of 84 *per cent* to the rural population, 50 *per cent* of the rural population were yet to get 55 lpcd. There was lack of synchronisation in taking up works resulting in non-utilisation of assets created. Further, four District Laboratories were functioning without NABL accreditation, testing was not conducted for the prescribed parameters and mechanism to take up the samples that tested positive for contaminants, to next level for further testing was not in place. Implementation of works was also affected with issues like delayed execution, defective planning etc. All the beneficiaries were not assessed for Water charges resulting in additional burden to the VPs on the O&M cost. We also noticed lapses in monitoring and verification processes of Third Party Inspection Agencies.

What we recommend?

Audit have made the following recommendations:

INSTITUTIONAL FRAMEWORK AND PLANNING

- The Government should direct the implementing agencies to take up works only after need assessments and should also ensure that estimates are prepared after taking into account the actual requirements.

- The Government should ensure effective synchronisation in works executed by the implementing agencies so as to avoid delays in utilisation of assets created in the in-village components.

IMPLEMENTATION OF JAL JEEVAN MISSION

- The Government should direct the Department to update in a time bound manner, the household data in the IMIS portal so as to ensure complete coverage in all districts.
- The Government should fix responsibility for the lapses in tender procedures and direct the Implementing agencies to ensure adherence to the relevant Act and Rules.
- The Government must direct the TWAD Board to ensure that all the necessary approvals have been obtained before commencement of works so that all the water supply works under JJM are executed without delay.
- The Government should direct the Department to rectify the deficiencies in the execution of work so as to ensure proper utilisation of all assets created, at the earliest for achievement of the intended objective.
- The Government should ensure that storage infrastructure are created only in needy habitations to avoid idling of the assets created besides optimum utilisation of valuable resources.

FINANCIAL MANAGEMENT

- The Government should ensure that the requisite community contributions as per the Operational Guidelines are collected from the beneficiaries.
- The Government should ensure that water charges be assessed and collected from all the beneficiaries so as to augment the revenue source of the VPs.

WATER QUALITY MONITORING AND SURVEILLANCE

- The Government must ensure renewal of accreditation of the water testing laboratories at the earliest.
- The Government should ensure that all equipment are purchased to make the laboratories fully functional at the earliest for comprehensive water testing in order to take timely remedial action.
- The Government must direct the implementing agencies to ensure optimum utilisation of the Field Testing Kits by conducting tests and recording the same.
- The Government should direct the Department to ensure the functionality of Reverse Osmosis Plants created for providing potable water.

POST OPERATION MANAGEMENT, MONITORING AND EVALUATION

- The Government should direct the Department to ensure that payments are released to contractors only on receipt of verification Reports, complete in all aspects, from the Third Party Inspection Agencies.
- The Government should ensure strict adherence to the Mission Guidelines in the conduct of social audit and for geo-tagging of assets.

OUTPUT AND OUTCOME FRAMEWORK OF JAL JEEVAN MISSION

- The Government should take steps to bring in all the schools and *Anganwadi* centres within the purview of JJM so as to provide FHTCs to all of them.

CHAPTER I

INTRODUCTION

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INTRODUCTION

1.1 Jal Jeevan Mission - Broad objectives

Jal Jeevan Mission (JJM) was launched in August 2019 with the vision viz., ‘Every rural household has drinking water supply in adequate quantity of prescribed quality on regular and long-term basis at affordable service delivery charges leading to improvement in living standards of rural communities’. JJM is a decentralised, demand-driven and community-managed programme. Some of the broad objectives of the Mission are:

- to provide Functional Household Tap Connection (FHTC) to every rural household and to Schools, *anganwadi* centres, Gram Panchayat buildings, Health centres, wellness centres and community buildings.
- to prioritise provision of FHTCs in quality affected areas, villages in drought prone and desert areas, *Sansad Adarsh Gram Yojana* villages, etc.
- to monitor functionality of tap connections and to promote and ensure voluntary ownership among local community by way of contribution¹.
- to assist in ensuring sustainability of water supply system, i.e. water source, water supply infrastructure, and funds for regular Operation and Maintenance (O&M).
- to bring awareness on various aspects and significance of safe drinking water and involvement of stakeholders in manner that make water everyone’s business.

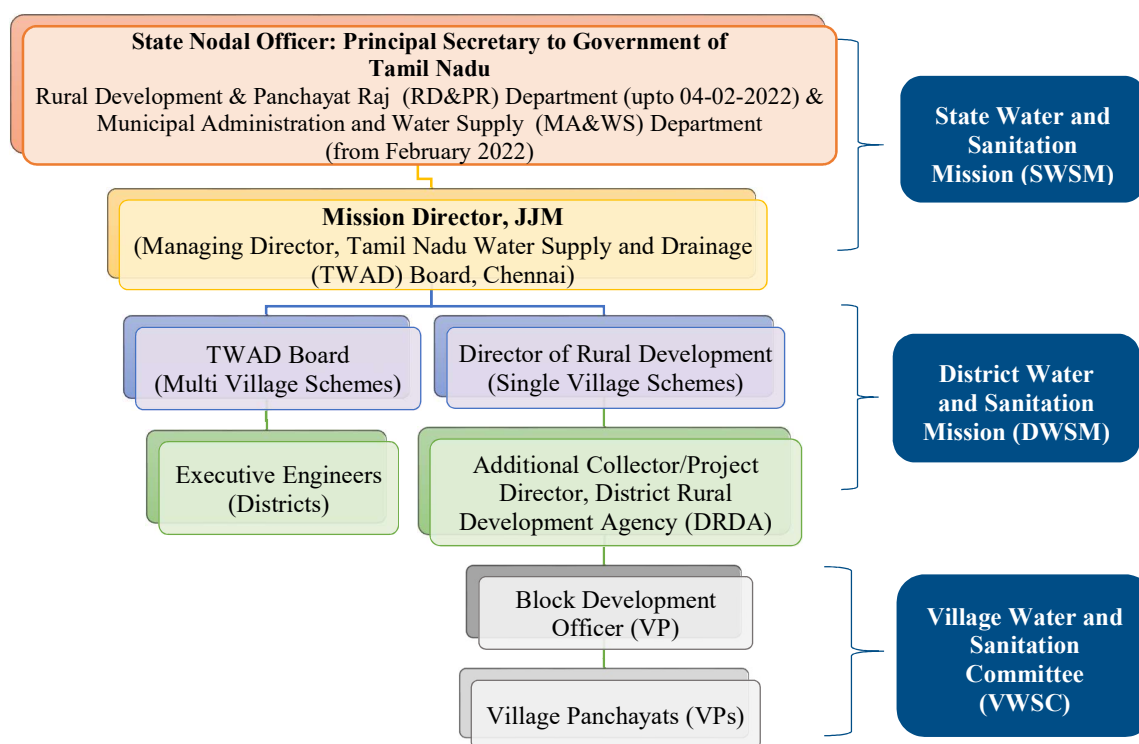
1.2 Organisation Structure

The organisation structure for implementation of JJM in Tamil Nadu is given in **Exhibit 1.1**. At the State level, the Principal Secretary to Government, Municipal Administration and Water Supply Department, is the Nodal Officer and the Managing Director, Tamil Nadu Water Supply and Drainage (TWAD) Board, is the Mission Director of JJM in Tamil Nadu.

Abbreviations used in this Report are listed in the Glossary at Page 80.

¹ In cash, kind and/or labour and voluntary labour (*shramdaan*).

Exhibit 1.1: Institutional mechanism for the implementation of JJM



1.3 Audit Objectives

The Performance Audit was conducted to ascertain whether

- Programme objectives (output and outcomes) have been achieved successfully.
- Efficient institutional framework is in place for planning, implementation, and post operational management of the scheme.
- Financial resources have been employed in an economic and efficient manner; and
- Assets created through the programme are sustainable for the next two to three decades and do not compromise water security for future generations.

1.4 Audit Criteria

The main sources of audit criteria were:

- Operational Guidelines for implementation of JJM issued by Government of India (GoI) and Government of Tamil Nadu (GoTN);
- Water Quality Monitoring & Surveillance Framework;
- Central Public Health and Environmental Engineering Organisation Manual 2005;
- Codes, Manual and Rules issued by GoTN;

- State specific guidelines and all orders issued by the State Government facilitating implementation of JJM in Tamil Nadu;
- Provisions of ‘Tamil Nadu Transparency in Tenders Act, 1998’ and ‘The Tamil Nadu Transparency in Tenders Rules, 2000’ made thereunder.

1.5 Audit Scope and Methodology

There are 37 District Panchayats (one each for 37 districts excluding Chennai), 388 Panchayat Unions (Blocks) and 12,525 VPs in Tamil Nadu. Of the 37 districts, Audit sampled six districts as given in **Table 1.1**.

Table 1.1: Sample Selection for the Performance Audit on JJM

Level	Audit Sampling
District	Districts were divided into three categories - high, average and low performing districts in terms of number of tap connections provided up to 30 June 2024 and two districts from each strata were selected (Exhibit 1.2).
Block	In each selected district, two Blocks were selected based on random sampling.
Village Panchayat	In each selected block, 5 VPs were selected on random sampling.

(Source: Approved Guidelines)

The details of selected districts, Blocks and VPs are given in **Appendix 1.1**.

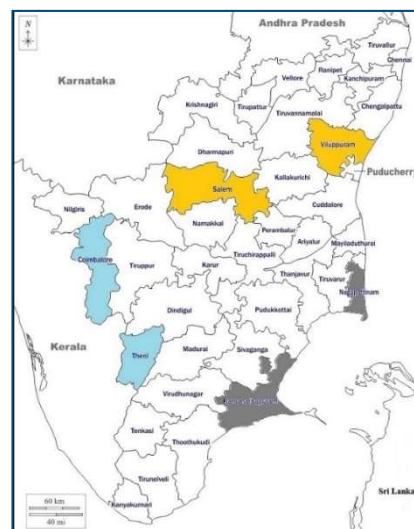
The audit was conducted by scrutiny of records at the Secretariat of RD&PR and MA&WS departments of GoTN, TWAD Board, DRDAs and TWAD divisions in the six selected districts, Blocks and VPs. In addition, Audit also conducted Joint Physical Verification (JPV) with Departmental officials, Focused Group Discussion (FGD) with stakeholders in each Block and Beneficiary Survey in the selected VPs.

The Performance Audit was conducted covering a period of 2019-2024. An Entry Conference was held with the Principal Secretary to GoTN, MA&WS Department on 25 July 2024 where the Audit objectives, criteria and scope of Audit were explained.

An Exit Conference was held with the Principal Secretary to Government, MA&WS Department on 10 March 2025 to discuss the Audit findings.

The responses given by the audited entities were considered and suitably incorporated in this report.

Exhibit 1.2: Districts selected for PA



1.6 Components of JJM in Tamil Nadu and their Implementing Agencies

In order to achieve the goal of ensuring water supply to rural households, Government of Tamil Nadu (GoTN) issued 'Operational Guidelines for the implementation of JJM' in June 2020 which was further revised in August 2022. The components supported under JJM are given below:

- Development of in-village piped water supply infrastructure to provide tap water connection to every household. This includes source augmentation, storage, distribution line and household tap connections.
- Development of reliable drinking water source (Single Village Scheme (SVS)² and Multi Village Scheme (MVS)/Combined Water Supply Scheme (CWSS)³) and/or augmentation of existing water sources to provide long term sustainability of water supply system.
- Retrofitting of completed and on-going SVS/MVS (CWSS) wherever feasible to provide FHTCs at a minimum service level of 55 lpcd⁴.
- Support activities: Information, Education and Communication (IEC) among local communities, training, development of utilities, third party inspection, water quality laboratories, water quality testing and surveillance, etc.

The implementing agencies in Tamil Nadu for the various components of JJM are as below:

In-village infrastructure	:	Rural Development and Panchayat Raj (RD&PR) Department
MVS (CWSS)	:	Tamil Nadu Water Supply and Drainage (TWAD) Board
Maintenance	:	In-village components by the Village Panchayat (VP) and CWSS by TWAD Board
Support Activities	:	TWAD Board, RD&PR Department, Self Help Groups etc.

² A scheme to provide water supply to one/more than one or all habitations in a village panchayat, if the source is available within the habitation/village panchayat. The JJM Operational Guidelines defines habitation as a group of minimum 20 households and/or 100 persons.

³ Multi Village Scheme is called as Combined Water Supply Scheme in Tamil Nadu wherein water supply is provided to cover more than one local body, i.e, more than one village panchayat.

⁴ Litre per capita per day.

1.7 Status of works taken up under JJM

The MVS/CWSS works sanctioned in the State and taken up by TWAD board during 2019-24 and the connected in-village component of these works along with the SVS works executed by the RD&PR Department and the status of these works as of December 2024 are given in **Table 1.2**.

Table 1.2: JJM works pending at State level

MVS (CWSS) works - Implementing agency - TWAD Board			
Year	Number of works		
	Sanctioned	Completed	Pending
2020-21	10	9	1
2021-22	5	3	2
2022-23	86	62	24
2023-24 ⁵	0	0	0
In-village component of the above mentioned MVS (CWSS) works - Implementing agency - RD&PR Department			
NEW MVS	7,993	5,525	2,468
MVS Retrofitting	2,654	2,654	0
SVS works - Implementing agency - RD&PR Department			
2020-21	15,164	15,164	0
2022-23	3,244	3,244	0
2023-24	1,301	722	579

(Source: TWAD Board and RD&PR Department)

The number of works executed by TWAD Board and RD&PR Department during 2019-24 in the selected districts and the status of these works as of December 2024 is given in **Table 1.3**.

⁵ No new work was sanctioned in the year 2023-24 by TWAD Board and the works sanctioned earlier were still under execution.

Table 1.3: Status of JJM works executed in selected districts

(In numbers)

District	Works executed by TWAD Board			Works executed by RD&PR Department		
	Sanctioned	Completed	Pending	Sanctioned	Completed	Pending
Coimbatore	1	1	0	1,196	1,196	0
Nagapattinam	1	0	1	517	326	191
Ramanathapuram	2	0	2	1,565	408	1,157
Salem	5	3	2	2,570	2,553	17
Theni	0	0	0	452	452	0
Viluppuram	1	1	0	457	457	0
Total	10	5	5	6,757	5,392	1,365

(Source: TWAD Board and RD&PR Department)

In the selected districts, TWAD executed 10 major works during 2020-24. The status of these works as of December 2024 are given in **Appendix 1.2**.

1.8 Acknowledgement

Audit acknowledges the co-operation extended by the Departments and all audited entities including TWAD Board in conduct of this Performance Audit.

1.9 Report Structure

The audit findings are grouped under the following Chapters:

- Chapter II : Institutional Framework and Planning
- Chapter III : Implementation of Jal Jeevan Mission
- Chapter IV : Financial Management
- Chapter V : Water Quality Monitoring and Surveillance
- Chapter VI : Post Operation Management, Monitoring and Evaluation
- Chapter VII : Output and Outcome Framework of Jal Jeevan Mission

CHAPTER II
INSTITUTIONAL
FRAMEWORK AND
PLANNING

CHAPTER II

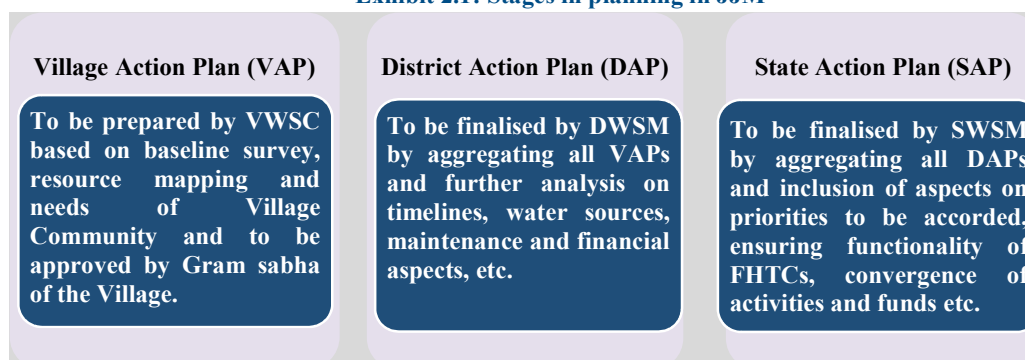
INSTITUTIONAL FRAMEWORK AND PLANNING

Due to non-conduct of the Village Water and Sanitation Committee (VWSC) meetings, the Village Action Plans were formulated without any need assessment which impacted the implementation of scheme. The District Water and Sanitation Mission in the selected districts did not conduct the prescribed number of meetings during 2019-24. No baseline survey was conducted to confirm the actual requirements of the VPs resulting in cancellation of works. Lack of synchronisation in the works executed by the implementing agencies viz., TWAD Board and RD&PR Department was noticed.

2.1 Institutional framework under Jal Jeevan Mission

The Operational Guidelines of JJM laid emphasis on strategised planning to implement the various components aimed at providing FHTCs to all rural households. Action plans at Village, District and State levels, specifying the modalities for implementation, activities to be taken up, output to be achieved etc., were to be prepared and finalised as detailed in **Exhibit 2.1**.

Exhibit 2.1: Stages in planning in JJM



The Annual Action Plan (AAP) emerges from the SAP, detailing physical and financial targets for the year and is approved by the Department of Drinking Water and Sanitation (DDWS), GoI. The planning strategy was also reiterated in the State specific guidelines for JJM.

2.2 Functioning of the Village Water and Sanitation Committee

The Village Action Plan (VAP) is a comprehensive document addressing a village's needs, including provision of FHTCs for all rural households. As per JJM guidelines, VAPs are to be prepared by the Gram Panchayat or its sub-committees, such as the Village Water and Sanitation Committee (VWSC), based on baseline surveys and community needs. The VAP outlines fund requirements, timelines, greywater treatment, reuse plans and surveillance

activities. All drinking water-related works in the village have to follow the VAP for coordination and efficiency.

In Tamil Nadu, GoTN issued orders (July 2005) establishing various Committees for VPs, including 'Development Committee'. Post the implementation of JJM, GoTN issued orders in March 2020 stating that the said 'Development Committee' would also act as the VWSC for JJM implementation, for managing water supply schemes, planning, execution, and maintenance of the infrastructure created as well as preparing the VAP for addressing water availability, quality, and FHTC needs.

- To an Audit questionnaire on the formation of VWSCs in the selected VPs, 52 of the 60 selected VPs stated that the VWSCs were formed in their VPs.
- Audit scrutiny of records revealed that in Viluppuram District, the VWSC were established in the ten sampled VPs during 2021-22. However, each of the committees in these villages has held only one meeting (i.e., at the time of formation). On this being pointed out, the Block Development Officers (BDOs) of selected Blocks replied that action will be taken to monitor the members of the respective committee to conduct the meeting periodically.
- In Ramanathapuram District, VWSC was formed only in 2023, and, no meetings were conducted after its formation.
- Similar issues were noticed in the selected VPs of Salem District, wherein it was observed that the VWSCs were non-functional.

Due to non-conduct of the VWSC meetings, the VAPs were formulated without any need assessment or baseline survey, which impacted the implementation of scheme.

2.3 Deficiencies in preparation of Village Action Plans

As per the JJM Dashboard data for Tamil Nadu, Village Action Plan (VAP) was prepared for 11,558 VPs (92.29 *per cent*) against the total of 12,525 VPs in the State. In the sampled districts, test-check of nine VAPs revealed the following:

- Figures relating to population, number of households and corresponding water requirement did not align with the water sources in any of the nine villages.
- Grey-water management (in terms of soak pits/ waste stabilization pond) was overlooked in the action plans.
- Three¹ out of the nine VAP documents did not adhere to the prescribed format of the Operational Guidelines and none of the VAP documents were properly signed².

¹ Gohilapuram, Nagayagoundanpatty and Sillamarathupatti.

² By chairperson, Public Health Engineering Department/Rural Water Supply official & Implementation Support Agency representative.

- Although all the nine villages declared that resource mapping and social mapping were done, the maps were not attached to the VAP.
- In one village viz., Gohilapuram of Theni district, while community contribution was incorporated in the VAP, during JPV it was noticed that villagers were unwilling to contribute towards the project cost which resulted in the cancellation of proposed works.
- The other selected VPs did not formulate any comprehensive VAP and merely projected the information uploaded in the portal as the VAP for implementation of JJM in the Village.

The last mile work execution (in-village components) and SVS are the responsibilities of the VPs. In the absence of a comprehensive baseline survey and need assessments, the VAPs formulated did not reflect the actual requirements, which in turn impacted the execution of works as discussed in **Paragraph 2.5.1.**

2.4 Functioning of District Water and Sanitation Mission

As per the JJM Operational Guidelines of GoI, the District Water and Sanitation Mission (DWSM) in the Districts are responsible for the preparation, finalisation and implementation of District Action Plans (DAPs), based on which the State Action Plan is consolidated. The DWSM also monitors and evaluates the physical and financial performance of the district in JJM, apart from grievance redressal.

GoTN issued orders (March 2020) constituting DWSM in all districts with the District Collector as Chairman. This was amended (April 2020) and a District level Project Management Unit (PMU) was set up with the Project Director, DRDA as the head.

The JJM Operational Guidelines stipulates that the DWSM will convene monthly meetings to consider and accord Administrative approval for in-village water supply schemes, grey water management, etc. Mission Director, TWAD stated (October 2024) that DAPs were formulated for all the 37 districts in the State (excluding Chennai) and had been included in the State Action Plan (SAP). However, Audit scrutiny revealed that none of the six selected districts had conducted the mandated 12 meetings per year during the years 2019-20 to 2023-24. The details of meetings held are detailed in **Table 2.1.**

Table 2.1: Details of DWSM meetings conducted in selected districts

District	Date of formation	Number of Meetings conducted	Date(s) of Meeting(s)
Coimbatore	12-05-2020	3	Details not furnished
Nagapattinam	22-04-2020	2	22-04-2020 and 17-03-2022
Ramanathapuram	20-03-2020	2	25-02-2021 and 04-03-2022
Salem	06-04-2020	4	09-02-2021, 26-02-2021, 07-03-2022 and 06-05-2022
Theni	28-04-2020	1	13-01-2022
Viluppuram	30-04-2020	3	21-09-2020, 27-11-2021 and 07-11-2022

(Source: DRDA Records)

Audit observed that non-conduct of regular meetings indicated poor monitoring at the District Level.

2.4.1 Functioning of the State Water and Sanitation Mission

As per the GoI Operational Guidelines, the State Water and Sanitation Mission (SWSM) is a state level institution provided with necessary powers for successful implementation of JJM. The SWSM would have an Apex Committee and an Executive Committee.

The Apex Committee would be headed by the Chief Secretary of the State with Secretaries in-charge of Rural Water Supply, Rural Development and Panchayati Raj, Primary Education, Health, Finance, Planning, Information and Public Relations and a Government of India representative as members. The Apex Committee shall provide policy guidance, be responsible for the overall planning, strategizing and implementation of JJM in the State and be responsible for finalisation of State Action Plan to provide FHTC to every rural household by 2024 among other things.

As per the details furnished by the Mission Director, TWAD Board, the State Action Plan for Tamil Nadu was finalised during October 2021 based on the DAPs from 37 districts and was approved by GoI in November 2021. The SAP was prepared to saturate all rural households by providing FHTCs in Tamil Nadu with 99 numbers of retrofitting CWSS, 78 numbers of new MVS and SVS where local sources were sustainable.

The GoI guidelines stipulate that Apex Committee would meet at least twice a year and if possible, quarterly. However, Audit noticed that the Apex Committee in Tamil Nadu had not met even once during the year 2023-24. Review of minutes of the meetings conducted revealed that there was no formal mechanism such as documented action taken reports, timelines for implementation, review of previous decisions etc. These deficiencies indicate the lack of continuous monitoring and resultant delays in completion of the projects.

2.5 Issues in Planning of works under JJM

TWAD Board is entrusted with the development of Water Supply and Sewerage facilities in the State of Tamil Nadu, except Chennai Metropolitan Development Areas. Apart from this, maintenance of major CWSS/MVS works is also its responsibility. The responsibility for development of in-village infrastructure under the scheme rests with RD&PR Department.

The GoTN guidelines on JJM states that planning must be based on the water demand and potential of water availability. If the ground water was of prescribed quality and could meet the demand for next 30 years, SVS/Retrofitting Schemes were to be proposed and where sufficient groundwater was not available, MVS were to be proposed. Audit observations in planning are discussed in the following paragraphs.

2.5.1 Planning of works executed by RD&PR Department

The VAP is a comprehensive document addressing a village's needs, including provision of FHTCs for all rural households. All drinking water-related works in the village have to follow the VAP for coordination and efficiency. The following deficiencies were noticed in planning of JJM works in the VPs.

2.5.1.1 Works executed without need assessment - Ramanathapuram

In the test-checked VPs, Audit noticed that VWSC was formed only in the year 2023 after a lapse of three years. Further, neither the regular committee meetings were held nor a survey conducted to assess the actual village-level requirements. As a result of this, there was misalignment with the needs of the community as discussed below:

- In July 2020, DRDA, Ramanathapuram, sanctioned ₹3.51 crore for 12 works for Periyapattinam VP in Thiruppullani Block and Work orders were issued in September 2021. However, out of the 12 sanctioned works, only four were initiated, while the remaining eight were cancelled prior to commencement. The expenditure on these works is given in **Table 2.2**.

Table 2.2: Details of works in Thiruppullani Block

(₹ in lakh)

Sl. No.	Name of Work	Estimate	Expenditure
1	Providing FHTC, pumping main line, construction of 30,000 litre OHT and extension of pipeline at Mutharayarnagar village in Periyapattinam VP	18.60	3.88
2	Providing FHTC, pumping main line and extension of pipeline at Karuchankundu village in Periyapattinam VP	8.48	7.36
3	Providing FHTC, pumping main line, construction of 30,000 litre OHT and extension of pipeline at Mangamapuram village in Periyapattinam VP	31.29	7.56
4	Providing FHTC, pumping main line, construction of 30,000 litre OHT and extension of pipeline at South Kudiyiruppu village in Periyapattinam VP	21.50	6.67
Total		79.87	25.47

(Source: DRDA, Ramanathapuram)

The four works were subsequently halted due to objections from the local community stating that JJM was not required as their village was already having access to potable water. Thus, due to absence of VWSC, the works were taken up without need assessment. Government replied (July 2025) that the works were taken up only after proper analysis of VAP. However, during execution, the people of the village were against the scheme and were not convinced even after peace committee meetings which resulted in cancellation of the works. The reply pointed to the fact that there were deficiencies in the planning of works in VAP.

- In July 2020, DRDA, Ramanathapuram, sanctioned ₹95.82 lakh for the works of construction of three openwells for Thinaikulam VP in Thiruppullani Block. During JPV in Thiruppullani Block in September 2024, Audit noticed that all the three wells were not put to use after construction (Exhibit 2.2). The Secretary, Thinaikulam VP stated that at the time of commencement of work, the local residents had requested the Department not to proceed with digging the well in the designated area as the groundwater in the area was salty and non-potable and would render the project unsuitable for their needs. Despite the above, the well was constructed but remained unused by the VP due to the non-potable nature of the water. Government also stated (July 2025) that Mission Director will pursue in taking action against the erring officials for not finding suitable source of potable water supply.

Exhibit 2.2: Open well at Thinaikulam VP not used



Thus, as JJM is a community managed Mission, the failure in ensuring participatory planning, culminating in misalignment with the actual needs of the community resulted in non-achievement of objective besides unfruitful expenditure on construction of borewells and wasteful expenditure on the halted works.

2.5.1.2 Improper estimate of FHTCs requirement - Theni

Theni district was one of the 'Har Ghar Jal' reported districts of Tamil Nadu. Audit test-checked the records relating to 18 works sanctioned by DRDA, Theni under JJM in 2020-21. These works included providing FHTCs to households in two³ Blocks. In the approved estimates for these works, it was proposed to provide 4,339 FHTCs. However, upon execution, only 1,723 connections were actually provided, amounting to just 40 per cent of the target outlined in the estimates. The details of the FHTCs proposed in the estimates and the FHTCs actually provided are given in **Appendix 2.1**.

Audit cross-verified the JJM dashboard data for the works taken up in these habitations and it was noticed that both the coverage of habitations in both the blocks were shown as 100 per cent in the dashboard. Also, as per the dashboard data, no other works were taken up in these habitations indicating that the actual requirement of FHTCs in these blocks were only 1,723 whereas the proposal was for 4,339 FHTCs. A complete baseline survey of available connections during the preparation of VAP would have aided in identification of existing tap connections. This omission led to the overestimation of the actual number of

³ Periyakulam and Uthamapalayam Blocks.

FHTCs required in the village, directly impacting the accuracy of estimates and the subsequent execution of work under JJM.

Government replied (April 2025) that many beneficiaries showed interest to use their own source and as such FHTC was provided to the remaining households. Further, it was also replied that more number of illegal connections had to be regularised while executing the FHTC works. The reply indicated the fact that the actual requirement of FHTCs and the availability of tap connections were not taken into account before proposing the works.

2.5.1.3 Works taken up without survey - Coimbatore

As per the details furnished by DRDA, Coimbatore, out of 1,074 in-village works sanctioned in the District during 2020-24, 945 works were completed and the pendency was stated as 129 works as of January 2025. A scrutiny of records revealed that all the pending 129 works were cancelled vide the proceedings of the District Collector, Coimbatore. Audit noticed that six of these works were cancelled based on the request of BDO(VP) and on the grounds that FHTCs were already available in the households proposed to be covered under these works. This indicated that no survey or planning was done before proposal of works.

2.5.1.4 Incorrect estimation of requirement - Nagapattinam

Audit test-checked the estimates and Completion Reports of three works in Nagapattinam District which revealed variations between estimates and the actual execution as given in **Table 2.3**.

Table 2.3: Discrepancies in the number of proposed and installed FHTCs in Nagapattinam District

Habitation	Extension of pipeline (EPL) (in metres)		Number of FHTCs		
	Proposed	Executed (increase in per cent)	Proposed	Installed	Not installed (in per cent)
Mela pudhupalli Therkku, Pudupalli VP	3,900	4,704 (20.62)	218	181	37 (16.97)
Keela pudhupalli Vadakku, Pudupalli VP	4,700	5,311 (13.00)	192	155	37 (19.27)
Pootchi Theru, Pirathaba ramapuram VP	4,050	5,005 (23.58)	259	189	70 (27.00)

(Source: Compiled by Audit)

Audit noticed that, the length of the pipeline was increased between 13 per cent and 24 per cent of the estimated length. However, in order to keep the expenditure within the estimate, the provision of FHTCs was reduced. Audit noticed similar issue during review of the completion reports for thirteen works executed in Thalanayar and Keelaiyur Blocks during 2023-24 where the extension of pipeline exceeded the approved estimate and the increase in pipeline length ranged between 6.35 per cent and 32.49 per cent of the estimated length.

Government replied (April 2025) that as the houses are geographically scattered, estimates were prepared approximately and the works were completed within the estimates. The reply is not acceptable since, the VP is a small area and the local terrain should have been properly analysed, mapped and the requirement of the correct length of the pipeline should have been estimated. Failure to do so has denied FHTCs to households.

Recommendation 1: The Government should direct the implementing agencies to take up works only after need assessments and should also ensure that estimates are prepared after taking into account the actual requirements.

2.5.2 Planning of works executed by TWAD Board

Test-check of executed works in the selected districts revealed deficiencies in planning as discussed in the following paragraphs.

2.5.2.1 Lack of synchronisation in planning - Ramanathapuram District

Consequent to launch of JJM, the following schemes/works were sanctioned for Ramanathapuram District under JJM to meet the projected requirement of rural habitations for the year 2050 at the rate of 55 lpcd:

- **In-village works:** Under AAP 2020-21, provision of FHTCs through 165 in-village component works (June 2020) at an estimated cost of ₹32.93 crore.
- **Retrofitting of existing Ramanathapuram CWSS:** Under AAP 2022-23, retrofitting of existing CWSS at a cost of ₹574.42 crore was taken up (July 2022) with target for completion by October 2024.

As TWAD Board and RD&PR Department are involved in the execution of works, proper planning and synchronisation of scheme components by these departments would ensure that the intended objectives of JJM are achieved. However, Audit noticed that:

- Despite reiteration in Operational Guidelines of GoTN to prioritise proposal for MVS in case of non-availability of sufficient groundwater, in-village works were proposed and taken up in AAP 2020-21 before finalisation of source augmentation works (CWSS/MVS) which were taken up only in AAP 2022-23.
- As of May 2025, the retrofitting work of existing CWSS was under progress while the assets under in-village components were completed by February 2023. Thus, the infrastructure developed under the 165 in-village works remains largely unused.
- During JPV, test check of three Over Head Tanks (OHTs) and 12 sumps constructed in the Thiruvadanai Block revealed that seven sumps were not receiving water and water was not pumped to the OHTs. In the remaining five sumps water was supplied from local source only once in a week. BDO (VP) stated that the infrastructure would be put to use once the TWAD Board works were completed.

Thus, failure of the sanctioning authority to assess the availability of water for the district or the progress of source creation work before sanctioning the in-village components indicated poor planning and non-synchronisation of head-works and in-village component.

The Government replied (April 2025) that all the works of retrofitting in Ramanathapuram CWSS would be completed by September 2025 and the delay was due to interlinking of new pipes without affecting the regular supply to the public. Further, it was also replied that in-village components are being used with the water quantity supplied through CWSS.

Recommendation 2: The Government should ensure effective synchronisation in works executed by the implementing agencies so as to avoid delays in utilisation of assets created in the in-village components.

2.5.2.2 Improper planning of works - Coimbatore District

In Coimbatore District, the 'CWSS to 295 habitations' scheme providing water supply to the rural habitations was commissioned in 2005 and maintained by the TWAD Board since February 2006. Under this CWSS, treated surface water sourced from the Aliyar River was pumped through two alignments - Alignment I serving 165 habitations and Alignment II serving 130 habitations. The total length of the pipeline was 426.36 km.

On account of road widening work by National Highways Authority, the Main Pumping lines and its branches spanning a length of 15.5 kilometres were damaged disrupting water supply to 130 habitations served by Alignment II. To ensure uninterrupted water supply, GoTN accorded (April 2022) Administrative approval for ₹47.37 crore⁴ for retrofitting work under JJM in 2021-22 to replace the damaged pipes. The work was completed in March 2024. TWAD Board reported (September 2024) that regular water supply was restored.

Scrutiny of records revealed that the habitations in Kinathukkadavu Block were receiving only 2.969 Million Litre per Day (MLD) in 2024, against the earmarked quantity of 5.084 MLD. Moreover, this was a significant drop from the quantity of 4.367 MLD received by these habitations in 2022 before the retrofitting work. During JPV (September 2024 and March 2025) numerous leaks and bursts were observed (**Exhibit 2.3**) in the main pumping lines which affected the quantity of water supplied. Further, scrutiny of the maintenance records on TWAD Board revealed that leaks and bursts were present in the pipeline system.

⁴ ₹9.53 crore for TWAD component and ₹38.70 crore for RD&PR component.

Exhibit 2.3: Water Stagnation due to leaks in pipelines



Incidentally, it was noticed that a Detailed Project Report (DPR) for the work of immediate replacement of pipes for a length of 28.27 km was prepared (November 2024) at an estimated cost of ₹51 crore, on account of leaks and bursts in the pumping line due to ageing of pipes (as they were laid before 20 years) and its wear and tear.

In this regard, Audit observed the following:

- TWAD Board failed to comprehensively identify the leaks and bursts in the pipeline while planning for the retrofitting work in 2022. The proposal focussed only on the extent of pipeline damaged by road widening works.
- On account of compartmentalised handling of issues, leakage continued to plague the pipeline and consequent water supply.
- Due to lack of holistic planning, the habitations in the tail-end block of the scheme received reduced quantity of water even after the completion of works. Moreover, these habitations had received a comparatively higher supply before the retrofitting work.

Thus, deficiency in planning led to ineffective implementation of the scheme as the issue of leakage in pipes continued to affect the supply lines leading to deprivation of adequate quantity of water supply to the tail-end beneficiaries.

The Government replied (April 2025) that the designated quantity would be supplied to all habitations including the tail-end habitations once the work of replacement of pipes and pump sets was complete. Thus, even after six years of JJM and expenditure on retrofitting works, sufficient water supply could not be ensured.

CHAPTER III

IMPLEMENTATION OF JAL JEEVAN MISSION

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Variations were noticed in the number of households as per the JJM Dashboard and as per the 'VP Tax Portal' of the Department for assessment of Property Tax. As a result, veracity of achievement percentage for FHTCs shown in the JJM dashboard could not be established. Implementation of works by TWAD Board was affected due to delay in site identification, non-obtaining of permissions from line departments and delayed execution besides lapses in tendering procedure. Further, assets created in VPs were not put to use owing to non-completion of TWAD Board works, non-availability of water sources etc. In respect of works executed by RD&PR Department, no penalty was levied for delayed execution.

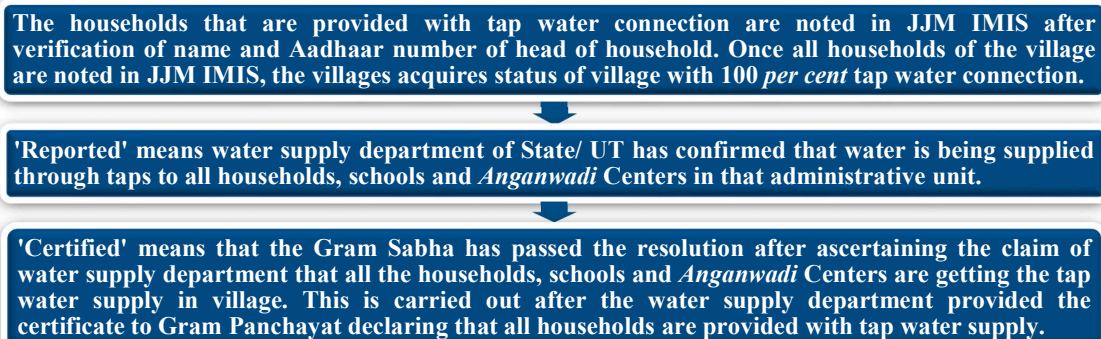
3.1 Introduction

JJM focused on piped water as the only means of delivering potable water in rural areas, marking a significant shift in the approach to erstwhile rural water supply schemes. The Mission has been extended up to 2028. JJM Operational Guidelines specifies a tap connection as 'FHTC' when it fulfils the following three criteria:

- Adequate Quantity : Ensuring supply of a minimum of 55 lpcd
- Regular Supply : Supply is continuous and sustainable in the long term
- Prescribed Quality : Water provided meets the drinking water standards¹

Besides rural households, provision of FHTCs to Schools, *Anganwadi* centres, Gram Panchayat building, health centres, wellness centres and community buildings was also envisaged in JJM. Whenever a particular Administrative Unit viz., VP/Block/District completes the stages in providing FHTCs (**Exhibit 3.1**), the Unit is termed as having achieved '*Har Ghar Jal*' (HGJ) status.

Exhibit 3.1: Three stages for '*Har Ghar Jal*' declaration process



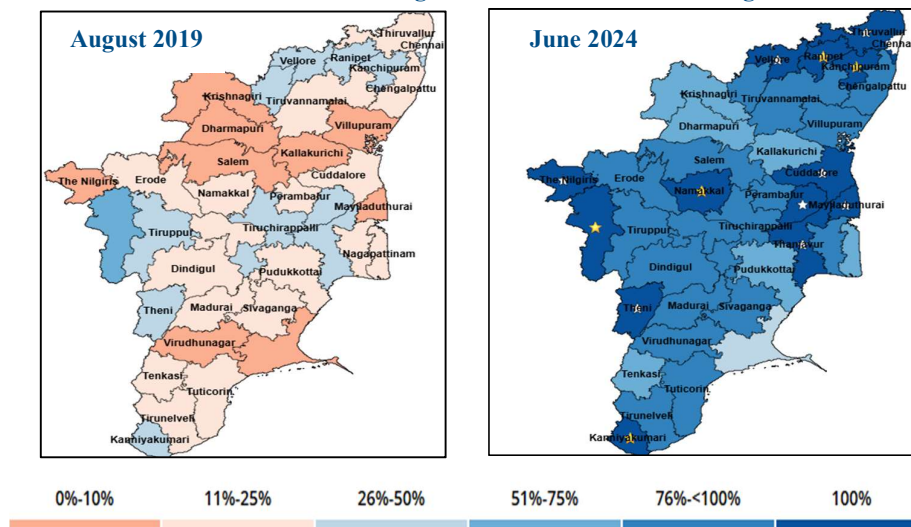
(Source: JJM dashboard)

¹ BIS: 10500:2012.

3.2 Coverage of FHTCs

At the launch of JJM i.e. 15 August 2019, Tamil Nadu had 21.76 lakh rural households with tap connections. This accounted for only 17.37 *per cent* (1.25 crore) of the total rural households in the State. As per the data provided in JJM Integrated Management Information System (IMIS) Dashboard, the State exhibited an overall achievement of providing FHTCs to 83.94 *per cent* (1.05 crore out of 1.25 crore) of rural households as of 2024 (**Exhibit 3.2**). Further, 100 *per cent* coverage was achieved in 10 districts².

Exhibit 3.2: Achievement in coverage of FHTCs under JJM during 2019-24



(Source: JJM dashboard)



- The achievement of the State in providing FHTCs has improved from 17.37 *per cent* to 83.94 *per cent* during 2019-24.
- In selected districts, as against the initial status of 1.19 *per cent* of households with FHTCs, Viluppuram district recorded an achievement of 82.86 *per cent* in June 2024.

Audit analysed the achievement of the selected districts reported in the JJM portal against the criteria for FHTC viz., adequate quantity, regular supply and prescribed quality and the discrepancies noticed are detailed in the succeeding paragraphs.

3.3 Variations in households data

The core objective of JJM is to provide FHTCs to every rural household. As of April 2025, as per JJM dashboard, all the VPs in 13 and six districts had achieved 'Har Ghar Jal' Reported and Certified status respectively.

Audit cross verified the data available in the JJM dashboard with the number of assessment as per the 'VP Tax portal' which is relied upon by the VPs for assessment and levy of property tax, water charges etc. The details of number

² Ariyalur, Coimbatore, Cuddalore, Kanchipuram, Kanniyakumari, Ranipet, The Nilgiris, Theni, Tiruvallur and Vellore.

of households in the selected districts as per the two data sets are given in **Table 3.1**.

Table 3.1: Number of households as per JJM and VP Tax portal

District	Total Households as per JJM portal	Households with Tap connection (as of November 2024)	Households as per VP Tax portal for 2024-25	Percentage of FHTC	
				JJM portal	VP Tax portal
Coimbatore	3,72,578	3,72,578	5,13,985	100.00	72.49
Nagapattinam	1,57,116	89,438	2,03,446	56.92	43.96
Ramanathapuram	3,33,279	1,11,024	4,24,073	33.31	26.18
Salem	6,46,114	5,65,111	7,46,427	87.46	75.71
Theni	1,85,013	1,85,013	2,36,911	100.00	78.09
Viluppuram	4,38,570	4,11,750	4,34,960	93.88	94.66

(Source: JJM dashboard and VP Tax portal data furnished by DRD)

From **Table 3.1**, it was seen that there was variance between the two sets of data relating to number of households. Further, out of the 60 selected VPs, 28 VPs were granted ‘*Har Ghar Jal*’ status during the Audit period. Scrutiny revealed that, the number of FHTCs provided in these VPs was lesser than the households as per the ‘VP Tax portal’ indicating discrepancies in data adopted in two portals resulting in Audit not able to establish the veracity of achievement percentage shown in the JJM dashboard (**Appendix 3.1**).

Government replied (April 2025) that the households in rural areas varied with time and as the households in IMIS data (updated up to June 2022) have been provided with FHTCs, it has been declared as ‘*Har Ghar Jal*’. The reply only indicated the fact that updation in IMIS portal is not real-time and VPs are to be certified ‘*Har Ghar Jal*’ based on the provision of FHTCs to all households in the VPs as per the actual number of households at the time of certification.

Recommendation 3: The Government should direct the Department to update in a time bound manner, the household data in the IMIS portal so as to ensure complete coverage in all districts.

3.4 Implementation of Projects

According to JJM Operational Guidelines issued by GoTN, the RD&PR Department executes projects within individual VPs, while the TWAD Board is responsible for larger-scale projects that encompass multiple Blocks/Districts. **Table 3.2** below outlines the number of works carried out by the RD&PR Department during 2020-24 in six selected districts, along with the status of works and their associated financial implications.

Table 3.2: Year-wise works carried out by RD&PR Department

Year	Number of works			Amount (₹ in crore)	
	Sanctioned	Completed	Pending	Sanctioned	Expenditure
SVS Works					
2020-21	2,913	2,913	0	356.91	314.98
2022-23	369	369	0	106.04	85.16
2023-24	129	112	17	31.73	8.75
In-village component connected with TWAD Board works					
NEW MVS	1,864	516	1,348	190.91	48.99
MVS Retro fitting	1,482	1,482	0	139.00	106.17
Total	6,757	5,392	1,365	824.59	564.05

(Source: Details furnished by RD&PR Department)



- All the SVS Works taken up by the Department during 2020-21 and 2022-23 were completed and there was no pendency.

Further, in respect of MVS, out of 10 works valuing ₹5,595.47 crore taken up by TWAD Board during 2020-21 to 2023-24 in the selected districts, five works relating to 2022-23 are still pending.

Audit observations based on scrutiny of execution of works by both RD&PR Department and TWAD Board and records maintained by the implementing agencies are discussed in the following paragraphs.

3.5 Discrepancies in Tendering and Contract Management

3.5.1 Splitting up of work to avoid tender transparency requirements

In order to ensure transparency, competitive pricing, and accountability, GoTN revised (August 2017) the financial norms for advertising Notice Inviting Tenders in newspapers as detailed in **Table 3.3**.

Table 3.3: Financial norms for advertising

Value of Procurement	Newspapers in which to be published
Above ₹10 lakh and up to ₹25 lakh	One Tamil daily - District edition
Above ₹25 lakh and up to ₹3 crore	One English daily and one Tamil daily - all editions in the State

(Source: Government Orders)

Under JJM works, the work of providing new MVS³ in Ramanathapuram District was taken up by TWAD Board during 2021-22. Tenders for surveying and levelling works to aid in preparation of the Detailed Project Report (DPR) for the new MVS, at an estimated cost of ₹1.74 crore was initiated in January 2022. The works were split up into ten packages (between ₹12.70 lakh and ₹24.33 lakh) and the same was finalised in February 2022 (**Appendix 3.2**).

In this regard, Audit observed that in spite of the scope of work being similar, the works were split up into smaller contracts to avoid the tender transparency thresholds and it was also not published in the newspaper as per the norms.

³ 4 Municipalities, 7 Town Panchayats and 2,189 rural habitations.

Further, based on the classification of soil as ‘ordinary soil’ in the survey and levelling work, the DPR was finalised. However, during execution the soil classification was reassessed as ‘including ordinary soil, soft disintegrated rock, Dense Medium Rock not requiring blasting and Dense Medium Rock requiring control blasting’ resulting in excess expenditure. The issue is further discussed in **Paragraph 3.6.1 (b)**.

The Government stated (April 2025) the non-availability of contractors due to COVID-19 outbreak and the urgency of work as reasons for splitting up of tender. It was further stated that all the reports were completed as per the agreement. The reply is not acceptable as adherence to tender conditions is mandatory and the finalisation of tender was done after the COVID-19 outbreak.

3.5.2 Lack of transparency in tender procedure

As per the proceedings (November 2023) of the District collector *cum* Chairman, DRDA, Ramanathapuram District, an amount of ₹45.68 lakh was allocated to the 11 Blocks of the district for printing of hoardings, posters and pamphlets towards IEC activities. Scrutiny of records in the two⁴ selected blocks revealed that the quotations submitted by vendors lacked dates and were not countersigned by the Tender Inviting Authority. Further, no records were furnished to Audit to substantiate that the BDOs had called for quotations⁵ from the Suppliers in the first place. These lapses indicated violation of the provisions of the Tamil Nadu Transparency in Tender Act / Rules besides raising concerns about the validity and authenticity of the tender process.

The BDO (VP) replied (September 2024) that proper tender conditions would be followed hereafter. Government replied (July 2025) that invitations were sent to three selected vendors in both the blocks and that due to documentary lapses in some of the works signing procedures would have been missed out by the Tender Inviting Authority. The reply is contradictory to the earlier reply of the BDO and the documentary evidence in support of the reply was not furnished.

3.5.3 Non-compliance of Agreement procedures

As per GoTN Operational Guidelines, a tripartite agreement must be executed between VP, DWSM and Implementing Agency before commencement of work.

- Scrutiny of records relating to Nagapattinam during 2019-24 revealed that in 39 out of 104 works, no contractual agreement was executed with the respective contractors and in 47 works taken up by four contractor, the signatures of VP authorities were not available in the agreements.

Government replied (July 2025) that tripartite agreement has been executed for all JJM works in Thirumarugal Block. The reply is not acceptable as the cases pointed out in Audit included works executed in the Thirumarugal Block also and no documentary evidence was furnished by the Government in support of the above reply. Further,

⁴ Thiruppullani and Thiruvadanai Blocks.

⁵ As per Rule 8 of the Tamil Nadu Transparency in Tender Rules, 2000, Notices Inviting Tenders and decisions on tenders in all cases, where the value of the procurement exceeds ₹10 lakh and is below ₹25 lakh, shall be published.

the current reply is in contradiction to the earlier reply given in April 2025 wherein it was stated that all tender conditions would be strictly followed in future and necessary instructions were issued.

- Further, out of 340 in-village works executed in Ramanathapuram during 2023-24, Audit test checked 44 works in which it was noticed that agreement was not executed in 16 works and in the remaining 28 works, agreement was entered into only after the completion of the works. Government endorsed (July 2025) the reply of Mission Director, JJM (June 2025) that due to documentary lapses in some of the works signing procedures was missed out by the Tender Inviting Authority and that all the works were completed successfully without any financial and legal issues. Government also stated (July 2025) that Mission Director will pursue in taking action for the lapses of non-compliance of agreement procedures against the erring officials.
- Audit also noticed that the agreement with the assigned Third Party Inspection Agencies as per JJM Operational Guidelines was not executed by Ramanathapuram and Sivagangai Divisions of TWAD Board. As a result, the TPIA functioned without a contract agreement between the concerned authorities that outlined the terms of service, roles, and responsibilities. Government replied (July 2025) that the agreement was since concluded in February 2025 and the delay in concluding the agreement was because the Third Party Inspection Agency did not provide the necessary security deposit on time.

As the agreement would serve as a legally binding document, these procedural lapses not only undermine the integrity of the contract management process but also expose the Department to potential legal and financial risks.

Recommendation 4: The Government should fix responsibility for the lapses in tender procedures and direct the Implementing agencies to ensure adherence to the relevant Act and Rules.

3.6 Execution of works under JJM by TWAD Board

3.6.1 Ramanathapuram New Multi Village Scheme

GoTN accorded (December 2022) administrative approval for New MVS under JJM in Ramanathapuram district to ensure a minimum of 55 lpcd of water supply at a cost of ₹4,187.84 crore. The project area was made as two systems viz., Systems 1 and 2 encompassing Ramanathapuram and Dindigul districts respectively with river Cauvery as the source. System 1 was divided into four packages having components like Headworks⁶, Zonal Balancing Reservoir⁷ (ZBR), Service Reservoirs (OHT), Master Balancing Reservoir, Gravity Main, Feeder main, etc., and the work orders were issued in March/April 2023, with a target completion period of 18 months. As of May 2025, the percentage of completion of works ranged between 81 *per cent* and 90 *per cent* only, even

⁶ A civil engineering term for any structure at the head or diversion point of a waterway.

⁷ These are typically smaller than main balancing reservoirs and are located within a specific zone of a water distribution system. They are used to regulate water pressure and distribution within that zone.

after six/seven months from the target date of completion. The factors which contributed to the delay are discussed in succeeding paragraphs.

(a) Procedural delays

Work order for construction of intake well (**Exhibit 3.3**) under Head works component of Package I was issued in April 2023 before the actual possession of site, in violation of TWAD Board instructions (February 2011) and the site was handed over to the contractor only in June 2023. As a result, the work began in July 2023 only.



Similarly, in Package III, the Master Balancing Reservoir (**Exhibit 3.4**) location was changed four⁸ times from April 2023 up to October 2023. Further, due to public objection, the construction was delayed and commenced only in May 2024. Government replied (April 2025) that necessary notice has been issued to the contractor to speed up the work and stated that the work would be completed before September 2025. The reply is not acceptable since Work order was issued before finalisation of site in violation of instructions.



In addition, there was delay (ranging between 93 days to 411 days from the date of Agreement - April 2023) in providing drawings for the Head works, Water Treatment Plant, etc., by TWAD Board to the contractor. These were handed over between July 2023 and June 2024. Government replied (April 2025) that the design and drawings for headworks and Water treatment plant were handed over to contractor during agreement stage itself, for ZBRs and OHTs by December 2023 and other drawings after April 2024. The fact remains that delayed finalization of drawings impacted the completion of works.

(b) Incorrect classification of soil & execution of additional items without approval of the Board

Proper soil classification is essential for designing and construction of infrastructure for water supply schemes. Incorrect soil classification affects excavation techniques, foundation design, and pipe-laying methodologies.

As discussed in **Paragraph 3.5.1**, the tender for survey and levelling works for identification of soil classification for New MVS work in Ramanathapuram was done in February 2022. Scrutiny of records revealed that the soil classification for earthwork was taken as 'Ordinary soil' in the sanctioned DPR. The contractor stated (July 2023) that presence of hard rock was noticed in certain areas during execution, which required controlled blasting for excavation. In view of this, an addendum to the agreement incorporating the supplementary item for excavation of hard rock was sought for by the contractor.

⁸ Initially proposed at Ganapathipalayam but was subsequently changed (July 2023) to Aatukulam, then to Navinipatti (August 2023), and finally to Thumbaipatti in the first week of October 2023.

Subsequently, the soil was reclassified (as per TWAD Board instructions) as ordinary soil, soft disintegrated rock, Dense Medium Rock not requiring blasting and Dense Medium Rock requiring control blasting. Accordingly, an additional amount of ₹36.70 crore was approved (July 2023/March 2024) by the Chief Engineer (CE), Madurai.

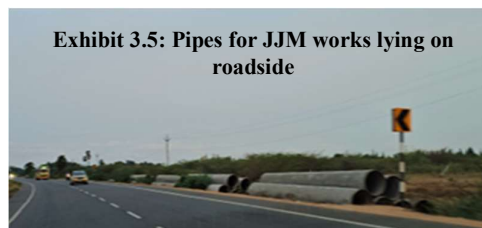
As the value of the additional items exceeded ₹50 lakh, prior approval from the Technical Committee was required before execution. Audit observed that, the additional works were carried out without obtaining approval for the same, which was in violation of the delegation of financial powers. Further, the delay was compounded due to obtaining approval from District Collector for blasting activities.

Government replied (April 2025) that after completion of all the packages, additional/substituted items of executed works will be submitted by the concerned executing division to TWAD Board Head Office for approval. The reply is not acceptable since the changes exceeded the delegation of power (more than ₹50 lakh) which required the approval of the Tender Committee and the same was not done. Further, the reply is silent about the action taken for the submission of incorrect soil classification in the DPR.

(c) Delay in obtaining approvals from line department

As per TWAD Board's instructions (February 2011), prior approval from the relevant line departments must be obtained before commencing a project. The New MVS included works related to laying of pipelines along the road in National Highways⁹ (NH) for which prior approval of the concerned Department, i.e., Ministry of Road Transport and Highways, GoI was required. In this regard, Audit observed that, while the agreement for new MVS was finalised in April 2023, the request for permission for laying of pipelines was submitted to the Regional Office, National Highways Chennai only in July 2023 in violation of instructions (February 2011). After much deliberations and the decision of the National Highways to widen the Highway (four-laning), TWAD Board was advised (September 2024) to lay the water pipeline along an alternative route as the existing road width was insufficient to accommodate both the pipeline and proposed road widening.

This resulted in completion of only 62 per cent of the pipeline laying work (October 2024), though 82 per cent of the pipes were procured, which was noticed, during JPV, as stored along the roadside at multiple locations (**Exhibit 3.5**).



Government replied (April 2025) that the approval from NHAI was yet to be received and the contractor has been requested to lay the pipeline in the feasible reaches. The reply is not tenable since, the work was taken up without firming up the site and as such the expenditure incurred till date remained unfruitful.

⁹ Package II - permission sought for 100.134 Km in NH 32, 85 and 87; Package IV - permission sought for 64.187 Km in Paramakudi - Ramanathapuram and Ramanathapuram - Mandapam NH.

(d) Construction of ZBR and Service Reservoirs

The package-wise number of ZBR and service reservoirs taken up and status of works as of May 2025 are detailed in **Table 3.4**.

Though the target for completion of the New MVS work was October 2024, it was noticed that only 36 per cent of ZBRs were completed as of May 2025.

Further, during JPV of the works, it was also observed that the construction of headworks, establishment of Water Treatment Plant, laying of pipelines and Over Head Tanks works were also not completed as per agreed milestones.

Government replied (April 2025) that sufficient skilled labour was not available. It was also stated that notice has been issued to the contractor to complete the balance works within the time period. Audit observed that delay in the completion of reservoirs affected the availability of water storage capacity for effective water distribution, which in turn affected the overall achievement in JJM as only 31 per cent of the households were covered as of June 2024.

Table 3.4: Status of progress

Particulars	ZBR	Service Reservoirs
	(In numbers)	
Completed	35	596
Under progress	62	164
Not started	0	64
Total	97	824

(Source: Details furnished by TWAD)

3.6.2 Delay in execution of Retrofitting work of CWSS in Salem District

GoTN accorded Administrative Sanction (July 2022) for ₹85.63 crore¹⁰ towards retrofitting work of the existing¹¹ scheme (from June 2003) in Salem District, to enhance the service levels from 40 lpcd to 55 lpcd. To achieve this, the additional requirement for the ultimate stage target year of 2054 was assessed as 5.166 MLD (Million Litres per day).

The work order was issued in August 2023, with a targeted completion period of 12 months (August 2024). However, as of March 2025, the work remained incomplete. Based on JPV and the records furnished to Audit, the factors contributing to the delay are detailed below.

(a) Delay in obtaining approvals from line departments

One¹² of the pipeline sections covering 1.4 km, remained incomplete due to delays in obtaining approval from the Highways Department. Although TWAD requested permission to lay pipes in November 2022, the Highways Department has yet to decide whether the pipes should be laid on the right or left side, and the approval is still pending. As a result, the pipeline for this stretch has not been laid to date (**Exhibit 3.6**), with pipes stored along the



¹⁰ TWAD Board - implementation of source-to-overhead tank components at a cost of ₹43.53 crore; RD&PR Department - execution of in-village components including the distribution system and FHTCs at a cost of ₹42.10 crore.

¹¹ Combined Water Supply Scheme (CWSS) for 136 fluoride-affected habitations and 512 wayside habitations in Kadayampatty and three other unions in Salem District'.

¹² Pipeline between Thindamangalam BPT and Thimirikottai Pirivu in Omalur Union.

roadside at multiple locations, awaiting clearance from the Tamil Nadu Road Sector Project.

(b) Incomplete pipeline installation

One of the key components was the laying of a 5.6 km MS pipeline. However, as of March 2025, only 4.2 km has been supplied and installed, while the remaining 1.4 km of MS pipeline was yet to be laid due to non-availability of MS pipes. Thus, non-firming up of MS pipes before the commencement of the project contributed to the delay in completion of the project. Thus, the significant delays hindered the scheme's objective of supply of 55 lpcd of water to these habitations.

Recommendation 5: The Government must direct the TWAD Board to ensure that all the necessary approvals have been obtained before commencement of works so that all the water supply works under JJM are executed without delay.

3.7 Execution of in-village components by RD&PR Department

The district wise number of sanctioned in-village works for the period 2020-24 in six selected Districts is given in **Appendix 3.3**.

3.7.1 Delay in completion of work

As per the general conditions of Contract, penalty will be levied and collected from the contractor for delay in completion of work. In case of delay beyond 60 days, the work order issued should be cancelled, security deposit forfeited, and the contractor blacklisted and penalised.

Audit observed that in four¹³ districts, out of 4,261 works, there was delay in completion in respect of 4,010 works, the delay ranged between 30 days and 1,380 days. Though, the delay warranted, besides levy of penalty, cancellation, blacklisting, etc., no action was taken in this regard. Further, the delay in execution of in-village works affected the last mile service delivery and ultimately impacted the achievement of objective of JJM.

Government replied (April 2025) that fine of ₹16.47 lakh has been imposed in 786 works relating to Coimbatore district. No specific reply has been given in respect of the remaining three districts. The reply is silent about levy of penalty in respect of the remaining three districts and also in respect of all the works in Coimbatore that were delayed. Further, it was also silent on the action taken on the defaulting contractors.

3.7.2 Non-adherence to TWAD norms in construction of OHTs

In respect of construction of OHTs, staging height¹⁴ is crucial to ensure minimum residual pressure for water supply. The norms followed by TWAD Board stipulates that staging height of 12 metre is required for OHTs with capacity of 30,000 litres and above.

¹³ Coimbatore, Salem, Theni and Viluppuram.

¹⁴ Height of staging is the difference between the lowest supply level of tank and the average ground level at the tank site.

Test check of four OHTs constructed (May/July 2022) by RD&PR Department in three¹⁵ VPs of Coimbatore District revealed that though the capacity was 30,000/60,000 litres, the staging height as per TPIA report ranged between 6 metre and 9.1 metre. This is in violation of the above said norms. Inadequate staging height of these OHTs would affect the minimum residual pressure required for sustained supply of water till the tail end habitation.

3.8 Infrastructure not put to use

Ramanathapuram District

During JPV (September 2024) in Ramanathapuram District, Audit noticed that although construction of OHTs was completed, water was not stored in them due to non-connection with the CWSS/MVS feeder or local bore well. Further, the distribution pipelines with FHTCs were not connected with OHTs.

In reply, Additional Collector/Project Director of DRDA, Ramanathapuram stated (September 2024) that (i) Water from own source (bore wells) depends on monsoon (ii) Once CWSS/MVS works were completed, it would be possible to ensure supply of 55 lpcd drinking water and (iii) all infrastructure would effectively be put up into use after completion of retrofitting and New MVS scheme works.

Thus, the intended benefits of providing a sustainable and adequate water supply to every household was not achieved, leaving residents to seek alternative and costly sources of drinking water.

Viluppuram District

The District Collector, Viluppuram accorded administrative sanction (August 2020) for construction of five¹⁶ Borewells for Vikravandi Block at an estimated cost of ₹73.48 lakh. During JPV (September 2024), Audit observed that in Kuthampoondi VP, out of two borewells, one borewell was lying idle for over 24 months due to the absence of essential provisions such as motor and pump room and all the three borewells of Kayathur VP created under JJM remained idle. Non-utilisation of the above assets denied the public of the purpose of construction of borewells.

Government replied (April 2025) that water from the bore wells have been sent for water test in TWAD laboratory and based on the report, necessary action would be taken to utilise the bore well. The reply is not tenable since the water quality testing should have been done before taking up the work.

Theni District

The District Collector/Chairman, DRDA, Theni accorded administrative sanction (August 2020) for the work of 'Providing water supply to Sillamarathupatty village from existing infiltration well to ground level sump' for Bodinayakkanur Block at an estimated cost of ₹1.30 crore and the work was completed in November 2022. During JPV, Audit observed that water was not being pumped from the infiltration well as planned but rather from a local borewell source. The reasons for the same was not available on record.

¹⁵ Thekkampatti, Rasichettipalayam and Vadhambacheri.

¹⁶ Two Borewells at Kuthampoondi VP and three Borewells at Kayathur VP.

Consequently, the failure to supply water from the infiltration well to the sump rendered the incurred expenditure of ₹1.30 crore ineffective.

In response to the audit query, the District Rural Development Agency stated (September 2024) that under JJM work, a 40 HP motor was provided. However, there was no sufficient water for the above motor capacity. The pumping main pipes also got burst due to the high-capacity motor. It was also stated that the motor capacity was since reduced to 20 HP and trial runs were in progress.

Government replied (April 2025) that work for an additional sump to utilise the water supply from infiltration well will be completed. The reply is not tenable since in case of insufficient water in the existing source after utilising reduced capacity of motor, alternative source should be looked into and not construction of additional sump.

Recommendation 6: The Government should direct the Department to rectify the deficiencies in the execution of work so as to ensure proper utilisation of all assets created, at the earliest for achievement of the intended objective.

3.9 Construction of excess storage structures

The GoTN Operational Guidelines for implementation of JJM has provided detailed instructions with regards to proposal and sanctioning for construction of storage structures such as Over Head Tanks (OHTs) and Ground Level Reservoirs (GLRs). Accordingly, the following assessments were to be made:

- New storage structures may be proposed only when necessary, based on the additional requirements identified.
- Need for an OHT is determined by evaluating the daily total water demand of the selected habitation for the ultimate design period.
- The capacity of the OHT should be designed to meet 50 *per cent* of the total daily demand, allowing the supply to be managed with two fillings per day, ensuring efficient use of funds.

Director, RD&PR Department had identified (2015) several VPs having storage structures exceeding the required capacity due to taking up of construction under different schemes. Consequently, instructions were issued (April 2015) that additional OHTs should not be built if they result in excess water storage structures, as this would lead to wasteful expenditure. Further, prior approval had to be obtained from the District Collector, along with a clear justification for the requirement wherever construction of an additional OHT was deemed necessary.

(a) Ramanathapuram District

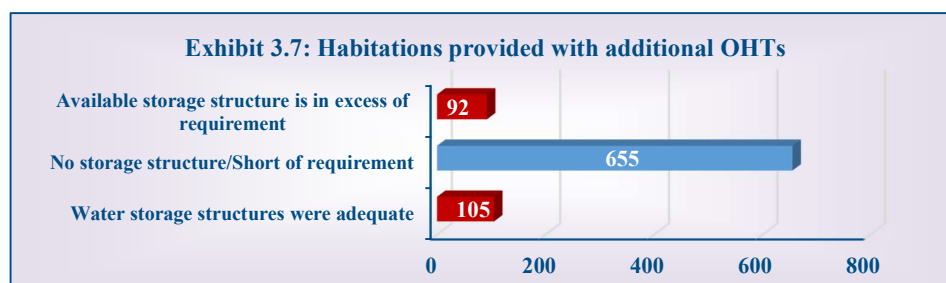
Audit analysed the data in the DRDA's report detailing the population and the available storage structures in each habitation as of 01 April 2023, against the daily water requirements and storage needs projected for the ultimate design period of 2053. The adequacy of water storage structures in 2,306 habitations in the district pre and post JJM and other schemes during 2020-24 are given in **Table 3.5**.

Table 3.5: Adequacy of water storage structures in the habitations of Ramanathapuram

Capacity of existing storage structures in habitations	Prior to commencement of JJM	After creation of structures during 2020-24	Percentage of increase (+)/ decrease (-)
Excess	363	655	80.44
Adequate	487	729	49.69
No storage structure/Short of requirement	1,456	922	(-) 36.68

(Source: Audit analysis of the capacity of storage structures furnished by RD&PR department)

A total of 943 OHTs were constructed in the district during the said period. From **Table 3.5**, it can be seen that, habitations having excess storage even before commencement of JJM were provided with additional OHTs even when there were habitations with shortage. Further, in 830 habitations out of 1,456 that did not have any storage structure prior to commencement of JJM, 430 (out of 922 habitations) continued to remain in the same state. The details of additional OHTs provided to habitations under JJM and other schemes during 2020-24 is given in **Exhibit 3.7**.

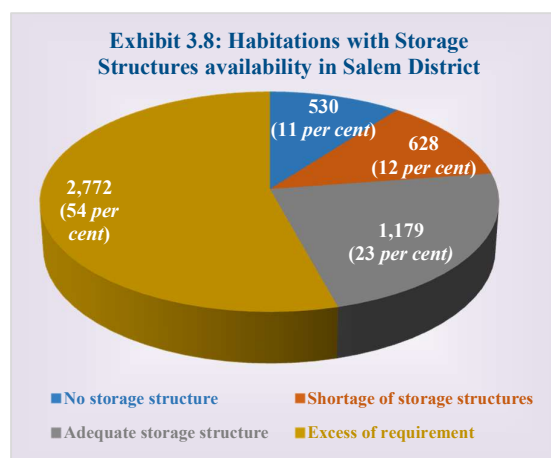


(Source: Audit analysis of OHTs sanctioned to habitations)

From **Exhibit 3.7**, it is seen that 105 out of 487 habitations (21.56 per cent) which had adequate water storage structures and 92 out of 363 habitations (25.34 per cent) which had excess water storage structures prior to commencement of JJM were provided with additional OHTs. Further, more than one OHT was sanctioned to 12 out of 92 habitations that already had excess storage structures.

(b) Salem District

In respect of Salem District, Audit reviewed (March 2025) the available storage structures as per the DRDA's Report as of April 2023 against the daily water requirements and projected storage needs for the ultimate design period of 2053. It was noticed that out of 5,109 habitations in Salem District, while 530 habitations (10.39 per cent) lacked storage structures entirely, 2,772 habitations (54 per cent) had storage capacities exceeding their requirements (**Exhibit 3.8**).



The District Collector, Salem granted Administrative Sanction (June 2022) for construction of 26 OHTs and 15,031 FHTCs to Kaveripuram and Kolathur Union at a cost of ₹19.98 crore. Audit conducted JPV (March 2025) of the OHTs constructed and observed the following:

- Water was not being supplied to the newly constructed OHTs at three¹⁷ habitations.
- The 26 OHTs were constructed by RD&PR Department under JJM without any prior intimation to TWAD.
- Additional OHTs were also constructed alongside existing OHTs (Exhibit 3.9).
- The TWAD officials also stated that water could be supplied to the new OHTs from the CWSS only after replacing the pump set with a suitable type and capacity and upgrading the pipelines with the appropriate diameter.



Audit observed that (i) the reasons for not supplying water to OHTs and the reasons for utilising different type of pipelines, as against the standard specifications were not on record (ii) the construction of OHTs could have been avoided and utilised in habitations having shortage of storage structures (under-served areas) indicating inadequate planning and resource mismanagement besides underutilization of the created assets.

Government replied (July 2025) that the staging height and age of OHTs were also considered before arriving at the requirement. Once after completion of new MVS and Retrofitting works of existing CWSS in Ramanathapuram, the OHTs which are aged more than 20 years will be subjected to demolition and the remaining OHT will meet the ultimate demand population for the district. The reply is not tenable since the above procedure should have been considered only after construction of OHTs in habitations where there is no such infrastructure.

Recommendation 7: The Government should ensure that storage infrastructure are created only in needy habitations to avoid idling of the assets created besides optimum utilisation of valuable resources.

¹⁷ Chettipatti Colony, Kanavaikadu and Melmolaporaipur Blocks.

CHAPTER IV
FINANCIAL
MANAGEMENT

CHAPTER IV

FINANCIAL MANAGEMENT

Audit noticed that only 33 per cent of the community contribution, being a pre-requisite for taking water supply scheme, has been collected in the selected districts. There was non-assessment and short-collection of water connection charges. Other issues like delayed release of funds, diversion of Earnest Money Deposit amount collected and non-remittance of Labour Welfare Fund were noticed.

4.1 Introduction

As per GoI's Operational Guidelines for implementation of JJM, the Centre-State funding pattern for implementation of the scheme is 50:50 for Coverage i.e., infrastructure in terms of FHTCs provided to rural households and 60:40 for Support Activities including Water Quality Monitoring and Surveillance (WQM&S). Till 2022-23, the Centre's share were credited to the State Government through the Public Financial Management System portal. Thereafter, the State was required to release or transfer the sanctioned amount to the 'Single Nodal Account' (SNA) of the scheme maintained by Mission Director, along with the matching State share, within 15 days of receipt. From January 2023, both the Centre and State's share of funds were directly released to the SNA. All payments were made by the implementing agencies through the portal by using the SNA.

The details of funds received and expenditure incurred under JJM in Tamil Nadu for the period 2019-2024 are given in **Table 4.1**.

Table 4.1: Receipt and expenditure of JJM funds at State level

(₹ in crore)

Year	Opening Balance (OB)	Receipt			Total Receipt	Expenditure			Total Expenditure	Closing Balance
		Central	State	Interest		Central	State	Interest amount remitted		
2019-20	11.76 ¹	373.10	184.83	3.54	573.23	99.97	99.13	0	199.10	374.13
2020-21	374.13	688.08	664.87	14.00	1,741.08	577.87	387.23	0	965.10	775.98
2021-22	775.98	630.71	826.30	22.35	2,255.34	467.25	506.68	0	973.93	1,281.41
2022-23	1,281.41	872.96	849.54	31.40	3,035.31	604.00	676.14	10.27	1,290.40	1,744.91
2023-24	1,744.91	2,617.10	2,556.03	36.54	6,954.58	2,620.71	2,614.95	67.94	5,303.60	1,650.98

(Source: TWAD Board, Chennai)

4.1.1 Delayed release of Central Assistance

Audit scrutiny of records revealed that, during the mission period upto 2022-23, the GoI share funds received by the State Government were released to the SNA with delays ranging from 6 to 104 days beyond the stipulated transfer date.

¹ OB taken from erstwhile National Rural Drinking Water Programme.

Further, delays ranging from 14 to 313 days were noticed in the release of State's share to SNA. The details of delays in release of funds is given in **Appendix 4.1**. Mission Director, JJM replied (February 2025) that normally the State's share was released on time and that the delay stated was due to administrative reason. Audit observed that, though there was delay in release of funds, the progress of the works under JJM was not affected for want of funds.

4.2 Short collection of community contribution under JJM

JJM operational Guidelines of GoI stipulates that recovery of user charges and full O&M will form the cornerstone of the long-term sustainability of the Mission. The State specific Guidelines issued in 2020 and 2022 reiterated the same by stating that the VPs were responsible for O&M of the in-village components of the Mission. The community contribution for in-village piped water supply infrastructure and related source development should be collected before commencement of the work from households in VPs as detailed below:

- Five *per cent* of the capital cost in cash and/or kind and/or labour in hilly and forested areas and habitations/VPs having more than 50 *per cent* SCs and/or STs population;
- 10 *per cent* of the capital cost in cash and/or kind and or labour in other habitations/VPs.

Willingness of the community and contribution under JJM is mandated from at least 80 *per cent* households of the village as a pre-requisite for taking up water supply schemes. As of July to October 2024, the community contribution amount due, collected and the balance to be collected from beneficiaries in the selected Districts and Blocks are detailed in **Table 4.2**.

Table 4.2: Status of community contribution

(₹ in crore)

District	District level			Selected Blocks		
	Due	Collected	Balance (in <i>per cent</i>)	Due	Collected	Balance (in <i>per cent</i>)
Coimbatore	6.46	5.50	0.96 (15)	1.38	0.96	0.42 (31)
Nagapattinam	3.37	0	3.37 (100)	0.92	0	0.92 (100)
Ramanathapuram	7.75	1.84	5.91 (76)	1.54	0.60	0.93 (61)
Salem	28.26	5.01	23.25 (82)	2.87	0.61	2.27 (79)
Theni	16.31	3.27	13.04 (80)	3.42	0.90	2.52 (74)
Viluppuram	10.08	8.39	1.69 (17)	1.05	0.98	0.07 (7)
Total	72.23	24.01	48.21 (67)	11.18	4.05	7.13 (64)

(Source: Data obtained from DRDAs)

As seen from **Table 4.2**, against ₹72.23 crore due as community contribution in the six selected districts, the collection was only ₹24.01 crore (33 *per cent*). In selected Blocks, as against ₹11.18 crore to be collected as community contribution, the VPs collected only ₹4.05 crore (36 *per cent*). Further, no community contribution was collected in Nagapattinam District.

Government replied (April 2025) that the balance amount would be collected at the earliest. However, the fact remains that the Operational Guidelines were not followed in ensuring the collection of community contribution before execution of works.

Recommendation 8: The Government should ensure that the requisite community contributions as per the Operational Guidelines are collected from the beneficiaries.

4.3 Short collection of water charges

One of the essential criteria for hassle free O&M of water supply schemes was cost recovery and proper financing policy which would increase the financial viability and sustainability of implementing agencies. Collection of water tariff was also emphasised in the State specific operational guidelines for JJM. Accordingly, the VPs must collect minimum water tariff amount² of ₹30 per month.

In this context, the data regarding number of water connections provided as of November 2024 and the water charges assessment conducted by VPs during 2024-25 were obtained from the JJM portal and the VP tax portal respectively. The details are given in the **Table 4.3**.

From **Table 4.3** it was seen that, JJM dashboard's data on number of FHTCs provided was higher than the number of assessments of water charges in the five districts indicating that a significant number of households having FHTCs were not assessed for water connection charges. This resulted in substantial short collection of revenue.

Table 4.3: Details of non-assessed connections

District	FHTC provided as per JJM Dashboard	Water charges assessed
Coimbatore	3,72,578	3,07,075
Ramanathapuram	1,11,024	21,313
Salem	5,65,111	2,64,994
Theni	1,85,013	76,296
Viluppuram	3,87,786	1,39,598

* Details not furnished for Nagapattinam District

(Source: Data compiled by Audit)

The non-assessment and short-collection of water connection charges placed an additional burden on the Operation and Maintenance of the Mission, besides revenue loss to the implementing agency.

Government replied (April 2025) that action is being taken to bring all households for assessment of water connections. The reply points to the fact that effective measures were not taken to ensure collection of water charges for the in-village water supply.

Recommendation 9: The Government should ensure that water charges be assessed and collected from all the beneficiaries so as to augment the revenue source of the VPs.

4.4 Other issues

Other district-specific issues on financial management noticed in the selected districts are detailed below.

² As per G.O.No.260, RD&PR Department dated 09 December 1998.

4.4.1 Diversion of JJM funds to DRDA Administrative Account

A review of the cash books of DRDA, Theni revealed that an amount of ₹3.23 crore pertaining to the Earnest Money Deposit (EMD)/Security deposit received from contractors for works under the JJM, were diverted to the DRDA Administrative Account between 2019-20 and 2023-24. The EMD amount is to be refunded to the contractors upon completion of the work. Instead, Audit noticed that the amount was diverted and utilised for routine administrative expenses.

On being pointed out, Assistant Project Officer, DRDA, Theni replied (September 2024) that since 2016-17, no funds were received from the Government to cover staff salaries and administrative expenses. Hence, the said amount was transferred to the DRDA's Administrative Account. Government replied (July 2025) that the amount pertaining to EMD and Additional Security Deposit for JJM works 2020-21 and 2022-23 was ₹1.25 crore, of which ₹30.55 lakh was released to contractor thus far and the balance would be refunded on request from the contractor. The reply is however silent about diversion of funds for payment of salaries and Administrative Expenses.

4.4.2 No uniformity in collection of Community Contribution - Theni

A review of deposit collections in the Uthamapalayam and Bodinayakannur blocks of Theni District revealed that, the community contribution collected from 305 households for providing FHTCs under JJM ranged between ₹650 to ₹3,000 both within and across various habitations. However, no reason was provided for the variation in amount collected within the same district.

Government replied (July 2025) that since collection of community contribution is purely based on the capital cost and number of households in the habitations/VPs, the variation in the community contribution collected varies within the same district. The reply is not tenable as variations were noticed within the same habitations also.

4.4.3 Non-remittance of Labour Welfare Fund deductions - Nagapattinam

A review of payments made to the Contractors for the works in respect of JJM in Nagapattinam District revealed that though one *per cent* of Invoice amount was deducted as Labour Welfare Fund (LWF) from the bills the same was not remitted to the LWF account by three Blocks of Nagapattinam District as given in **Table 4.4**.

Government replied (April 2025) that necessary action is being taken to remit the Labour Welfare Fund amount to the LWF account. The fact remains that these lapses point to ineffective monitoring in financial progress of works under JJM.

Table 4.4: Non-remittance of LWF into Labour Board accounts

Block	Amount of LWF deducted and kept in the accounts of the blocks (in ₹)
Keelaiyur	7,13,384
Nagapattinam	4,83,379
Thirumarugal	3,64,087
Total	15,60,850

(Source: Data furnished by DRDA)

CHAPTER V

**WATER QUALITY
MONITORING AND
SURVEILLANCE**

CHAPTER V

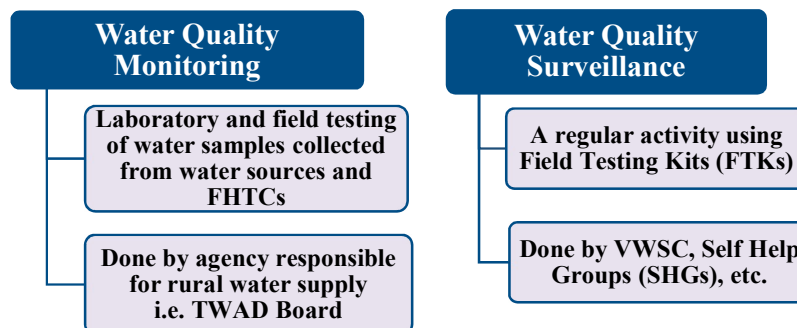
WATER QUALITY MONITORING AND SURVEILLANCE

The water testing laboratories functioned without any mechanism for referring positively tested samples to higher level laboratories. Further, four District laboratories in the selected districts functioned without NABL accreditation. The infrastructure and equipment were found to be lacking in all the 18 laboratories (including State laboratory) at various levels across the selected districts. The water quality testing conducted by TWAD Board divisions was inadequate as all the 13 prescribed parameters were not tested. No water quality tests were conducted by using Field Testing Kits in any of the selected districts.

5.1 Introduction

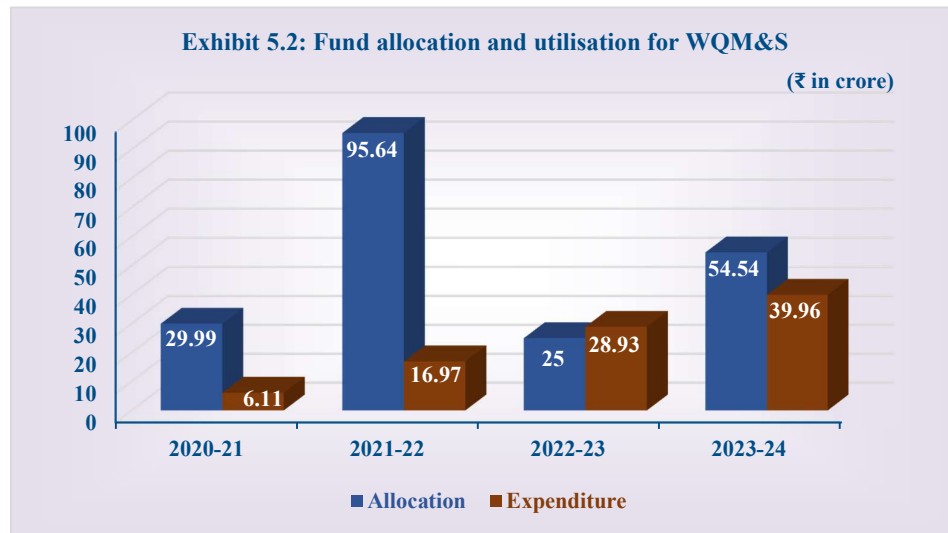
The Operational Guidelines of JJM issued by GoI prescribes Water Quality Monitoring and Surveillance (WQM&S) for ensuring the quality of water supplied through FHTCs. These activities involve testing of water samples collected from water sources by Department in water quality testing laboratories, Surveillance using Field Test Kits (FTKs) by community, sanitary inspection, etc. Up to two *per cent* of JJM funds of the State are to be allocated for WQM&S which is done as per the Uniform Drinking Water Quality Monitoring Protocol¹ (UDWQMP). The WQM&S framework is described in **Exhibit 5.1**.

Exhibit 5.1: Water Quality Monitoring and Surveillance framework



GoTN Operation Guidelines stipulate that the District Water and Sanitation Mission (DWSM) is responsible for monitoring water quality. The funds allocated towards WQM&S under JJM are intended for monitoring and surveillance of water quality at the field level in habitations, as well as for establishing and upgrading water quality testing laboratories at the State, District and Sub-district levels. The fund allocation and utilisation for WQM&S during 2020-24 are detailed in the **Exhibit 5.2**.

¹ Issued by the Ministry of Drinking Water and Sanitation, Government of India, in February 2013.



(Source: Details furnished by TWAD Board)

5.2 Lack of adequate infrastructure and equipment for Water Quality Testing

Central Public Health and Environmental Engineering Organisation's (CPHEEO) Manual 2005, stipulates that the agency operating the water supply system is primarily responsible for ensuring that the water supplied meets quality standards. This requires regular physical, chemical and bacteriological testing of water samples. In Tamil Nadu, the RD&PR Department and the TWAD Board are responsible for monitoring water quality. The details of District, sub-district and Block level laboratories in the six selected districts are given in **Table 5.1**.

Table 5.1: Details of laboratories established in six selected districts

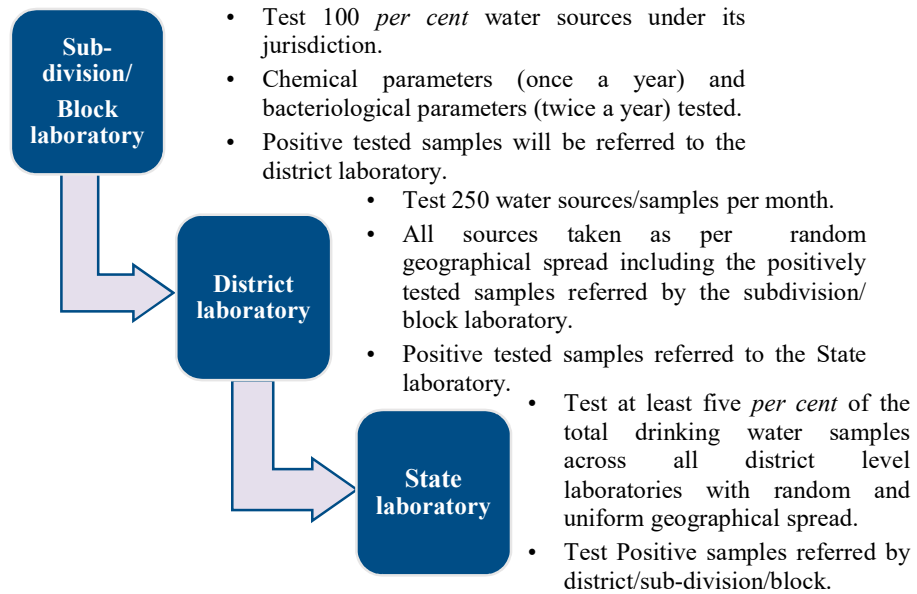
District	Total blocks in the district	District laboratory	Sub-district laboratories	Block laboratories
Coimbatore	12	1	1	1
Nagapattinam	6	1	0	0
Ramanathapuram	11	1	1	1
Salem	20	1	3	1
Theni	8	1	0	1
Viluppuram	13	1	1	1
Total	70	6	6	5

(Source: Details furnished by TWAD Board divisions)

5.2.1 Absence of reporting mechanism to higher laboratories

As per the JJM Operational guidelines, the broad guidelines for undertaking testing of sources/samples at different level are given as **Exhibit 5.3**.

Exhibit 5.3: Guidelines for testing of water samples



As given in **Exhibit 5.3**, the block/sub-division laboratories are required to refer positive tested samples to the District laboratory which was to test all sources taken as per random geographical spread including the positive tested samples referred by the subdivision. However, Audit observed that the district laboratories did not function as per their intended role, but were rather operating as Block laboratories covering few specific blocks. This was in contravention of the roles envisaged as per the guidelines.

For instance, in Ramanathapuram district, three laboratories were operational one each at District, Sub-district and Block level. However, the jurisdiction of the District laboratory was restricted to only four blocks (**Table 5.2**).

Table 5.2: Details of allocation of blocks to laboratories in Ramanathapuram district

Name of Laboratory	Jurisdiction
District laboratory, Ramanathapuram	Bogalur, Ramanathapuram, R.S.Mangalam, Thiruvadanai
Sub-district laboratory, Paramakudi	Kadaladi, Kamuthi, Mudukulathur, Paramakudi
Block level laboratory, Uchipuli, Mandapam	Mandapam, Nainarkovil, Thiruppullani

(Source: RWS Division, TWAD Board, Ramanathapuram)

Government replied (April 2025) that the same number of manpower were engaged for District, Sub-district and Block level laboratories. Hence, jurisdiction were fixed evenly. The reply is not tenable since the district laboratory is functioning as a block laboratory which consequently resulted in the district devoid of certain higher functions performed through it.

5.2.2 Laboratories functioning without accreditation

The JJM Operational Guidelines issued by GoI stipulates that drinking water quality testing laboratories should be accredited under IS/ISO/IEC 17025 for basic water quality parameters, with gradual upgrades to other parameters based on local conditions. The GoTN Operational Guidelines also mandates that the TWAD Board should take necessary steps to obtain National Accreditation

Board for Testing and Calibration Laboratories (NABL) accreditation for all District-level Water testing laboratories in a phased manner. The status of accreditation in six selected districts is given in **Table 5.3**.

Table 5.3: Details of accreditation obtained by laboratories

District	NABL accreditation validity until	Lab functioning without renewal of NABL accreditation (November 2024)
Coimbatore	30/01/2024	10 months
Nagapattinam	21/04/2024	7 months
Ramanathapuram	23/02/2024	9 months
Salem	31/07/2026	Not Applicable
Theni	21/04/2024	7 months
Viluppuram	11/09/2026	Not Applicable

(Source: Records furnished by TWAD Board Divisions)

As of November 2024, four out of six district water testing laboratories in the six selected districts have been operating without NABL accreditation for periods ranging from seven to ten months.

Government replied (April 2025) that necessary action has been taken to renew the accreditation. However, the fact remains that the laboratories continued to function without renewal of accreditation which was in contravention of the GoI and GoTN guidelines.

Recommendation 10: The Government must ensure renewal of accreditation of the water testing laboratories at the earliest.

5.2.3 Lack of Equipment/Infrastructure in laboratories

As per the CPHEEO Manual, Water quality testing laboratory is the backbone of water quality surveillance. A well-located and well-equipped analytical laboratory with competent staff is very essential to evaluate the efficiency of water utility services in terms of water quality.

(i) Infrastructure

The details of infrastructure available and shortfall in the State laboratory and 17 laboratories established in the selected districts are given in **Appendix 5.1**.

The infrastructure and other equipment/instruments, recommended by the UDWQMP were found to be lacking in the 17 established laboratories at various levels across the six selected districts.

(ii) Equipment/Instruments

Significant shortfalls concerning equipment/instruments required for effective water quality testing were observed in the State laboratory and across all 17 established water testing laboratories in the six selected districts as detailed in **Appendix 5.2**.

Audit noticed that, in spite of the mandate to ensure proper infrastructure and fully equipped facilities for comprehensive water quality monitoring, the laboratories were found lacking in essential testing equipment, tools and other supporting infrastructure at both district and sub-district levels to perform bacteriological and chemical tests effectively, as recommended by the

UDWQMP and outlined in the Operational Guidelines. These deficiencies included critical testing instruments, reagents, and supporting facilities necessary for accurately detecting and analysing key water quality parameters such as chemical contaminants (arsenic, fluoride, nitrate, etc.) and bacteriological indicators (E.coli, coliform bacteria, etc.).

Government replied (April 2025) that the details of essential equipment, tools and other supporting infrastructure are collected and tender works for the same are under process. The reply is not acceptable since funds were available for purchase of equipment despite which the laboratories functioned with shortage of infrastructure and equipment.

5.3 Testing of water sources and parameters

The details of testing of water sources done in six selected districts during 2019-24 by TWAD Board laboratories and their results are given in **Table 5.4**.

Table 5.4: Details of number of water sources tested

District	Number of water sources	Number of tests conducted	Number of sources with contaminants above permissible limit	
			Bacteriological	Chemical
Coimbatore	6,243	15,702	0	0
Nagapattinam	1,561	21,847	2	36
Ramanathapuram	5,013	65,001	5	843
Salem	32,916	99,855	64	275
Theni	5,920	18,500	0	0
Viluppuram	11,207	10,280	0	0
Total	62,860	2,31,185	71	1,154

(Source: Details furnished by TWAD Board divisions)

- Audit observed that the Block and VP level officials were also not aware of the issue of contamination as they did not maintain any record in this regard.
- Further, Audit tested 43 water samples in selected districts and found that the test results of all the five water samples taken in Coimbatore District and two samples taken in Ramanathapuram District were found not of potable quality.

Government replied (April 2025) that villages that were affected with water contamination of chemical and bacteriological parameters were provided with CWSS scheme with river water sources. Thus, the reply indicates the lack of action to restore the water source with proper rectificatory action in case of presence of contaminants. Further, the reply was silent on the mandatory testing to be done.

- The JJM Operational Guidelines issued by GoI prescribes a list of 13 basic water quality parameters² to be tested along with the acceptable limit for each and the permissible limit in the absence of

² pH value, Total dissolved solids, Turbidity, Chloride, Total alkalinity, Total hardness, Sulphate, Iron, Total arsenic, Fluoride, Nitrate, Total coliform bacteria, E.coli or Thermotolerant coliform bacteria.

alternate source. Scrutiny of the test results received indicated that test for arsenic, a chemical contaminant and one of the 13 basic parameters that poses serious health risks, was not conducted in any of the tested samples.

- For bacteriological contamination, only faecal coliform testing was performed instead of total Coliform and E.coli or Thermotolerant Coliform bacteria, which is the standard parameter.
- Thus, the water quality testing conducted by TWAD Board divisions was incomplete as the water quality testing was not done adequately for all the 13 prescribed parameters which impacted the accuracy and reliability of the test results, resulting in potential health risks undetected.

Government replied (April 2025) that there was no arsenic contamination in drinking water in Tamil Nadu as it is geo-genic in nature. The reply is not acceptable since it accounted for natural sources of contamination (geo-genic) only but was silent on other sources like industry/factory contamination, one of the reason based on which testing this parameter was also made mandatory.

Recommendation 11: The Government should ensure that all equipments are purchased to make the laboratories fully functional at the earliest for comprehensive water testing in order to take timely remedial action.

5.4 Non-utilisation of Field Testing Kits

The Operational Guidelines of GoI mandates that VWSCs must ensure water quality testing using Field Test Kits (FTKs). The tests were to be conducted by trained member of Self Help Groups and the results must be updated on the JJM-WQMIS web portal. GoTN Operational Guidelines stipulates that the test results must be reported to the Village Panchayat Secretary, who would maintain a water quality register. The BDO(VP) must cross-verify 5 per cent of VPs monthly, ensuring tests are conducted every 15 days and recorded. The details of FTKs distributed to the selected districts for the period 2019-24 are as given in the **Table 5.5**.

Table 5.5: Details of FTKs supplied to districts (year-wise)

District		Coim-batore	Naga-pattinam	Ramana-thapuram	Salem	Theni	Vilup-puram
Number of Blocks		12	6	11	20	8	13
Number of VPs		228	193	429	385	130	688
FTKs supplied	2019-20	0	0	0	0	130	688
	2020-21	228	0	0	385	130	688
	2021-22	228	193	429	0	130	688
	2022-23	228	0	429	385	130	688
	2023-24	228	0	0	385	130	688

(Source: Details furnished by TWAD Board Divisions)

Audit observed that, there was no uniformity in the distribution of FTKs as only three out of six selected districts reported to have received FTKs during 2020-24. The reasons for non-uniformity in supply of FTKs was not furnished.

Further, Audit observed that despite the distribution of FTKs and training provided to SHGs, no water quality tests were conducted by these trained members in any of the selected districts. It was further confirmed during the JPV in selected blocks and VPs that the FTKs were in unopened condition indicating complete non-utilisation of the kits as shown in **Exhibit 5.4**.



Key provisions such as maintenance of FTK registers, periodic verification by the BDO and local monitoring were not implemented. Consequently, the intended community-level water quality surveillance, as outlined in the Operational Guidelines, was not done. Furthermore, FTKs have a shelf life of one year and since almost all of them were not used. This rendered the procurement of the kits as wasteful.

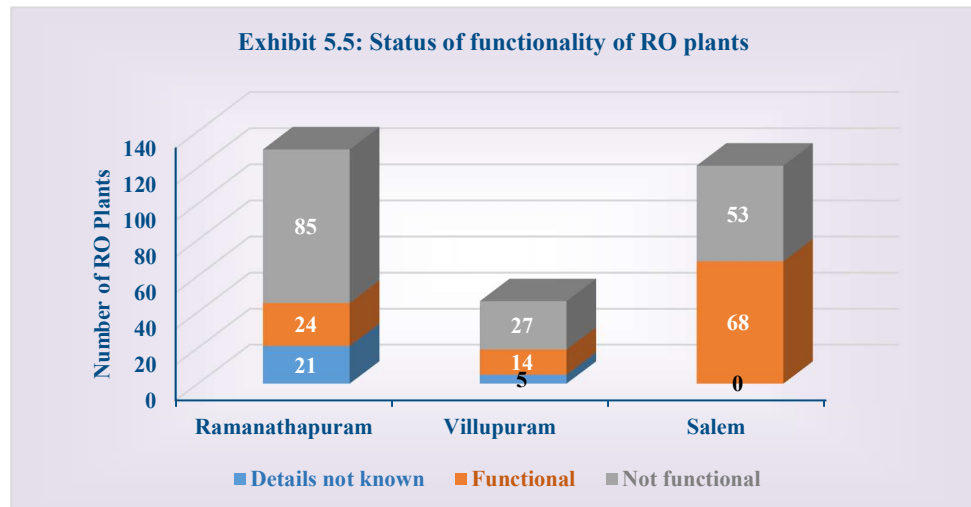
Government replied (April 2025) that during 2019-21, FTKs were not assembled due to non-availability of funds. During 2021-24, FTKs were supplied through contractors for packing and transporting from State level water testing laboratory. It was further stated that every year 5 SHG members in each VP were trained for using FTKs and 24.08 lakh tests were conducted. The reply is not acceptable as there was no shortage of funds under WQM&S and hence, uniform procurement and distribution of FTKs could have been ensured. Further, in the test-checked districts no tests were conducted utilising FTKs.

Recommendation 12: The Government must direct the implementing agencies to ensure optimum utilisation of the Field Testing Kits by conducting tests and recording the same.

5.5 Non-functional Reverse Osmosis plants

Section 110 of the Tamil Nadu Panchayats Act, 1994, stipulated that it was the duty of VPs to provide safe drinking water in rural areas. JJM Operational Guidelines of GoI stipulated that supply of potable water in quality affected areas must be accorded priority and Community Water Purification Plant could be installed towards this effort. It further stated that the choice of technology is left to States to ensure that such systems have robust post installation O&M systems and safe disposal of residue so that they continue to function as per prescribed standards.

GoTN accorded permission to install Reverse Osmosis (RO) plants in rural areas to overcome problems related to water quality in locations with non-potable, salty, or brackish water. As per the details furnished by the DRDAs, 130, 46 and 121 RO plants were installed in Ramanathapuram, Viluppuram and Salem respectively during 2019-21 and the status of functionality of these RO plants is given in **Exhibit 5.5**.



As seen from **Exhibit 5.5**, the non-functional ROs ranged from 43.8 *per cent* to 65.4 *per cent* in the test checked Districts. Some of the non-functional RO plants test checked in Audit during JPV in September 2024 are given in **Exhibit 5.6**.

Exhibit 5.6: Non-functional RO plants in test-checked blocks of Ramanathapuram



Further, the date of installation of RO plant and the date from which the RO plant became non-functional was not documented. The absence of such crucial details, indicate gaps in record-keeping and documentation process. This not only hinders effective monitoring and maintenance of the RO plants but also raises concerns about the overall management and accountability in the implementation of the project. As a result, the intended objective of supplying safe drinking water to the rural population was not achieved.

Government replied (April 2025) that orders were issued to rectify the defective RO plants in Viluppuram district utilising the General funds of the VPs and Panchayat Union as a onetime measure to make them operational. No specific reply was received in respect of the other districts. The reply points to the fact that the objective of installation of RO plants could not be fully achieved and there was lack of monitoring.

Recommendation 13: The Government should direct the Department to ensure the functionality of Reverse Osmosis Plants created for providing potable water.

CHAPTER VI
POST OPERATION
MANAGEMENT,
MONITORING AND
EVALUATION

CHAPTER VI

POST OPERATION MANAGEMENT, MONITORING AND EVALUATION

Lapses in monitoring and verification processes of Third Party Inspection Agencies were noticed. In test-checked vouchers of completed works, issues like payments released without TPIA reports, incomplete scrutiny reports and discrepancies between TPIA report and completion report for the works executed, etc., were noticed. IEC materials remained undistributed/unused in the districts, despite a lapse of more than six months since their receipt. Geo-tagging of assets and linking of FHTCs with Aadhaar were incomplete. Social audit was not conducted in any of the six selected districts.

6.1 Issues in Monitoring

6.1.1 Lapses in Monitoring by the Third Party Inspection Agencies

The State specific Guidelines for implementation of JJM specifies that the State Water and Sanitation Mission (SWSM) must empanel Third Party Inspection Agencies (TPIAs) to check the quality of work executed by the implementing agencies, quality of materials used for construction and quality of machinery installed in each of the scheme. It was further stated that payments shall be made to the contractor only after verification and recommendation by the TPIA and VP President.

The TPIA reports contain two parts. Format A of the TPIA Report contains the work information to be filled up by the executing departments such as total number of households, the number of FHTCs provided as of 01-04-2020, the funding pattern, etc. Format B of the TPIA report used by the Inspecting Officer contains details of inapplicable items, material tests (e.g. steel, cement and concrete cube tests) reports, critical parameters for OHTs such as water tightness & interconnection of pipes and the number of FHTCs provided.

Some of the deficiencies noticed by Audit in the test-check of vouchers in selected districts as detailed in **Table 6.1**.

Table 6.1: Discrepancies in TPIA certification in test-check of vouchers in selected districts
(₹ in crore)

District	Works without TPIA certificates		Works with incomplete Format B		Works having discrepancy in FHTC numbers		Works without FHTC numbers		OHT works with unverified water tightness	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Coimbatore	8	6.24	32	2.44	4	0.15	1	0.06	1	0.09
Ramanathapuram	20	2.61	61	7.58	10	1.51	NA	NA	NA	NA
Salem	2	0.72	NA ¹	NA	31	4.30	NA	NA	NA	NA
Theni	2	0.40	NA	NA	2	0.92	1	0.30	NA	NA
Viluppuram	4	0.71	NA	NA	NA	NA	2	0.57	2	0.52

(Source: Test-check of DRDA payment vouchers)

Government endorsed (July 2025) the DRDA's reply for Ramanathapuram that the absence of TPIA report in some items was due to documentary lapses. Government also stated (July 2025) that Mission Director will pursue in taking action for the improper monitoring of TPIA Report, not conducting material test against the erring official and TPIA concerned.

Other issues

- GoTN Operational Guidelines stipulated that if any defects were identified by TPIA, they must be rectified and re-verified by both TPIA and VP president before approval of payment. It was observed that for 29 works in Thirumarugal Block of Nagapattinam District, corrective measures suggested (April/May 2024) by the TPIA were stated to have been carried out by the BDO(VP). However, these works were not re-verified by the TPIA to confirm their execution. Despite this, the payments were made to the contractors. Government replied (July 2025) that the TPIA has been instructed to re-verify the works carried out.
- A review of the Completion Reports (April 2024) and Measurement Books for 11 works in three Blocks², as detailed in the **Appendix 6.1**, indicated that 25mm PVC pipes were used for FHTCs. Whereas, the TPIA Report stated that 20mm pipes were used. However, the bills were processed for the rates applicable to 25mm PVC pipes. As a result of the incorrect application of the rate of 25mm pipe (₹43.25 per metre) instead of 20 mm pipe (₹25.30 per metre), an overpayment of ₹1.58 lakh³ was made to the contractor. Government replied (April 2025) that the differential cost of ₹1.58 lakh will be recovered from the concerned contractor. The reply points to the fact that payment was made without rectifying the discrepancies pointed in TPIA report.

¹ NA- Not available.

² Keelaiyur, Thalanayar and Thirumarugal Blocks.

³ For 8,855.20 metres of 25mm PVC pipe at ₹43.25 per metre instead of 20mm pipe at ₹25.30 per metre.

Recommendation 14: The Government should direct the Department to ensure that payments are released to contractors only on receipt of verification Reports, complete in all aspects, from the Third Party Inspection Agencies.

6.1.2 Discrepancies in payment for preparation of Detailed Project Report

As per GoTN Operational Guidelines, Detailed Project Report shall be prepared for the works approved in the Village Action Plan (VAP)/District Action Plan (DAP)/State Action Plan (SAP).

It was observed that the DRDA, Ramanathapuram did not appoint any consultant for DPR preparation, despite a provision being made in the estimate. Consequently, all estimates for the year 2020-21 were prepared departmentally. However, scrutiny of Completion Reports (CR) and final bill payments revealed that DPR charges amounting to ₹17.17 lakh, as detailed in **Appendix 6.2**, were incorrectly included as part of the works expenditure and paid to the contractors. Government replied (July 2025) that the inclusion of DPR Charges in the final bill paid to contractor was a procedural oversight and that recovery order will be issued and the inadmissible expenditure of ₹17.17 lakh would be collected from the contractor. Government also stated (July 2025) that Mission Director will pursue in taking action for the lapses of non-compliance of agreement procedures against the erring officials.

6.2 Implementation of IEC Activities under JJM

Information, Education, and Communication (IEC) activities are integral to the support activities under JJM. These activities aim to educate user groups on topics such as water conservation, rainwater harvesting, micro-irrigation, maintenance of assets, greywater management etc. As per the GoTN Operational Guidelines, IEC activities were to be carried out by various agencies viz., TWAD Board, State Institute of Rural Development and Panchayat Raj (SIRD&PR), DWSM, Tamil Nadu Corporation for Development of Women (TNCDW), etc.

A test check of the IEC activities in the selected districts was conducted to identify the implementation and effectiveness of these activities. Audit noticed that an amount of ₹13.86 crore was allocated by the Mission Director, JJM for IEC activities in 2023-24, specifically for printing and fixing hoardings, posters, and distributing pamphlets. Scrutiny of records in Thirumarugal block in Nagapattinam and Thiruppullani and Thiruvadanai Blocks in Ramanathapuram revealed that IEC materials such as hoardings, posters, and pamphlets were received from contractors in January and March 2024, respectively at an expenditure of ₹3.76 lakh and ₹8.46 lakh. However, as of September 2024, these IEC materials remained undistributed/unused in the districts, despite a lapse of more than six months since their receipt (**Exhibit 6.1**).

Exhibit 6.1: IEC materials kept undistributed



In the Focussed Group Discussion held (September 2024) by Audit in the selected blocks in Ramanathapuram District, it was noticed that the local population was unaware of the various components of JJM. During the Beneficiary survey conducted by Audit, beneficiaries totalling 794 out of 1,427 (55 *per cent*) surveyed responded that they were unaware of any IEC activity. Thus, the non-distribution of IEC material procured impacted the outreach and awareness efforts intended under JJM.

Government replied (April 2025) that IEC materials have now been distributed through self-help groups and water and sanitation committee members. It was also stated that awareness programme is continuously given to public. The reply is not tenable since lack of monitoring in ensuring distribution of IEC materials impacted the objective of awareness activities.

6.3 Geo-tagging of assets

As per the Operational Guidelines issued by GoI, States must geo-tag all water supply scheme assets, including infrastructure like greywater treatment plants, source sustainability structures etc., to ensure transparency and effective monitoring. The same has been reiterated in State Specific Operational Guidelines issued by GoTN.

Further, JJM Operational Guidelines mandates that the JJM IMIS should capture data of every FHTC, including physical progress, geo-tagging, expenditure details, functionality status etc. This data should be publicly accessible for social audits and oversight.

In Nagapattinam and Ramanathapuram districts, 517 and 1,175 works respectively were sanctioned under JJM convergence funds through the RD&PR Department. Out of these, 133 and 764 works respectively were completed. However, the assets created under these completed works were not geo-tagged. Further, geo-tagging of works undertaken by TWAD Board was not complete as of September 2024.

During Exit conference (March 2025), the Engineering Director, TWAD Board stated that the geo-tagging work is under progress and 88 *per cent* has been completed. Government replied (April 2025) that in Nagapattinam district there is no own source pending for geo-tagging and that there was technical error

regarding geo-tagging with field user login which would be sorted out shortly. Non-completion of geo-tagging affects monitoring as the details of assets created for water supply are not effectively mapped.

6.4 Linking of FHTC with Aadhaar

JJM Operational Guidelines of GoI and GoTN specifies that FHTCs should be linked with the Aadhaar number of the head of the households, subject to statutory provisions, for targeted delivery and monitoring. In Ramanathapuram and Viluppuram districts, 1,33,882 and 1,01,471 FHTCs respectively were undertaken under JJM and convergence schemes. However, the linking task remained incomplete as only 1,08,258 and 99,771 FHTCs respectively were linked with Aadhaar numbers. Government replied (April 2025) that linking of FHTC with Aadhaar has since been completed. The reply is not acceptable since, as per the JJM dashboard data, only 72 per cent of the FHTCs have been tagged with the beneficiaries even as of June 2025.

6.5 Non-conduct of Social Audit under JJM

JJM Operational Guidelines of GoI stipulates that Gram Panchayats and VWSCs are required to conduct social audits of the JJM scheme. Social audits help institutionalise community participation, enhancing transparency and ensuring that the scheme's benefits reach the intended beneficiaries. This requirement was also reiterated in the State specific guidelines.

Audit noticed that Social audit has not been conducted so far in any of the six selected districts. Government replied (April 2025) that a Third Party Audit was done by SWSM. However, no details was furnished for the same. The reply is not tenable since non-conduct of social audit indicated non-compliance with the Mission Guidelines.

Recommendation 15:

The Government should ensure strict adherence to the Mission Guidelines in the conduct of social audit and for geo-tagging of assets.

6.6 Improper maintenance of completed works

GoTN sanctioned (February 2021) a new Water Supply Scheme for Yercaud Union in Salem District at a cost of ₹12.70 crore. The scheme included the construction of six open wells, one aerator, two ground-level sumps and six OHTs. The work order was issued by TWAD Board in January 2022 following tender process. The work commenced in February 2022 and was completed in February 2023. After the one-year maintenance period, the scheme was handed over to the local body for further upkeep in March 2024.

During the Joint Physical Verification (JPV) of the Water Supply Scheme in March 2025, it was noticed that there was a decline in pumping efficiency which had led to increased turbidity in the water. Consequently, water from the new

openwells was supplied once every three days, while the overall water supply is being maintained through other existing local sources.

The Assistant Executive Engineer (AEE) stated that the decline in pumping efficiency was due to lack of pump set maintenance and absence of desilting of well. Audit further noticed that the pumping logbook records detailing water transfer from the well to the sump and from the sump to the OHTs was not maintained. Audit observed that, in the absence of the records, it was not possible to monitor the consistent water supply in the scheme.

On being pointed out, the AEE replied (March 2025) that the BDO has been informed to carry out the necessary maintenance to ensure a consistent water supply. The BDO further assured that all relevant records will be maintained going forward. Lack of proper maintenance of records indicated deficiencies in monitoring of the completed schemes.

CHAPTER VII
OUTPUT AND OUTCOME
FRAMEWORK OF
JAL JEEVAN MISSION

CHAPTER VII

OUTPUT AND OUTCOME FRAMEWORK OF JAL JEEVAN MISSION

The progress in providing FHTCs to rural households in water quality affected areas was less resulting in disparity of water supply across districts. The rural households in the selected districts that were provided with tap connections did not receive sufficient quantity of water. Also quality issues in the water supply were noticed. A majority of FHTCs provided were outside the house in contravention to the guidelines which prescribed provision of FHTC within the house.

7.1 Introduction

Jal Jeevan Mission's primary output is providing all rural households with a Functional Household Tap Connection by 2024. The mission period was further extended up to 2028 in February 2025. In parallel, the Mission also strives to achieve four key measurable outcomes viz., (i) improved health conditions of rural communities, (ii) reduction in drudgery faced by women and girls and empowerment of women, (iii) reduced school dropout rates of upper primary level girls and (iv) increase in employment opportunities for rural communities.

7.2 Non-achievement of Primary Output

7.2.1 FHTCs not provided

One of the broad objectives of the JJM is 'to prioritise provision of FHTCs in quality affected areas, villages in drought prone and desert areas etc.' by March 2021. Of the selected districts, the ground water of the entire districts of Nagapattinam and Ramanathapuram were not suitable for drinking purpose and was classified as brackish and saline in nature. Yet, it was noticed that the progress in these districts was much lower compared to other districts and the achievement in providing FHTCs to these districts stood at 46 *per cent* and 31 *per cent* respectively, as of June 2024. It is pertinent to note that even after a lapse of four years after launch of the scheme, these districts could not register the desired progress in ensuring coverage of rural households under JJM.

Theni District has been reported as '*Har Ghar Jal*'. However, during JPV, Audit noticed (March 2025) that in Agamalai VP, none of the 1,622 households were provided with FHTC. The population depended on either natural water source (aquifers, river falls etc.) or public taps.

In the beneficiary survey involving 1,427 respondents, 147 respondents stated that they were not provided with FHTCs under the scheme, out of which 143 belonged to Nagapattinam and Ramanathapuram Districts.

Government replied (July 2025) that in Ramanathapuram and Nagapattinam districts the three major MVS were under implementation. Upon completion, the balance FHTCs in Ramanathapuram and Nagapattinam districts will be

provided for saturation of the districts. The reply indicated the fact that saturation was not achieved even after five years of roll out of JJM.

7.2.2 Insufficient and Irregular supply of water in FHTCs

JJM Operational guidelines mandates that a minimum of 55 lpcd of water is required to be supplied through every tap connection provided. To ensure the same, Audit obtained records of the water supplied to habitations¹ during 2019-24 in the selected districts and the details are given in **Table 7.1**.

Table 7.1: Quantity of water supplied to habitations during 2019-24

Districts	Number of habitations	Quantity of water supplied		Percentage of habitations supplied with the required quantity
		Less than 55 lpcd	55 lpcd or above	
Coimbatore	1,200	1,096	104	8.67
Nagapattinam	980	980	0	0
Salem	5,109	1,901	3,208	62.79
Theni	607	0	607	100
Viluppuram	2,284	1,191	1,093	47.85
Ramanathapuram	2,306	2,269	37	1.60
Total	12,486	7,437	5,049	40.44

(Source: Concerned DRDAs/TWAD Board)

From **Table 7.1** it was seen that none of the habitations in Nagapattinam District were supplied with 55 lpcd of water. Though Coimbatore District had reported 100 *per cent* achievement in providing FHTCs, it was noticed that only 8.67 *per cent* of habitations were supplied with quantity of water as per the prescribed norms.

Further, Audit enquiry regarding the water supplied to FHTCs, FGDs, JPVs (August/September 2024) and beneficiary survey revealed that shortfall in supply of water as detailed below:

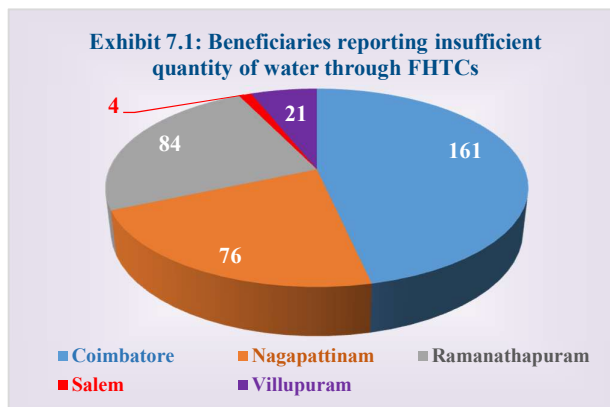
- In Nagapattinam, three² selected VPs of Vedaranyam block could not supply 55 lpcd of water. Of these, the water supplied in Kodyakkarai VP was as low as 17 lpcd.
- In Ramanathapuram, all 10 selected VPs reported that water was not supplied in required quantity and supply was made only once in four to seven days thereby forcing the public to buy water.
- In Salem, the beneficiaries who participated in FGD stated that water was supplied once in three days.

¹ As per JJM Operational Guidelines, habitation is defined as a group of minimum 20 households and/or 100 persons.

² Kodyakkarai, Marudhur North and Mollaikarai VPs.

- In Coimbatore, none of the VPs in Kinathukadavu block received regular supply of water as the supply from the ‘CWSS 295 habitations scheme’ was inadequate, which is further commented in **Paragraph 2.5.2.2**.

The above observations were further substantiated during beneficiary survey by 346 beneficiaries (out of 1,280 provided with FHTCs) that they did not receive sufficient quantity of water (**Exhibit 7.1**). Also, 98 beneficiaries stated that they did not receive water on a daily basis. Of these, 88 beneficiaries belonged to Coimbatore District.



Government replied (April 2025) that after completion of Retrofitting works and New MVS works in Ramanathapuram and Nagapattinam districts, water will be supplied at 55 lpcd to all the habitations in the districts. The reply is not tenable as the fact remained that the objective of supplying a minimum of 55 lpcd was not achieved even after five years of roll out of JJM.

7.2.3 Non-supply of water as per prescribed quality parameters

As per the JJM Operational Guidelines, the water supplied must meet the BIS:10500:2012 drinking water standards concerning bacteriological parameters. During field visit, Audit collected water samples from 43 habitations³ randomly selected in six districts and got them tested in TWAD Board's District Water Testing Laboratories, wherein all five samples taken at habitations of Coimbatore District and two samples pertaining to Ramanathapuram District did not meet the above Guidelines. The issues noticed in testing of water quality are discussed in **Paragraph 5.3**.

Further, Audit questionnaire through beneficiary survey and FGDs in the selected districts revealed that 209 out of the 1,280 beneficiaries provided with FHTCs expressed dissatisfaction⁴ on the quality of water received by them. Out of the above 209 beneficiaries, 123 beneficiaries belonged to Ramanathapuram District.

Quality issues were noticed during JPV in some habitations of the selected districts such as Viluppuram, Ramanathapuram and Theni as beneficiaries expressed that the water supplied was not potable.

³ Coimbatore - 5; Nagapattinam - 3; Ramanathapuram - 13; Salem - 8; Theni - 4 and Viluppuram - 10.

⁴ Coimbatore - 25; Nagapattinam - 14; Ramanathapuram - 123; Salem - 4 and Viluppuram - 43.

Government replied (April 2025) that quality issues in Ramanathapuram District was on account of ground water quality issues and after completion of New MVS and CWSS works implemented by TWAD, uniform quality and quantity of drinking water would be supplied. However, the reply was silent on the deficient quality of water noticed in Coimbatore and Theni districts.

7.2.4 Other issues in coverage of FHTCs

7.2.4.1 Incorrect location of FHTC delivery points in households

JJM Operational Guidelines envisaged that FHTC may be provided to every household with JJM funding for one tap out of three delivery points (taps) viz. kitchen, washing & bathing area and toilet.

Audit scrutiny revealed that, as of September 2024, out of 2,69,645 FHTCs provided in the selected districts, 2,59,613 FHTCs (96 per cent) were installed outside the beneficiary's house in contravention of the guidelines. The details are given in **Appendix 7.1**. This position was corroborated during JPV conducted across 12 selected blocks in selected districts (**Exhibit 7.2**).

Exhibit 7.2: FHTC provided in open space without concrete stand post



This deviation from the guidelines not only fails to provide the intended benefit to the people at large but also leaves these connections outside the house vulnerable to civic problems.

Government replied (April 2025) that the tap connections were provided outside the households due to (i) lack of space to install taps, (ii) beneficiaries' request and (iii) ease of usage on account of small size of rural houses. The reply is not tenable as installation of taps at open and vulnerable points affect the safety and maintenance of the asset created.

7.2.4.2 Water tap connections to schools and Anganwadi centres

As per Para 3.3 of JJM Operational Guidelines, one of the objectives of JJM is to provide functional tap connection to Schools, *Anganwadi* centres, GP buildings, Health centres, wellness centres and community buildings. The details of JJM tap connections of schools and *Anganwadi* centres in the State, as of November 2024 is given in **Table 7.2**.

Table 7.2: JJM tap connections of schools and *Anganwadi* centres as of November 2024

	Tamil Nadu		Selected districts	
	Rural Schools	Provided with FHTCs	Rural Schools	Provided with FHTCs
Rural Schools	38,855	38,848	6,340	6,339
<i>Anganwadi</i> Centres	40,242	40,191	6,628	6,624

(Source: JJM Dashboard)

From **Table 7.2**, it was seen that nearly all the rural schools and *Anganwadi* centres have been provided with FHTCs as per the data uploaded in JJM dashboard. Whereas, during test-check of rural schools in JPV, Audit noticed that two rural schools and one *Anganwadi* centre of Salem District⁵ were not provided with FHTCs though JJM dashboard indicated provision of tap connections to them.

Further, Mission Director reported in October 2024 that 1,626 Panchayat Union Schools and 6,444 *Anganwadis* in the State have not yet been provided with water tap connections. Out of these, 1,564 *Anganwadis* belong to the six selected districts. This was contradictory to the data uploaded in Dashboard.

Government replied (April 2025) that in respect of three selected districts viz., Nagapattinam, Ramanathapuram and Viluppuram, the BDOs/VP presidents have been instructed to provide pipe connections immediately. It was also stated that all rural schools and *Anganwadis* in the remaining three selected districts have now been provided with tap connection. The reply indicated that the information uploaded in JJM dashboard was not accurate.

Recommendation 16: The Government should take steps to bring in all the schools and *Anganwadi* centres within the purview of JJM so as to provide FHTCs to all of them.

7.3 Outcomes of JJM

7.3.1 Sustainable Development Goal - 6

The Sustainable Development Goals (SDGs) framework is a unique articulation of public interest on a global scale wherein the 2030 Agenda for Sustainable Development was adopted by 193 members of the United Nations General Assembly in 2015. At the core of this 2030 Agenda are the 17 Global Goals and their 169 targets driven by the principle of ‘Leaving no One Behind (LNOB)’.

The SDG Global Target 6 - Clean water and Sanitation - calls for access to safe and affordable drinking water, sanitation facilities and hygiene for all by 2030.

⁵ Government Panchayat Union Primary School in Kaveripuram VP and Government Panchayat Union Primary School and *Anganwadi* (in same campus) of Navapatti VP in Kolathur Block.

In particular, Target 6.1 of SDG-6 aims to achieve universal and equitable access to safe and affordable drinking water for all by 2030.

The GoI has also aligned itself with the global commitment to sustainable development to achieve the 2030 Agenda and the target is to provide piped water connection under Jal Jeevan Mission. In order to achieve the SDG-6 goal, GoI implements various⁶ programmes and initiatives including JJM. The performance of the State under SDG-6 is given in **Table 7.3**.

As per NITI Aayog's SDG India Index 2023-24, 81.87 *per cent* of rural households in Tamil Nadu are getting safe and adequate drinking water within premises through Piped Water Supply.

Table 7.3: Performance of Tamil Nadu under SDG-6

Year / Period	SDG-6 score		Ranking amongst the States
	India	Tamil Nadu	
2018	63	66	9
2019-20	88	90	8
2020-21	83	87	11
2023-24	83	87	11

7.3.2 Achievement in Key measurable Outcomes of JJM

In order to ensure socio-economic wellbeing of rural households, JJM strives to achieve the four key measurable outcomes as stated in **Paragraph 7.1**. To assess the progress, Audit conducted beneficiary survey, JPVs and FGDs wherein the achievements in outcomes were discussed.



- During FGDs in the selected VPs, beneficiaries stated that there was significant reduction in women's hardships wherever water was provided to their homes.
- The members of community such as school headmasters, health inspectors and Village nurses also stated that their children could spend time learning in school.

7.3.2.1 Reduced dropout of upper primary school girls

In the beneficiary survey conducted by Audit, 1,280 beneficiaries stated that they were provided with FHTCs. None of the beneficiaries reported drop-out of school going girls in their households, both in the 'classes 1 to 5' group and 'classes 6 to 8' group. Audit obtained the data on drop-out of School Going Children in the primary and middle school level. It was noticed that the drop-out rate at these level was negligible (in the range of 0.01 *per cent* to

⁶ (a) Swachh Bharat Mission; (b) AMRUT 2.0 Scheme; (c) PM Krishi Sinchayee Yojna (PMKSY); (d) Mission Amrit Sarovar; (e) Jal Shakti Abhiyan; (f) Atal Bhujal Yojana; (g) National River Conservation Programme (NRCP); (h) Namami Gange - Integrated Ganga Conservation Mission and (i) National Perspective Plan (NPP).

0.2 per cent) in all the selected districts owing to the initiatives of the State Government in Education Sector.

7.3.2.2 Reduced drudgery of women

In the FGDs held in the two selected blocks of Ramanathapuram District, the representatives of rural communities stated that women had to collect water from distant areas (ranging from 500 metre to 1 kilo metre) and added that the burden would be alleviated only if potable water was supplied to doorsteps.

Thus, even after four years of the roll out of JJM, Ramanathapuram district had not recorded progress in achievement of FHTCs and lagged in achievement of one the key outcomes viz., reduction in drudgery faced by women

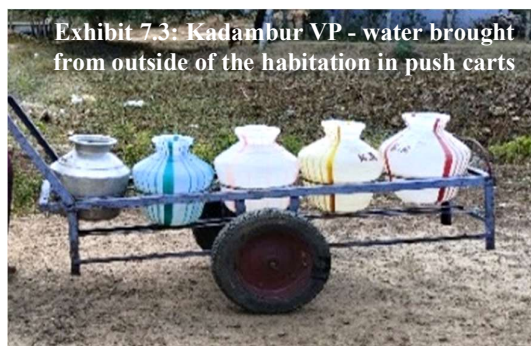
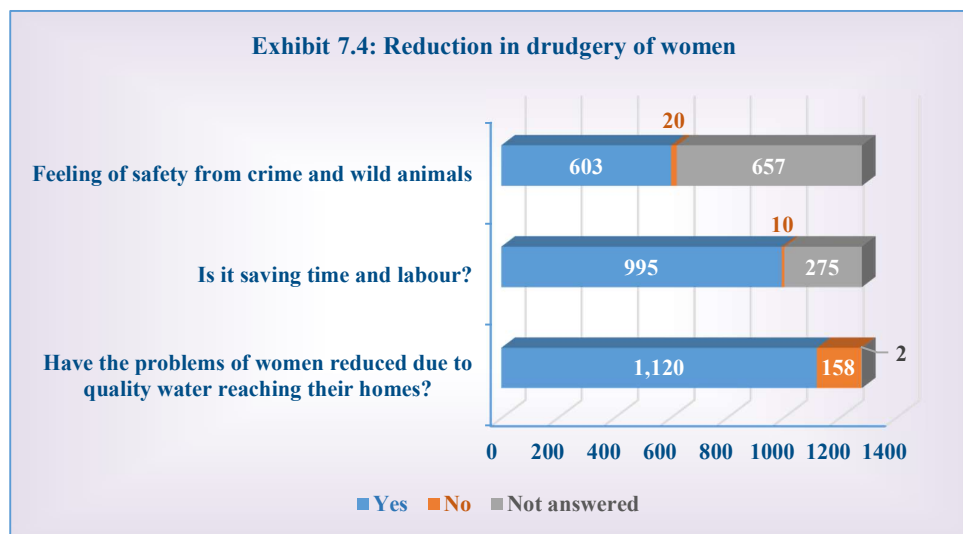
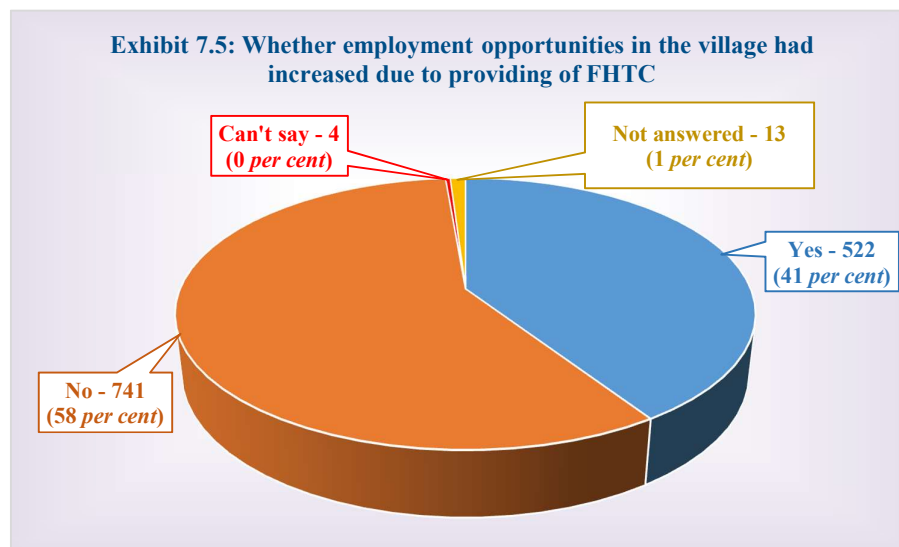


Exhibit 7.3. The response of 1,280 beneficiaries provided with FHTCs during the survey conducted by Audit is given in Exhibit 7.4.



7.3.2.3 Increased employment opportunities

The Beneficiary Survey revealed that the beneficiaries of the scheme did not perceive a significant impact on their employment opportunities on account of provision of FHTCs to their households. While 41 per cent of the beneficiaries reported an increase in employment opportunities on account of increased time availability, 58 per cent felt no change in the employment opportunities (Exhibit 7.5).



7.3.2.4 Reduced waterborne diseases and healthy rural communities

Of the key measurable outcomes, the reduction in waterborne diseases is vital for the long term development of the rural communities. As measurable improvement in this aspect can be attributed to a variety of factors including robust health care system with focus on preventive health care measures, awareness initiatives and proper sewage/waste disposal, correlating the reduction in waterborne diseases with provision of FHTCs alone cannot be conclusively established. In the beneficiary survey, while admitting that they could not recollect the frequency of waterborne diseases before the start of the Scheme, 594 beneficiaries (46.40 *per cent*) felt that there was reduction in water-borne diseases like vomiting, diarrhoea, jaundice, cholera etc. due to the provision of giving quality water to homes through JJM.

Audit compared the data on the water-borne diseases in the selected districts and the State provided by the Directorate of Public Health and Preventive Medicine against the progress of provision of FHTCs in the districts at the start of the Mission period (2019-20) and at the end of 2023-24.

Table 7.4: Data on prevalence of water-borne diseases *vis-à-vis* FHTCs provided in selected districts.

District	Total number of people affected		Percentage of FHTCs provided (JJM Dashboard data)	
	2019-20	2023-24	2019-20	2023-24
Coimbatore	0	2,355	39.65	100
Nagapattinam	625	1,233	5.20	38.05
Ramanathapuram	580	7,329	9.80	28.23
Salem	12	3,405	7.52	80.20
Theni	0	3,052	24.31	100
Viluppuram	2,886	13,096	1.05	81.17
State Total	28,548	1,12,884	15	82

(Source: Data furnished by Directorate of Public Health and Preventive Medicine and JJM Dashboard)

From **Table 7.4**, it was observed that there was no reduction in the number of people affected with water-borne diseases even in districts with high achievement in provision of FHTCs. Though the increase in the water-borne diseases could be due to a variety of factors including improved reporting practices, providing water of prescribed quality through FHTCs would aid in ensuring better health standards in the State in the long-term.

Government replied (July 2025) that in Ramanathapuram, since there was no potable local source of water, the entire district was completely dependent on the new MVS and Retrofitting of existing CWSS works which were under progress. On completion, it would be possible to achieve all the key measurable outcomes.



(FREDERICK SYIEMLIEH)
Principal Accountant General (Audit-I),
Tamil Nadu

Chennai
The 14 January 2026

Countersigned



(K. SANJAY MURTHY)
Comptroller and Auditor General of India

New Delhi
The 27 January 2026

APPENDICES

Appendix 1.1

(Reference: Paragraph 1.5; Page 3)

Details of selected Districts, Blocks and Village Panchayats

Sl. No.	District	Sl. No.	Block	Sl. No.	Village Panchayat
1	Coimbatore	1	Karamadai	1	Bellapalayam
				2	Chikkadasampalayam
				3	Chinnakallipatty
				4	Nellithurai
				5	Tholampalayam
		2	Kinathukadavu	6	Devanampalayam
				7	Kappalankarai
				8	Kuthiralayampalayam
				9	Solavampalayam
				10	Vadapudur
2	Nagapattinam	3	Thirumarugal	11	Adalaiyur
				12	Kottarakudi
				13	Kottur
				14	Thirupayathankudi
				15	Vazhkudi
		4	Vedaranyam	16	Ayyakaranpulam
				17	Kodiakarai
				18	Maruthur North
				19	Moolaikarai
				18	Pushpavanam
3	Ramanathapuram	5	Tiruppullani	21	Kalimankundu
				22	Landhai
				23	Regunathapuram
				24	Utharavai
				25	Vannankundu
		6	Tiruvadanai	26	Arasathur
				27	Kadambur
				28	Karumozhi
				29	Oriyur
				30	Paganoor

Sl. No.	District	Sl. No.	Block	Sl. No.	Village Panchayat
4	Salem	7	Kolathur	31	Chithirapattipudur
				32	Kaveri Puram
				33	Kolnaickanpatti
				34	Navapatti
				35	Pannavadi
		8	Peddanaickenpalayam	36	Kalarampatty
				37	Ottapatty
				38	Thennampillaiyur
				39	Vadugathampatty
				40	Vellapatty
5	Theni	9	Bodinayakkanur	41	Ahamalai
				42	Anaikaraipatti
				43	Kamarajapuram
				44	Kodagangipatti
				45	Sillamarathupatti
		10	Uttamapalaiyam	46	Gohilapuram
				47	Lakshminaickenpatty
				48	Nagayagoundanpatty
				49	Pallavarayanpatty
				50	U.Ammapatty
6	Viluppuram	11	Gingee	51	Chinnaponnampoondi
				52	Gangavaram
				53	Manalapadi
				54	Meledayalam
				55	Palapattu
		12	Vikravandi	56	Asoor
				57	Ayyur Agaram
				58	Kayathur
				59	Kutham poondi
				60	Mundiyampakkam

Appendix 1.2
(Reference: Paragraph 1.7; Page 6)
Status of TWAD Works in selected District

Scheme	District	Work Order date	Expected Date of Completion	Date of Completion
Completed works				
CWSS to 295 rural habitations in Pollachi North, Pollachi South and Kinathukadavu unions in Coimbatore district	Coimbatore	28-09-2022	16-07-2023	31-03-2024
CWSS to Alapakkam and 21 rural habitations in Marakkanam union of Viluppuram district	Viluppuram	24-06-2022	03-01-2023	July 2023
CWSS to Kaveripuram and 141 rural habitations in Kolathur union of Salem District	Salem	03-11-2022	06-11-2023	31-03-2024
Water Supply Scheme to Yercaud and 8 other habitations in Yercaud Panchayat of Yercaud Union in Salem district	Salem	12-01-2022	February 2023	February 2023
Providing additional infrastructure in retrofitting of existing CWSS to Iruppali, 236 fluoride affected habitations and 1237 wayside habitations of Salem district.	Salem	02-12-2022	30-12-2023	31-10-2024
Ongoing works				
Scheme	District	Work Order date	Expected Date of Completion	Status of progress (in per cent)
Retrofitting of existing CWSS to 136 Fluoride affected habitations and 604 way side habitations in Kadayampatty and 3 other unions of Salem district.	Salem	28-08-2023	31-12-2024	90
Retrofitting of existing CWSS to Sankari TP, Thevur TP and 245 rural habitations in Sankari union of Salem district.	Salem	07-02-2023	31-12-2024	98
Retrofitting of existing Ramnad CWSS covering 5 Municipalities 11 Town Panchayats and 3,163 rural habitations in Ramanathapuram, Sivagangai and Pudukottai district.	Ramanatha-puram	P I - 03-11-2023 P II- 08-04-2023	November 2024 October 2024	P I - 40 P II - 79
Combined Water Supply Scheme to 2 municipalities, 5 town panchayats and 2,306 rural habitations in 11 panchayat unions in Ramanathapuram district and Oddanchatram municipality, Keeranur and Neikkarapatty town panchayat and 1,422 rural habitations in 7 unions	Ramanatha-puram & Dindigul	P I - 08-04-2023 P II - 31-03-2023 P III-31-03-2023 P IV- 31-03-2023	October 2024	(As of September 2024) P I - 53 P II - 70 P III - 63 P IV - 66
Combined Water Supply Scheme to Nagapattinam Municipality, Thittachery, Velankanni, Kilvelur, Thalainayar Town panchayats and 980 rural habitations in Nagapattinam, Thirumarugal, Kilvelur, Keelaiyur, Thalainayar and Vedaranyam unions in Nagapattinam District.	Naga-pattinam	P I - 31-03-2023 P II - 24-04-2023 P III-24-04-2023 P IV- 24-04-2023 P V - 22-02-2024	P I - Jan 2025 P II - Dec 24 P III - Nov 24 P IV - Nov 24 P V - June 25	(As of September 2024) P I - 74 P II - 79 P III - 77 P IV - 76 P V - 22

* P- Package

(Source: Details furnished by TWAD Divisions)

Appendix 2.1

(Reference: Paragraph 2.5.1.2; Page 12)

Details of FHTCs proposed and provided in Theni District

Sl. No.	VP	Block	Number of FHTCs proposed	Number of FHTCs provided
1	Melasindalacheri	Uthamapalayam	502	247
2	Anna Nagar, Endapuli	Periyakulam	160	0
3	MGR Nagar, Endapulai	Periyakulam	69	37
4	J.K Colony, Endapuli	Periyakulam	178	45
5	E.Vel Nagar, Endapuli	Periyakulam	207	69
6	Arokiamathanagar, Endapuli	Periyakulam	320	139
7	Kalaigiar colony, Endapuli	Periyakulam	100	0
8	Alagarnaickenpatti, Endapuli	Periyakulam	111	66
9	Arulananthapuram, Endapuli	Periyakulam	125	40
10	E.Kamatchipuram, Endapuli	Periyakulam	290	113
11	E.Puthukottai, Endapuli	Periyakulam	244	212
12	E.Puthupatty, Endapuli	Periyakulam	230	130
13	Endapuli	Periyakulam	380	178
14	Irulaiamman Nagar	Periyakulam	12	12
15	Mel Endapuli	Periyakulam	31	31
16	Murugumalai, Endapuli	Periyakulam	145	104
17	Nehru Nagar, Endapuli	Periyakulam	205	160
18	Unchampatti	Theni	1,030	140
Total			4,339	1,723

Appendix 3.1

(Reference: Paragraph 3.3; Page 19)

**Number of FHTCs in JJM dashboard *vis-à-vis* number of assessments as per VP Tax portal
for 'Har Ghar Jal' certified VPs**

District	Block	VP	If <i>Har Ghar Jal</i> Certified?	Number of Households provided FHTCs	Gram Sabha resolution date	Number of FHTCs as per JJM dashboard As on 01/04/23	Number of tap connections provided under JJM	Tax portal
Coimbatore	Karamadai	Bellapalayam	yes	30	26/01/2024	2,533	2,533	4,481
Coimbatore	Karamadai	Chikkadasam palayam	yes	12,300	26/01/2024	8,012	8,012	9,575
Coimbatore	Karamadai	Chinnakalli patty	Yes	1,775	26/01/2024	1,531	1,531	1,758
Coimbatore	Karamadai	Nellithurai	Yes	900	26/01/2024	900	900	968
Coimbatore	Karamadai	Tholam palayam	Yes	2,210	26/01/2024	2,210	2,210	2,748
Coimbatore	Kinathukadavu	Devanam palayam	Yes	Not Available	Unsigned	825	825	938
Coimbatore	Kinathukadavu	Kappalan karai	Yes	1,411	26/01/2024	1,411	1,411	1,771
Coimbatore	Kinathukadavu	Kuthiralayam palayam	Yes	403	26/01/2023	362	362	404
Coimbatore	Kinathukadavu	Solavam palayam	Yes	2,335	26/01/2024	1,268	1,268	2,477
Coimbatore	Kinathukadavu	Vadapudur	Yes	1,455	26/01/2023	1,455	1,455	2,319
Salem	Kolathur	ChithiraPatti Pudur	Yes	Not Available	15/08/2023	3,382	3,382	2,277
Salem	Kolathur	Kaveri Puram	Yes	4,577	Not Available	6,858	6,858	4,932
Salem	Kolathur	Kolnaickan Patti	Yes	Not Available	Not Available	2,129	2,129	2,335

Performance Audit on 'Jal Jeevan Mission'

District	Block	VP	If Har Ghar Jal Certified?	Number of Households provided FHTCs	Gram Sabha resolution date	Number of FHTCs as per JJM dashboard As on 01/04/23	Number of tap connections provided under JJM	Tax portal
Salem	Kolathur	Navapatti	Yes	2,854 (taken from GS resolution)	Not Available	3,014	3,014	2,998
Salem	Peddanaicken palayam	Thennam pillaiyur	Yes	474 (taken from GS resolution)	15/08/2023	474	474	438
Salem	Peddanaicken palayam	Vadugatham patty	Yes	383 (taken from GS resolution)	Not Available	383	383	439
Theni	Bodinayakkanur	Kamaraja puram	Yes	Not Available	05/08/2022	3,115	3,115	815
Theni	Uttamapalaiyam	Gohilapuram	Yes	1,385	02/10/2024	1,385	1,385	1,479
Theni	Uttamapalaiyam	Lakshmi naickenpatty	Yes	1,189	02/10/2024	2,241	2,241	1,686
Viluppuram	Gingee	Chinnaponnam poondi	Yes	172	22/03/2022	172	172	186
Viluppuram	Gingee	Manalapadi	Yes	499	22/03/2022	480	480	459
Viluppuram	Gingee	Meledayalam	Yes	423	10/08/2022	423	423	374
Viluppuram	Gingee	Palapattu	Yes	570	10/08/2022	570	570	528
Viluppuram	Vikravandi	Asoor	Yes	914	01/11/2023	1,426	1,426	803
Viluppuram	Vikravandi	Ayyur Agaram	Yes	1,522	02/10/2024	1,545	1,545	1,512
Viluppuram	Vikravandi	Kayathur	Yes	Not Available	03/08/2022	433	433	436
Viluppuram	Vikravandi	Kutham poondi	Yes	Not Available	01/11/2022	425	425	432
Viluppuram	Vikravandi	Mundiyam pakkam	Yes	436	02/10/2024	1,059	1,059	1,152

Appendix 3.2

(Reference: Paragraph 3.5.1; Page 20)

Package-wise Work Specifications for Survey and Levelling work

Sl. No.	Package	Estimate (₹ in lakh)	Expenditure (₹ in lakh)
1	Surveying and levelling works for Providing New MVS through JJM with River Cauvery as source for Transmission Main in Ramanathapuram District- Package I	18.89	17.57
2	Surveying and levelling works for Providing New MVS through JJM with River Cauvery as source for Kalayarkoil to Thondi and Thiruvadanai in Ramanathapuram District- Package II	22.16	19.94
3	Surveying and levelling works for Providing New MVS through JJM with River Cauvery as source for R.S,Mangalam union in Ramanathapuram District- Package III	20.35	18.41
4	Surveying and levelling works for Providing New MVS through JJM with River Cauvery as source for Nainarkoil and Bogalur union in Ramanathapuram District- Package IV	16.59	15.96
5	Surveying and levelling works for Providing New MVS through JJM with River Cauvery as source for Ramanathapuram union, Keelakarai MPTY and Thirupullani Union in Ramanathapuram District- Package V	24.33	18.73
6	Surveying and levelling works for Providing New MVS through JJM with River Cauvery as source for Rameswaram MPTY, Mandapam TP and Mandapam Union in Ramanathapuram District- Package VI	16.59	16.01
7	Surveying and levelling works for Providing New MVS through JJM with River Cauvery as source for Paramakudi MPTY and Paramakudi Union in Ramanathapuram District- Package VII	13.27	12.77
8	Surveying and levelling works for Providing New MVS through JJM with River Cauvery as source for Muthukulathur Union and Muthukulathur TP in Ramanathapuram District- Package VIII	14.02	13.50
9	Surveying and levelling works for Providing New MVS through JJM with River Cauvery as source for Sayalkudi TP and Kadaladi Union in Ramanathapuram District- Package IX	14.73	5.75
10	Surveying and levelling works for Providing New MVS through JJM with River Cauvery as source for Kamuthi TP, Abiramam TP and Kamuthi Union in Ramanathapuram District- Package X	12.70	6.20
	Total	173.63	144.84

Appendix 3.3

(Reference: Paragraph 3.7; Page 26)

Number of in-village works sanctioned under JJM/Convergence during 2020-24

Name of the work	Coim-batore	Naga-pattinam	Ramanatha-puram	Salem	Theni	Vilup-puram
JJM 2020-21	1072	0	165	1143	220	313
JJM 2022-23	2	0	0	0	232	135
SVS 2023-24	0	0	0	129	0	0
MVS- in-village	0	517	1343	4	0	0
Retrofitting in-village	122	0	57	1294	0	9
Convergence 2020-21	665	580	223	528	82	700
Convergence 2021-22	561	309	57	484	264	790
Convergence 2022-23	627	275	198	546	0	631
Convergence 2023-24	4	0	86	438	0	940

Appendix 4.1

(Reference: Paragraph 4.1.1; Page 32)

Delay in release of Centre and State's share to 'Single Nodal Account'

Year	Central share released by Ministry of Jal Shakthi			Central share released by GoTN				GoTN share release particulars				
	Sanction order	Date of release	Amount (₹ in lakh)	GO (D) No.	Date	Amount (₹ in lakh)	Delay in days	due (₹ in lakh)	GO No.	Date	Amount (₹ in lakh)	Delay in days
2019-20	G 11011/5/2019-Water-I/16	28-08-2019	15,144.61	433	29-10-2019	15,144.61	47	15,144.61	490	17-12-2019	15,144.61	96
	G 11020/8/2020-JJM-I-DDWS/48	19-02-2020	22,049.23	121	23-03-2020	22,049.23	18	21,534.73	393	16-11-2020	21,534.73	257
	G 11044/5/2019-WQ/9	27-03-2020	116.10	184	27-05-2020	116.10	46	146.28	70	18-02-2021	146.28	313
2020-21	G 11011/1/2020-JJM-I-DDWS/13	01-06-2020	246.29	263	07-08-2020	246.29	52	240.54	71	18-02-2021	240.54	247
	G 11011/1/2020-JJM-I-DDWS/44	25-11-2020	22,689.80	439	16-12-2020	14,578.88	6					0
		25-11-2020		456	28-12-2020	8,110.92	18	22,164.36	456	28-12-2020	22,164.36	18
	W 11020/8/2020-JJM-I-DDWS/65	29-01-2021	246.29	43	09-02-2021	246.29	-	22,400.92	43	09-02-2021	22,400.92	-
	W 11020/8/2020-JJM-I-DDWS/65	29-01-2021	8,147.65	43	09-02-2021	8,147.65	-					
	W 11020/8/2020-JJM-I-DDWS/65	29-01-2021	14,542.16	43	09-02-2021	14,542.16	-					
	W 11020/8/2020-JJM-I-DDWS/77	22-02-2021	22,936.09	114	26-02-2021	21,527.50	-	22,400.92	127	21-10-2021	22,400.92	226
		22-02-2021		77	21-06-2021	1,408.58	104					-
	WQ-11031/8/2020-WQ-DDWS	10-03-2021	227.36	69	21-05-2021	227.36	57	227.36	69	21-05-2021	227.36	57
2021-22	G 11011/1/2020-JJM-I-DDWS-Part 1 /11	13-05-2021	61,435.36	104	26-08-2021	61,435.36	90	60,001.87	128	22-10-2021	60,001.87	147
2022-23	W 11020/8/2020-JJM-I-DDWS/44	11-01-2023	87,296.12				0	84,954.03	15	09-02-2023	84,954.03	14
2023-24	W 11020/8/2020-JJM-I-DDWS/87	31-08-2023	87,236.50				0	85,200.98	130	14-09-2023	85,200.98	-
	W 11020/8/2020-JJM-I-DDWS/	08-01-2024	87,236.50				0	85,200.98	4	23-01-2024	85,200.98	-
	W 11020/8/2020-JJM-I-DDWS/98	11-03-2024	87,236.50				0	85,200.98	54	15-03-2024	85,200.98	-
2024-25	W 11020/8/2020-JJM-I-DDWS/18	19-07-2024	36,583.35				0	35,729.74	98	01-08-2024	35,729.74	-
	W 11020/8/2020-JJM-I-DDWS/30	03-09-2024	36,583.35				0	35,729.74				-

From 2022-23, the Centre's share was directly credited to the JJM Escrow Account (SNA Account).

Appendix 5.1

(Reference: Paragraph 5.2.3 (i); Page 38)

Details of available infrastructure and shortfall in laboratories

Sl. No.	Type of infrastructure/ equipment	Number of laboratories having required infrastructure	Number of Laboratories ¹ not having required infrastructure	
			In numbers	In per cent
1	Total space (at least 25 sq.mt)	4	14	78
2	Computers	17	1	6
3	Internet facility	14	4	22
4	UPS	5	13	72
5	Invertors	5	13	72
6	Printer	12	6	33
7	Telephone facility	5	13	72
8	Fax	1	17	94
9	Air conditioner	18	0	0
10	Fume Hood	2	16	89
11	Gas connection	9	9	50

(Source: Details furnished by TWAD Board divisions)

¹ These figures include six districts and 11 sub-district laboratories.

Appendix 5.2

(Reference: Paragraph 5.2.3 (ii); Page 38)

Shortfall of equipment in laboratories of selected districts

Sl. No.	Equipment Required	Laboratories (in numbers)	
		Having required equipment	Not having required equipment (in per cent)
1	pH meter	18	0
2	TDS/ Conductivity meter	18	0
3	Nephelometer (Turbidimeter)	17	1 (5.55)
4	Digital Balance	18	0
5	UV- Visible spectrometer [#]	7	0
6	Refrigerator	18	0
7	Water Still	13	5 (38.46)
8	Voltage stabilizer/ Inverters	9	9 (50)
9	Hot Plate	17	1 (5.55)
10	Heating mantle	3	15 (83.33)
11	Water bath	17	1 (5.55)
12	Hot air oven	18	0
13	Bacteriological incubator	18	0
14	Autoclave	9	9 (50)
15	Magnetic stirrer	4	14 (77.77)
16	Microscope [#]	3	4 (57.14)
17	Vacuum pump	9	9 (50)
18	Atomic Absorption Spectrophotometer (AAS) with electrode lamp ^s	1	0
19	Inductively coupled plasma- optical emission spectrometry (ICP-OES)/mass spectrometry (MS) ^s	0	1 (100)
20	UV laminar Air flow chamber for bacteriological analysis	12	6 (33.33)
21	Plate count and colony counter	12	6 (33.33)
22	Arsenic Testing Instrumentation (portable) [#]	1	6 (85.71)
23	Hydride generator with all accessories ^s	0	1 (100)
24	DO meter	2	16 (88.89)
25	Cool box with icepacks	8	10 (55.55)

Sl. No.	Equipment Required	Laboratories (in numbers)	
		Having required equipment	Not having required equipment (in per cent)
26	Specific Ion meter along with electrodes (for Fluoride)	2	16 (88.88)
27	Fume coup board	1	17 (94.44)
28	GC-MS / HPLC/ LC-MS ^{\$}	0	1 (100)
29	Auto burette and auto pipette	0	18 (100)
30	Uranium analyser ^{\$}	0	1 (100)
31	Thermometers	17	1 (5.55)
32	Single Stage distillation apparatus	6	12 (66.67)
33	Double distillation Apparatus/Ultrapur Water Purification System to provide type I/type II water for sophisticated instruments	0	18 (100)
34	Argon, Nitrogen, Hydrogen Helium & Oxygen Gas Cylinders (To be used with AAS/ Advanced Spectrophotometer)/ICP-MS/ OES [#]	1	6 (85.71)
35	Kjeldal distillation apparatus [#]	1	6 (85.71)
36	Pressure Pump [#]	1	6 (85.71)
37	Membrane filtration	15	3 (16.67)
38	PCR machine ^{\$}	0	1 (100)
39	Deep freezer (-20 degrees C) ^{\$}	0	1 (100)
40	Micropipette ^{\$}	0	1 (100)
41	Centrifuge [#]	2	5 (71.43)
42	Redflux Apparatus/ COD digester ^{\$}	1	0
43	Ion Chromatograph ^{\$}	0	1 (100)

Not applicable for sub-division/block laboratory

\$ Applicable only for State laboratory

Appendix 6.1

(Reference: Paragraph 6.1.1; Page 44)

Excess expenditure on account of incorrect application of the rates for pipes

Block	Thalanayar					Keelaiyur					Thiru marugal	Excess Amount (in ₹)
Village Panchayat	Naluvadhpathy			Kovilpathu		Vettaikkaraniruppu		Pudupalli		Prathabaramapuram	Polagam	
Habitation	Naidu Street	Mookachi Theru	Naluvadhpathy	Yathavar Street	Mela kadu	Therkku Salli kulam	Kandiyan kadu	Mela puthu palli Therkku	Keela pudu palli Vadakku	Poochi theru	Kuthapattar Thoppu	
FHTC Estimated (Numbers)	108	234	86	121	118	144	96	218	192	259	45	
FHTC Completed (Numbers)	108	234	86	121	118	144	96	181	155	189	66	
FHTC PVC pipe length as per Bill (metre)	324	702	309.6	435.6	436	1,152	768	1,448	1,240	1,512	528	
PVC Pipe (25mm) rate per meter as per bill (₹)	43.25	43.25	43.25	43.25	43.25	43	43	43	43	43.2	43	
PVC Pipe (25mm) total cost as per bill per work (₹)	14,013.00	30,361.50	13,390.20	18,839.70	18,857.00	49,536.00	33,024.00	62,264.00	53,320	65,318.40	22,704.00	3,81,627.80
PVC Pipe (20mm) cost per work @ ₹25.30/m (₹)	8,197.20	17,760.60	7,832.88	11,020.68	11,030.80	29,145.60	19,430.40	36,634.40	31,372	38,253.60	13,358.40	2,24,036.60
Excess expenditure (₹)	5,815.80	12,600.90	5,557.32	7,819.02	7,826.20	20,390.40	13,593.60	25,629.60	21,948	27,064.80	9,345.60	1,57,591.00

Appendix 6.2

(Reference: Paragraph 6.1.2; Page 45)

DPR charges incorrectly included as part of the works expenditure

(₹ in lakh)

Sl. No.	Name of the work	Estimate cost	DPR Charges paid to the contractor	
			As per Estimate	As per CR
1	Providing Extension of pipeline with FHTC at Kattoorani Village in Peravoor Panchayat	37.33	0.488	0.488
2	Construction of 60,000 lit Capacity of OHT Tank at Kattoorani Village in Peravoor Panchayat	22.32	0.292	0.292
3	Construction of 30,000 lit Capacity Of OHT Tank and Providing Extension of pipeline with FHTC at MGR Nagar in Peravoor Panchayat	33.45	0.437	0.437
4	Providing Extension of Pipeline work at Peyanvalasai in Therkkutharavai Panchayat	7.61	0.099	0.099
5	Providing Extension of pipeline with FHTC to South side of Athiyuthu village in Athiyuthu Panchayat	42.18	0.552	0.552
6	Providing Extension of pipeline with FHTC to North side of Athiyuthu village in Athiyuthu Panchayat	39.93	0.522	0.522
7	Providing Extension of pipeline with FHTC at Kovilkarai village in Athiyuthu Panchayat	12.84	0.168	0.168
8	Construction Of 30,000 lit Capacity Of OHT tank and Providing Extension of pipeline with FHTC at Eraniyanvalasai village in Athiyuthu Panchayat	35.14	0.000	0.000
9	Providing EPL with FHTC at Avarenthal	4.20	0.055	0.043
10	Providing EPL with FHTC at Chithaloor	6.84	0.090	0.090
11	Providing EPL with FHTC at Nettanenthal	4.35	0.057	0.051
12	Providing EPL with FHTC at Pulichavayal	4.43	0.057	0.057

(₹ in lakh)

Sl. No.	Name of the work	Estimate cost	DPR Charges paid to the contractor	
			As per Estimate	As per CR
13	Construction of 30,000 litre OHT and Providing Extension of Pipeline with FHTC at Keezhamankundu in Thamaraikulam panchayat (2,750 m)	28.86	0.378	0.378
14	Construction of 60000 litres OHT sump and Providing Extension of Pipeline with FHTC at Melamankundu in Thamaraikulam panchayat (1,300 m)	22.21	0.291	0.291
15	Construction of 30,000 Lit OHT Tank and extension of pipeline with FHTC at Thargavalasai in Enmanankondan panchayat	30.27	0.396	0.396
16	Construction of 30,000 Lit OHT Tank and providing extension of pipeline with FHTC at Enmanamkondan in Enmanankondan panchayat	31.48	0.412	0.412
17	Construction of 30,000 litres OHT and Providing Extension of Pipeline with FHTC at Thuthivalasai in Enmanankondan Panchayat (5,500m)	46.98	0.615	0.615
18	Providing Extension of Pipeline with FHTC at samythoppu (1,900 m)	9.56	0.125	0.125
19	Providing Extension of Pipeline with FHTC at Krishnapuram colony in Alagankulam Panchayat (1,800 m)	7.85	0.102	0.102
20	Providing Extension of Pipeline with FHTC at Aththanvalavu in Valantharavai Panchayat (580 m)	2.83	0.036	0.036
21	Construction of 10,000 Lit OHT Tank and providing extension of pipeline with FHTC at Keerippoorvalasai in Valantharavai Panchayat	10.36	0.135	0.135
22	Construction of 10,000 Lit OHT Tank and providing extension of pipeline with FHTC at Alam in Valantharavai Panchayat	6.80	0.089	0.089
23	Construction of 10,000 litres OHT and Providing Extension of Pipeline with FHTC at Vadakkuvalasai in Rettaiyoorani Panchayat (360 m)	7.34	0.096	0.096

(₹ in lakh)

Sl. No.	Name of the work	Estimate cost	DPR Charges paid to the contractor	
			As per Estimate	As per CR
24	Providing Extension of Pipeline with FHTC at Ilaingaimedu in Kuyavankudi Panchayat (530 m)	3.10	0.040	0.040
25	Providing Extension of Pipeline with FHTC at Aranganvalasai in Kuyavankudi Panchayat (650 m)	3.43	0.044	0.044
26	Providing Extension of Pipeline with FHTC at AD colony in Kuyavankudi Panchayat (120 m)	2.54	0.033	0.033
27	Providing Extension of Pipeline with FHTC at Kuppanivalasai in Kuyavankudi Panchayat (550 m)	4.89	0.063	0.063
28	Construction of 10,000 Lit OHT Tank and providing extension of pipeline with FHTC at Samayanvalasai in Kuyavankudi Panchayat	12.29	0.160	0.160
29	Construction of 10,000 litres OHT and Providing Extension of Pipelinewith FHTC at Muniyanvalasai in Kuyavankudi Panchayat (400 m)	20.33	0.266	0.266
30	Providing Extension of Pipeline with FHTC at Muttanvalasai in Keelanagachi Panchayat (1,400 m)	6.01	0.078	0.074
31	Providing Extension of Pipeline with FHTC at Naduvalasai in Keelanagachi Panchayat (1,250 m)	5.80	0.075	0.075
32	Providing Extension of Pipeline with FHTC at Kattakaravalasai in Keelanagachi Panchayat (2,800 m)	9.60	0.125	0.117
33	Providing Extension of Pipeline with FHTC at Thoppuvalasai in Keelanagachi Panchayat (820 m)	5.76	0.075	0.072
34	Providing Extension of Pipeline with FHTC at Vathiyarkudieruppu in Keelanagachi Panchayat (3,300 m)	12.28	0.160	0.146
35	Construction of 10,000 Lit OHT Tank and providing pipeline extension with FHTC at Annanagar in Keelanagachi Panchayat	11.50	0.150	0.069

(₹ in lakh)

Sl. No.	Name of the work	Estimate cost	DPR Charges paid to the contractor	
			As per Estimate	As per CR
36	Construction of 60,000 litre OHT Sump and providing pipeline extension with FHTC at Thoppukattuvalasai in Keelanagachi panchayat	15.46	0.202	0.182
37	Construction of 10,000 litres OHT and Providing Extension of Pipeline with FHTC at Panavaikootam in Keelanagachi Panchayat (5,000 m)	33.16	0.434	0.362
38	Providing Extension of Pipeline with FHTC at Kadukaivalasai in Manankudi Panchayat (800 m)	6.03	0.078	0.078
39	Providing Extension of Pipeline with FHTC at Kunduthi in Pudumadam Panchayat (650 m)	5.45	0.071	0.071
40	Providing Extension of Pipeline with FHTC at Thenkadarkarai in vedalai Panchayat (1,200 m)	7.48	0.084	0.084
41	Providing Extension of Pipeline with FHTC at Annanagar Pamban Panchayat (650 m)	3.83	0.050	0.050
42	Providing Extension of Pipeline with FHTC at Pananthoppu Pamban Panchayat (900 m)	7.38	0.096	0.096
43	Construction of 10,000 lit OHT and Providing Extension of Pipeline with FHTC 143 nos at Thenpoduvakudi	22.18	0.288	0.288
44	Construction of 10,000 lit OHT and Providing Extension of Pipeline with FHTC 7 nos at Vagaiyendhal	5.69	0.073	0.073
45	Providing Extension of Pipeline Construction of 10,000 lit OHT with FHTC 48nos at Idaiyathur	8.61	0.111	0.109
46	Providing Extension of Pipeline with FHTC 6 nos at Nanduppatti	1.58	0.019	0.019
47	Providing Extension of Pipeline with FHTC 10 nos at Kulasekara alvarpuram	1.79	0.022	0.021

(₹ in lakh)

Sl. No.	Name of the work	Estimate cost	DPR Charges paid to the contractor	
			As per Estimate	As per CR
48	Construction of Open Well and 30,000 litre OHT, Pump room, Pumping main line and Extension of Pipeline(1,500 m) with functional house hold connections at Silayappan Valasai	33.74	0.441	0.441
49	Providing Pumping main line and Extension of Pipeline(1,500 m) with functional house hold connections at Nadar Kudiyirippu	8.06	0.105	0.105
50	Construction of 30,000 litre OHT, Pumping main line and Extension of Pipeline(1,500 m) with functional house hold connections at Kaakayan Valasai	16.18	0.211	0.211
51	Construction of 10,000 lit. OHT & providing FHTC	14.55	0.135	0.135
52	Construction of 10,000 lit. OHT & providing FHTC	14.82	0.194	0.194
53	Providing FHTC	16.70	0.200	0.200
54	Providing FHTC, 150 dia bore well and 10,000 lit. OHT (2 Nos.)	29.53	0.367	0.280
55	Providing FHTC, Pumping main Line, Construction of 30,000 Litre OHT and Extension of Pipe Line	40.48	0.530	0.530
56	Providing FHTC, Pumping main Line and Extension of Pipe Line	7.26	0.094	0.094
57	Providing FHTC, Pumping main Line, Construction of 30,000 Litre OHT and Extension of Pipe Line	23.18	0.303	0.303
58	Providing FHTC, Pumping main Line and Extension of Pipe Line	10.81	0.141	0.136
59	Providing FHTC, Pumping main Line, Construction of 30,000 Litre OHT and Extension of Pipe Line	24.82	0.303	0.303
60	Providing FHTC, Pumping main Line, 30,000 Lit. OHT and Extension of Pipeline at Sathankulam in Kuyavankudi Panchayat	36.82	0.482	0.482
61	Providing FHTC, Pumping main Line, 30,000 Lit OHT and Extension of Pipeline at Akkamadam in Pamban Panchayat	36.75	0.481	0.481

(₹ in lakh)

Sl. No.	Name of the work	Estimate cost	DPR Charges paid to the contractor	
			As per Estimate	As per CR
62	Providing FHTC, Pumping main Line, 10,000 Lit. OHT and Extension of Pipeline at Muthrayan nagar in Valanthuravai Panchayat	10.70	0.139	0.132
63	Providing FHTC, Pumping main Line, Bore Well and Extension of Pipeline at Munusuvalasai in Valanthuravai Panchayat	29.02	0.388	0.388
64	Providing FHTC, Pumping main Line, Bore Well and Extension of Pipeline at Ammankovil in Valanthuravai Panchayat	33.67	0.440	0.440
65	Providing FHTC, Pumping main Line, 10,000 Lit. OHT and Extension of Pipeline at Kenikaraivalasai in Keelanagachi Panchayat	15.51	0.203	0.203
66	Providing FHTC, Pumping main Line, 30,000 Lit. OHT and Extension of Pipeline at Kalkinatravalasai in Keelanagachi Panchayat	34.06	0.446	0.446
67	Providing FHTC and Extension of Pipeline at Bharathinagar in Alagankulam Panchayat	25.73	0.337	0.337
68	Providing FHTC, Pumping main Line and Extension of Pipeline at Nochivadi in Thangachimadam Panchayat	12.07	0.158	0.158
69	Providing FHTC, Pumping main Line, 30,000 Lit. OHT and Extension of Pipeline at Ammapattinam in Pudumadam Panchayat	33.68	0.441	0.441
70	Providing FHTC, Pumping main Line and Extension of Pipeline at Madasamykovil in Therbogi Panchayat	19.78	0.258	0.258
71	Providing FHTC, Pumping main Line and Extension of Pipeline at Nallathambivalasai in Therbogi Panchayat	15.33	0.200	0.200

(₹ in lakh)

Sl. No.	Name of the work	Estimate cost	DPR Charges paid to the contractor	
			As per Estimate	As per CR
72	Providing FHTC, Pumping main Line, Bore Well and Extension of Pipeline at Polayan nagar in Valantharavai Panchayat	28.40	0.371	0.366
73	Providing FHTC, borewell, Pumping main Line and Extension of Pipeline at Therkoor Colony in Valantharavai panchayat	30.30	0.396	0.381
74	Providing FHTC, Pumping main Line, 10,000 Lit. OHT and Extension of Pipeline at Seelivalasai in Valantharavai panchayat	10.89	0.142	0.142
75	Providing Extension of Pipeline and 10,000 lit OHT at Muttanvalasai in keelanagazhi Panchayat	7.73	0.808	0.808
76	Providing Extension of Pipeline and 10,000 lit OHT at Naduvalasai in keelanagazhi Panchayat	7.73	0.101	0.101
77	Providing Extension of Pipeline and 10,000 lit OHT at thoppuvalasai in keelanagazhi Panchayat	13.23	0.173	0.173
78	Providing Extension of Pipeline and 10,000 lit OHT at Vathiyar kudieruppu in keelanagazhi Panchayat	9.46	0.124	0.124
79	Providing Extension of Pipeline and 10,000 lit OHT at thoppukattuvalasai in Keelanagachi panchayat.	7.73	0.101	0.101
Total			17.504	17.171

Appendix 7.1

(Reference: Paragraph 7.2.4.1; Page 52)

Details of FHTCs installed outside the house in selected districts

District	Name of the Block	Number of FHTCs provided under JJM	Number of FHTCs installed outside the house
Coimbatore	Karamadai	50,128	50,128
	Kinathukadavu	23,223	23,223
Nagapattinam	Thirumarugal	9,050	9,050
	Vedaranyam	15,532	15,532
Ramanathapuram	Thiruppullani	14,817	14,817
	Thiruvadanai	8,120	8,120
Salem	Kolathur	23,630	23,630
	Peddanaikenpalayam	22,300	22,300
Theni	Bodinayakanur	24,847	22,491
	Uthamapalayam	16,435	14,896
Viluppuram	Gingee	32,287	29,071
	Vikravandi	29,276	26,355
Total		2,69,645	2,59,613

(Source: Details furnished by DRDAs)

Glossary of Abbreviations

Abbreviations	Full Form
AAP	Annual Action Plan
AEE	Assistant Executive Engineer
BDOs	Block Development Officers
CE	Chief Engineer
CPHEEO	Central Public Health and Environmental Engineering Organisation
CR	Completion Reports
CWSS	Combined Water Supply Scheme
DAP	District Action Plan
DDWS	Department of Drinking Water and Sanitation
DPR	Detailed Project Report
DRDAs	District Rural Development Agencies
DWSM	District Water and Sanitation Mission
EMD	Earnest Money Deposit
EPL	Extension of Pipe Line length
FGD	Focused Group Discussion
FHTC	Functional Household Tap Connection
FTKs	Field Test Kits
GLRs	Ground Level Reservoirs
GoI	Government of India
GoTN	Government of Tamil Nadu
HGJ	<i>Har Ghar Jal</i>
IEC	Information, Education and Communication
IMIS	Integrated Management Information System
JJM	Jal Jeevan Mission
JPV	Joint Physical Verification
LoA	Letter of Acceptance
LWF	Labour Welfare Fund
MA&WS Department	Municipal Administration and Water Supply Department

Abbreviations	Full Form
MVS	Multi Village Scheme
NABL	National Accreditation Board for Testing and Calibration Laboratories
NH	National Highways
O&M	Operation and Maintenance
OHTs	Over Head Tanks
RD&PR Department	Rural Development and Panchayat Raj Department
RO	Reverse Osmosis
SAP	State Action Plan
SHGs	Self Help Groups
SLSSC	State Level Scheme Sanctioning Committee
SNA	Single Nodal Account
SVS	Single Village Scheme
SWSM	State Water and Sanitation Mission
TPIAs	Third Party Inspection Agencies
TWAD Board	Tamil Nadu Water Supply and Drainage Board
UDWQMP	Uniform Drinking Water Quality Monitoring Protocol
VAP	Village Action Plan
VP	Village Panchayat
VWSC	Village Water and Sanitation Committee
WQM&S	Water Quality Monitoring and Surveillance
ZBR	Zonal Balancing Reservoir

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