Report of the

Comptroller and Auditor General of India

on

Implementation of Jal Jeevan Mission

Government of Karnataka

Report No. 12 of 2025

(Performance Audit – Civil)

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Preface

This Report of the Comptroller and Auditor General of India for the year ended 31 March 2024 has been prepared for submission to the Governor of Karnataka under Article 151 (2) of the Constitution to be tabled in the State Legislature.

The Report contains the results of Performance Audit on 'Implementation of Jal Jeevan Mission' covering the period 2019-24.

The instances mentioned in the Report are those, which came to notice in the course of the performance audit conducted during June 2024 to December 2024. Matters relating to the periods outside the audit period have also been reported in places where they were found necessary.

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

EXECUTIVE SUMMARY

Executive Summary

Why did CAG do this audit?

The Comptroller and Auditor General (CAG) of India conducted the Performance Audit (PA) to assess the implementation and effectiveness of the Jal Jeevan Mission (JJM) in Karnataka. The PA aimed to evaluate whether the mission has met its objectives of providing safe and adequate drinking water through Functional Household Tap Connections (FHTCs) to every rural household by 2024. The prescribed service level for an FHTC is a minimum of 55 litres per capita per day (LPCD) of drinking water and meeting the prescribed quality standards (as per Bureau of Indian Standards IS: 10500) on regular basis.

Scope of the PA

The PA focused on planning and implementation of the mission through stipulated institutional framework, financial management, water quality and sustainability aspects for the period 2019-20 to 2023-24. A total of seven districts were selected from among the least, average and best performer categories. Two taluks in each district, two Gram Panchayats (GPs) in each taluk and one village in each GP were selected randomly. Beneficiary survey and Focused Group Discussion also formed part of the methodology for this PA.

Audit findings

Planning and Institutional Framework

The functioning of the mandated institutions/authorities were found to be deficient. The Village, District and State Water and Sanitation Committees did not meet regularly as required. The JJM's Operational guidelines stipulate the preparation of Village Action Plans (VAPs) through community participation. This includes the preparation of baseline data, water source mapping, convergence activities, sustainability measures *etc*. There were omissions of crucial elements like source sustainability, financial sustainability provisions such as collection of user charges, data on groundwater and convergence with other schemes. In 14 VAPs, the lessons learnt from past implementation such as preparation of O&M plan, identifying issues for delays, preventive maintenance *etc*., were not included. This shows deficiencies in the constitution and functioning of the Village Water and Sanitation Committees (VWSCs).

The District Water and Sanitation Mission (DWSM) is responsible for overall implementation of JJM at the district level. Its functions involve ensuring preparation of VAP after taking stock of each village for FHTCs, approval of VAPs, finalisation of District Action Plan (DAP) *etc*. It convenes monthly meetings to consider and accord administrative approval of the in-village water supply schemes, plan protection and preservation of village water resources, greywater management *etc*.

Audit noticed that none of the districts had conducted the mandated 12 meetings during the years 2019-20 and 2023-24. While 13 districts including four

sampled districts had not conducted any meeting during 2023-24, 17 districts including three sampled districts had conducted between one to six meetings and one district between seven to eleven meetings. Non conducting of regular meetings indicates poor monitoring at the district level.

The Apex Committee which had a multi department involvement was not represented at times by the heads of the departments such as Primary Education, Health, Finance, Planning *etc*. This led to absence of integration with other programmes focussing on water conservation, grey water management *etc*., under the mission. The Apex Committee was responsible for coordination among various departments and other agencies for convergence. The operational guidelines indicate various Central Government schemes that can be converged under JJM *viz.*, grey water management under Swachh Bharat Mission Grameen (SBMG), provision of drinking water supply in schools under Samagra Shiksha, Watershed management/artificial recharge, creation / augmentation of water bodies under Pradhan Mantri Krishi Sinchayee Yojana *etc*. It was seen that the State Water Sanitation Mission had not devised any policy framework for integration. Integration with other programmes focussing on water conservation, grey water management *etc.*, were not taken up under JJM. Only 13 out of the 28 test-checked villages incorporated partial convergence strategies in their VAPs. Field visits showed that none of these 13 villages had actually taken up any activity under convergence. Non-convergence with other schemes could lead to missed opportunities for infrastructure and resource optimization and weak sustainability of water supply systems.

Engagement of Implementation Support Agencies (ISAs) was inadequate as was the deployment of trained personnel for Operation and Maintenance activities.

Implementation of the Mission

Though the initial mission period ended on 31 March 2024, the State was yet to provide Functional House Tap Connections to 24.52 lakh households (34 *per cent*) as of November 2024 out of the targeted 72.14 lakh households. This was due to delays in tendering, entrustment of multiple works to contractors, entrustment of works before ensuring availability of land, executions hampered by delays in obtaining land clearances and providing approvals for structural and hydraulic designs, deficient preparation of DPRs *etc*. There were instances of works being dropped citing reasons of lesser number of households in the habitations and augmentation works exceeding ₹1.50 lakh. Five villages were incorrectly declared Har Ghar Jal compliant and 21 villages were reported as 100 *per cent* FHTC done though works were yet to be completed.

The work of providing FHTCs to 435 households in Inchur Habitation of Inchur Gram Panchayat was entrusted (October 2023) to a contractor for ₹146.64 lakh to be completed by July 2024. The work could not be commenced as land for construction of OHT was not handed over to the contractor. The department, after incurring an expenditure of ₹60.41 lakh (May 2024), towards construction of open well and laying of pipes, had to abandon the work midway. Hence, the objective of providing water supply of 435 households remained unachieved.

The work of providing FHTCs to 239 households in Dharmapur village of Hokarna B Gram Panchayat was entrusted (18 April 2022) to a contractor for ₹51.86 lakh with the scheduled completion period of four months. During JPV, it was seen that the work was yet to commence even after lapse of two years. The HDPE pipes procured for the work was kept alongside of the road. The department had not taken any action to terminate the contract and get the same executed by a different contractor resulting in not achieving the objective of providing drinking water to 239 households.

Financial management

The State received only ₹11,189 crore against the allocation of ₹24,819.48 crore (45 *per cent*) from the Centre mainly due to its inability to utilise the already released funds. The poor fund utilisation under support activities was on account of reduced engagement of Implementation Support Agencies. Fund utilisation under water quality monitoring and surveillance declined from 50 *per cent* in 2019-20 to two *per cent* in 2023-24. The non-utilisation resulted in infrastructural gaps in terms of shortage of laboratories for water testing, shortage of equipment *etc*. The mission emphasized on community involvement and community contribution. However, the community contributions in the State was negligible with only ₹22.57 crore collected out of the expected ₹1,594.90 crore.

Water Quality Monitoring and Surveillance

Testing was deficient at all levels – GP, taluk, district and State. 533 villages in the State did not have women trained in Field Test Kits. Retesting of contaminated samples were taken up only during 2023-24 and it was only 18 *per cent*. Of the 31 district level and 48 taluk level laboratories in the State, none of them were equipped to test for Arsenic. Only 17 district level and 4 taluk level laboratories were equipped to conduct tests for microbiological parameters (total coliform and E.coli). The department failed to get a single sample tested from the designated State Referral laboratory during the period 2019-20 to 2023-24. The turnaround time for laboratory testing ranged from nine to 106 days as against 24-48 hours. The remedial action initiated for the sources that tested positive for contamination was inadequate. Independent testing by audit with the cooperation of the Karnataka State Pollution Control Laboratories showed that water quality met the required standard in only two of the 28 test-checked villages.

Post Operation Management, Monitoring and Evaluation

The State was heavily reliant on groundwater sources for water supply posing the risk of unsustainability in the long run. The department's efforts to include sustainable measures such as recharge of ground water through conservation and reuse of water resources, grey water management *etc*., was inadequate. The State brought out the Operation and Maintenance policy only in September 2024 and hence it's effectiveness could not be ascertained. Grievance redressals took high resolution time and complaints were closed without indicating the nature of action taken. Monitoring systems such as Supervisory Control and Data Acquisition (SCADA) were either non-functional or underutilized, asset

geo-tagging was incomplete, and mandated social audits were missing. Evaluation reports by third-party agencies and State Quality Monitors lacked depth, and independent performance assessments were delayed.

Outputs and outcomes

The State's performance under SDG-6 'Clean Water and Sanitation for all' witnessed fluctuations during the period 2018-19 to 2023-24. Audit attempted to measure the four key outcomes envisaged under the mission through collection of data from multiple sources. Analysis showed that implementation of JJM helped reduce the dropout rates among upper primary school going girls and eased the burden for women. However, its impact on employment and public health remains limited.

Conclusion

The Performance Audit highlights gaps in planning, execution, financial management, water quality assurance, post-implementation sustainability, and achievement of intended outcomes. While the State made progress in expanding access to household tap connections and aligning with SDG-6 objectives, Audit noticed systemic deficiencies in institutional arrangements, inadequate convergence with other schemes, delayed tendering, underperformance of support agencies, ineffective water quality monitoring, and weak grievance redressal mechanisms. Root cause analysis of system deficiencies identified non-compliance with guidelines, fragmented planning, poor deployment of trained personnel, poor financial controls, and insufficient community engagement.

Recommendations

The report contains the following recommendations which are intend to help the State Government improve the implementation of the mission.

- *The State Government should direct that the committees formed to oversee the implementation of JJM, prepare and implement the convergence plans with other schemes specifying the timelines and measurable outcomes for optimal resource utilisation.*
- *The State Government should ensure that sufficient number of Implementation Support Agencies are engaged and their performance monitored to ensure that adequate number of persons are trained and deployed.*
- *The State Government should award works only after ensuring availability of land to avoid delays in completion of works.*
- *The State Government should ensure that works are awarded to contractors after considering their available tender capacity.*
- *The State should direct the department to ensure that the funds released for JJM are fully utilised under all components and pursue with the GoI to get unreleased funds.*

- *The State Government should prioritise water quality testing at all levels to ensure that water of mandated quality is supplied to all citizens, the turnaround time for laboratory testing be strictly adhered to and remedial action taken for contaminated samples to prevent outbreak of water borne diseases.*
- *The State Government should ensure that recharge structures and grey water management activities are taken up in all villages to ensure continuous water supply of required quantity and quality.*
- *The State Government should ensure that the data uploaded in the online portal is subject to different levels of verification to prevent incorrect reporting.*

CHAPTER-I

INTRODUCTION

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INTRODUCTION

1.1 Jal Jeevan Mission – A Profile

Jal Jeevan Mission (JJM), a demand driven and community centric scheme launched (August 2019) by Government of India (GoI), adopts piped water supply as the only means of potable water delivery in rural areas. It aimed to provide piped water supply to each of the 19.25 crore rural households of the country through Functional Household Tap Connections (FHTCs) by the end of 2024. A Functional Household Tap Connection has three definite characteristics:

- Water supply in adequate quantity *i.e.*, at least 55 litres per capita per day (lpcd)
- Water supply of prescribed quality *i.e.*, BIS:10500 standard and
- Long term continuous supply

Under this scheme, rural communities are responsible for maintaining water supply infrastructure, and women and weaker sections are actively involved in management and water quality surveillance using Field Test Kits (FTKs). The components of JJM are indicated in **Chart 1.1**.

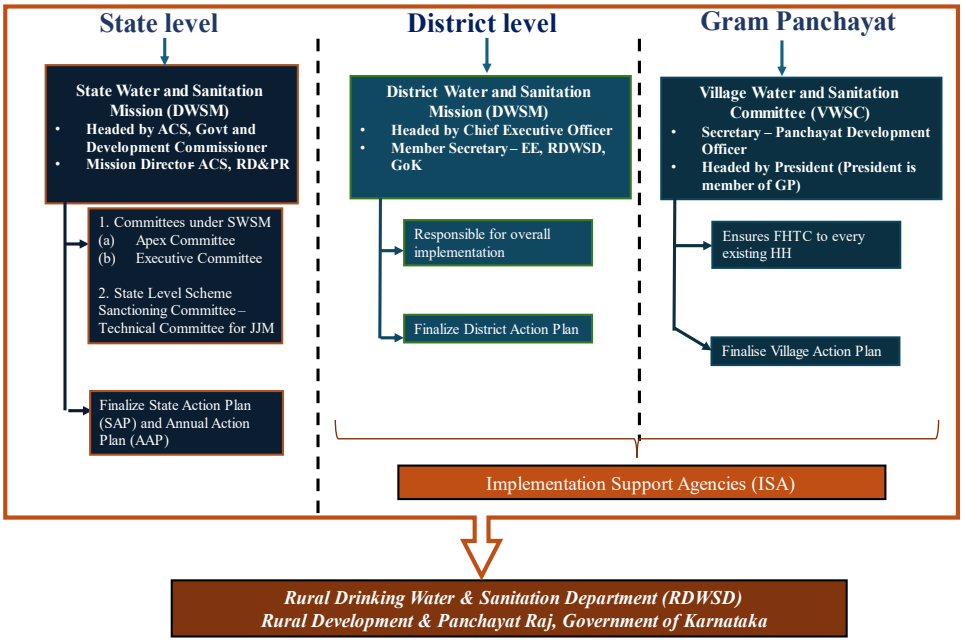
Chart 1.1: Components of Jal Jeevan Mission

Source: JJM Brochure

1.2 Organisation structure

The organisational structure for the implementation of JJM in Karnataka involves several levels of governance, ensuring a coordinated approach from the state level down to the village level. The Commissioner, Rural Drinking Water and Sanitation department (department) is responsible for effective implementation of JJM. **Chart 1.2** depicts the organisation structure.

Chart 1.2: Organisation structure of JJM in Karnataka



Source: JJM Brochure

1.3 Audit objectives

The Performance Audit (PA) aims to ascertain whether

- there exist institutional frameworks for proper planning and implementation of the scheme;
- the financial resources have been utilised for the intended purposes;
- water supplied is constantly monitored for its quality;
- post operational management of the scheme is in place; and
- programme objectives (output and outcomes) have been achieved as envisaged.

1.4 Audit criteria

The following sources formed the basis for audit criteria:

- ✓ Operational guidelines for implementation of JJM
- ✓ *Margadarshika* for Gram Panchayats (GPs) and Village Water and Sanitation Committee (VWSC)
- ✓ Water Quality Monitoring and Surveillance Framework
- ✓ Karnataka Transparency in Public Procurement Act and Rules
- ✓ State Government orders and guidelines issued from time to time

1.5 Audit scope and methodology

The PA covered the JJM implementation period from 2019-20 to 2023-24. Audit involved scrutiny of records and documents in selected GPs/VWSC, Project Implementing Units, selected District Water and Sanitation Mission (DWSM) and State Water and Sanitation Mission (SWSM) besides interaction with beneficiaries (focused group discussions in villages and survey of beneficiaries) and undertaking joint physical inspections. Audit also analysed the data relating to grievance redressal, e-procurement, dropout rates of upper primary school girls, water borne diseases *etc.*, received from different sources.

Audit adopted stratified random sampling method for selection of units using Interaction Data Extraction and Analysis (IDEA) software. The districts were categorised into three performance levels based on tap connection achievements as of April 2024 and seven districts (23 *per cent*) were selected for audit as indicated in **Table 1.1**.

Table 1.1: Selection of districts

Strata	No. of Districts	Number selected	*Per cent*
Least Performer	05	02	40
Average Performer	09	02	22
Best Performer	17	03	18

Source: IMIS

In each district, two taluks (14) and in each taluk, two GPs (28) and in each GP, one village (28 villages) were selected randomly. The villages were selected based on the reported achievements in providing FHTCs. Audit, however, noticed that in four[1] of these villages, the declared 100 *per cent* completion of FHTCs was found to be overstated as discussed in Para 3.2. These villages were therefore required to be replaced. Beneficiary survey covering 560 individuals selected randomly, 23 Focused Group Discussions (FGDs)[2] and survey of members of 28 VWSCs prioritising women formed part of the audit methodology. The details of districts, taluks, GPs and villages selected are detailed in **Appendix 1.1.**

An entry conference was held on 27 June 2024 with the Additional Chief Secretary to Government, Rural Development and Panchayat Raj department wherein the objectives, sampling and methodology were explained. The report was sent to the State Government on 28 February 2025. The State Government furnished the replies to Audit in April/May 2025. The replies have been incorporated and suitably rebutted where required.

The Audit team developed 12 toolkits for collection of information from the sampled units and for conducting beneficiary/VWSC member survey and Focus Group Discussions. Further, Audit sought the assistance of the Karnataka State Pollution Control Board (KSPCB) for quality testing of water samples collected by Audit teams from multiple points.

[1] Aikur, Arabikothanur, Darasaguppe and Kirangoor.

[2] One FGD in each selected village. FGDs in five villages (Bilhar, Hadigere, K Hosahalli, Kadwad and Kodihalli) could not be undertaken due to non-cooperation by the stakeholders.

1.6 Acknowledgement

Audit acknowledges the cooperation extended by all the institutions test-checked under the Rural Drinking Water and Sanitation department in the smooth conduct of audit and the officers/officials of KSPCB for water quality testing.

1.7 Structure of the Report

The Audit findings noticed during the PA have been categorised into six chapters as below:

Chapter II – Institutional Framework, Planning and Capacity Building

Chapter III– Implementation of Jal Jeevan Mission

Chapter IV – Financial Management

Chapter V– Water Quality Monitoring and Surveillance

Chapter VI– Post Operational Management, Monitoring and Evaluation

Chapter VII– Outputs and Outcomes

CHAPTER-II

INSTITUTIONAL FRAMEWORK, PLANNING AND CAPACITY BUILDING

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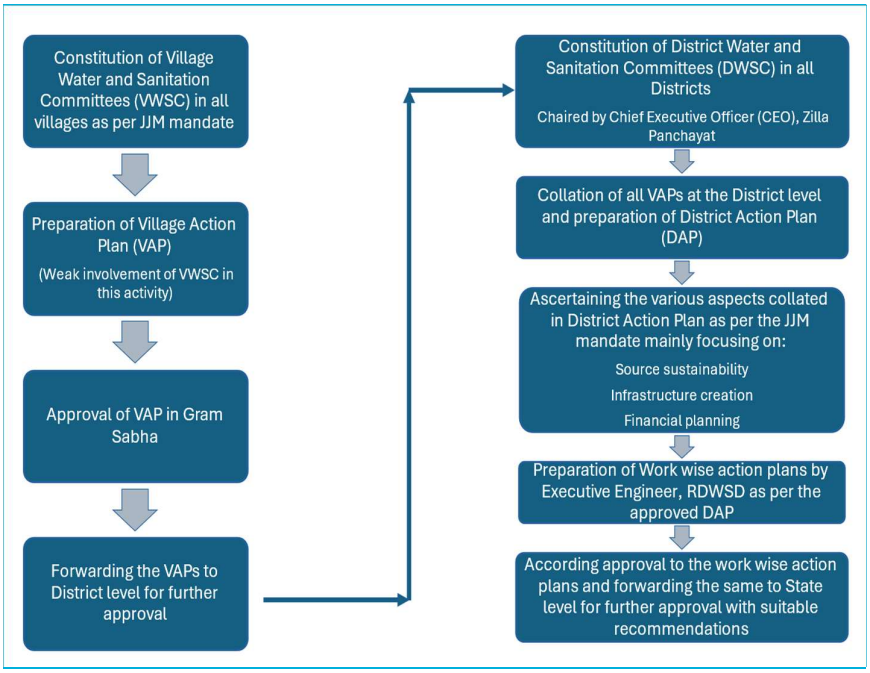
INSTITUTIONAL FRAMEWORK, PLANNING AND CAPACITY BUILDING

This chapter focuses on the existence of planning and institutional mechanism existing within the State for implementation of JJM. The implementation was hindered by the absence of non-preparation/deficiencies in the preparation of Village Action Plans, not holding the mandated meetings at the district and state levels and absence/inadequacy of convergence measures. Deployment of Implementation Supporting Agencies was inadequate and impacted capacity building measures.

2.1 Institutional framework under Jal Jeevan Mission

The institutional framework of the JJM is vital for its effective planning, implementation, and sustainability. By integrating state, district and village-level stakeholders, it ensures coordinated efforts to provide FHTCs to rural households. JJM follows a hierarchical planning approach as shown in **Chart 2.1**.

Chart 2.1: Hierarchy of Action plans



Source: Information furnished by department

2.1.1 Functioning of Gram Panchayats/Village Water and Sanitation Committee

Paras 3.5 and 5.4 of JJM's operation guidelines provide for empowering the GPs to manage in-village water supply systems as the GPs have a constitutional mandate to manage drinking water. It further stresses the need to have community participation, ownership and contribution in all decisions pertaining to water supply systems. The willingness of community, reflected through Gram Sabha resolution and community contribution will be the foremost criterion for planning of water supply systems in villages. The State Government and its departments are to play a true role of facilitator.

The GP/VWSC shall function as a legal entity as envisaged in the 73rd Constitutional Amendment. The Gram Sabha shall decide whether the GP or the VWSC will carry out the responsibilities of water supply management in the village. The GP/VWSC among other functions shall ensure the preparation of Village Action Plan (VAP) for the water supply scheme, provide FHTC to every existing rural household, mobilise and motivate the community to contribute either in cash/kind or labour *etc*. Further the GPs/VWSCs shall hold periodic meetings at least four times in a year and maintain minutes/record of the same.

In this regard, Audit noticed the following:

- 898 villages in the State had not constituted the VWSCs.
- Five out of 28 test checked villages[3] delayed forming VWSCs or failed to reconstitute them promptly.
- While 16 of the test-checked villages adopted resolutions to take up JJM, eight[4] did not adopt and four villages[5] did not report such resolutions.
- In seven[6] villages, the baseline survey was not conducted to assess the number of FHTCs existing and the quantity and quality of water supplied before implementing JJM.
- The number of test-checked villages which conducted the mandated four meetings in a year ranged from zero (2019-20) to nine (2022-23).

The non-constitution of VWSCs and where constituted, their failure to conduct the mandated meetings and pass resolutions is an indicator of their poor involvement in carrying out the various activities such as preparation of VAPs, community involvement *etc*., enlisted under the guidelines for implementation of JJM.

Out of the FGD respondents 27 per cent reported non-involvement and 32 per cent reported partial involvement in community planning.

The State Government stated (May 2025) that during the start of JJM, VSWCs were constituted in all the villages. However, after reconciliation of the villages in the State during 2024, out of the total 26,591 villages, 25,553 villages have reconstituted VWSCs and after thorough follow-up, the State had constituted VWSCs in all the balance villages. It further stated that VWSCs were formed in the five villages and resolutions adopted in the 12 villages pointed out by

[3] Anoor, Doddaganjur, Haradanahalli, Mudnal and Rajnal.
[4] Basavathanpura, Bilhar, Hadigere, Kodihalli, Kuthanahalli, Nelahalli, Thiruganahalli and Tholasikambri.
[5] Akkunji, Arga, Halageri and Kadwad.
[6] Arga, DN Doddi, Hulakoti, Hunjunkere, Kadwad, Tholasikombri and Tumkur.

Audit. It also stated that baseline household details for the seven districts were collected from the respective Panchayat Development Officers and data ground truthing was done during DPR survey. With regard to the observation on the meetings, it stated that the department had issued circulars and closely monitors the regular meetings of VWSCs and its functions as per the guidelines.

The Government's reply confirms that many VWSCs were reconstituted only in 2024, well after the launch of JJM—validating Audit's concern of delayed grassroots institutional involvement. No supporting documents (resolutions, meeting records, constitution dates) were provided to substantiate full compliance. The claim of regular meetings is unverified as Audit found most villages did not hold even the mandated four annual meetings. The lack of documentation also resulted in absence of institutional memory of community involvement and learning.

2.1.2 Deficiencies in preparation of Village Action Plans

The guidelines stipulate the preparation of VAPs through community participation. This includes the preparation of baseline data, water source mapping, convergence activities, sustainability measures *etc*.

If community participation is inadequate, the VAPs may not reflect the true needs and priorities of the village, resulting in gaps in implementation of the water infrastructure. Hence, the VAP shall be approved in the Gram Sabha when 80 *per cent* of the village community present in the meeting agree to the prepared plan. Para 3.6 of the guidelines specifies the various elements that should form part of the VAP.

Audit noticed that out of 26,432 villages, 346 villages in the State had not prepared VAPs. This includes two test-checked villages (Basavanthapura and Bilhar). In Bilhar village, even the VWSC was not constituted. The deficiencies noticed in the preparation of the VAPs in the test-checked villages and the likely impact in implementation are shown in **Table 2.1**.

Table 2.1: Deficiencies noticed in preparation of VAPs

Deficiency	Impact
Only four out of 26 VAPs reviewed were in the prescribed format as per guidelines.	Lack of standardized planning leads to incomplete or unstructured implementation of water supply schemes.
18 villages did not secure community contributions before initiating water supply schemes. • *15 per cent of surveyed beneficiaries reported no community involvement in JJM planning, while only five per cent recorded satisfactory participation*.	Non-compliance with JJM guidelines, financial burden on government funds, and reduced community ownership of water projects. Weak community engagement leads to poor awareness, lack of responsibility, and possible resistance to JJM initiative.
16 villages failed to submit their VAPs to the District Water Supply Mission for further action.	Possible non-inclusion in the District Action Plans. Delayed approvals and fund allocations, resulting in slow implementation.

Deficiency	Impact
Only two and 10 villages prepared social maps and resource maps.	Lack of critical mapping tools results in ineffective resource utilization, improper planning, and inefficient project execution.
18 villages reported that their VAPs were not integrated with the Gram Panchayat (GP) Development Plans.	Non-alignment with local governance priorities could lead to duplication of efforts, fund misallocation, and lack of coordination with other developmental activities.

Source: Audit analysis

Apart from the above, the VAPs omitted crucial elements like source sustainability, financial sustainability provisions such as collection of user charges, data on groundwater, convergence with other schemes *etc*. In 14 VAPs, the lessons learnt from past implementation such as preparation of O&M plan, identifying issues for delays, preventive maintenance *etc*., were not included. The non-preparation of VAPs and shortcomings in the prepared VAPs reflects on the deficiencies in the constitution and functioning of the VWSCs.

The State Government stated (May 2025) that VWSC has been constituted in Bilhar village and both Basavanthapura and Bilhar villages have prepared VAPs. It further stated that source sustainability of the schemes taken up in the villages was ensured through District Source Finding Committee and financial sustainability of the scheme was addressed in the District Action Plan. The reply is not acceptable as the VAPs of the test-checked districts did not contain these parameters and the reply also does not address the audit issues relating to non-submission of VAPs to DWSM, non-preparation of VAPs as per prescribed format *etc*.

2.1.3 Functioning of District Water and Sanitation Mission

The District Water and Sanitation Mission (DWSM) is responsible for overall implementation of JJM at the district level. The functions of DWSM among other things involve ensuring preparation of VAP after taking stock of each village for FHTCs, approve VAPs, finalise District Action Plan (DAP) *etc*. The DWSM shall convene monthly meetings to consider and accord administrative approval of the in-village water supply schemes, plan protection and preservation of village water resources, greywater management *etc*.

Audit noticed that none of the districts had conducted the mandated 12 meetings during the years 2019-20 and 2023-24. While 13 districts including four[7] sampled districts had not conducted any meeting during 2023-24, 17 districts including three[8] sampled districts had conducted between one to six meetings and one district between seven to eleven meetings. Non conducting of regular meetings indicates poor monitoring at the district level.

The State Government stated (May 2025) that DWSMs were formed as per the JJM guidelines and the department had issued circulars to districts on reconstitution and activation of DWSM. However, it did not furnish reply to the

[7] Chikkaballapura, Gadag, Uttara Kannada and Yadgir.
[8] Bidar, Kolar and Mandya.

audit observation on non-conducting the mandated meetings during the period 2019-20 to 2023-24.

2.1.4 Functioning of the State Water and Sanitation Mission

In accordance with Para 5.2 of the guidelines, SWSM, a state level institution headed by Chief Secretary with Principal Secretary/Secretary in-charge of PHED/ RWS Department as Mission Director is the organisation responsible for implementation of JJM in the state. 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 PHE/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. The Apex Committee shall meet at least twice a year and if possible, quarterly.

  Audit noticed that during the year 2023-24, the Apex Committee had not met even once. In the meetings conducted, necessary participation of the department heads was missing and 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.

  Though the State was required to complete the works under JJM by 15 March 2024 for in-village works and 31 March 2024 for Multi Village Scheme (MVS), the progress of the works was slow and six of the in-village works for which Detailed Project Reports were prepared were yet to be tendered as indicated in Para 3.4.

- The Executive Committee functioning under SWSM on the other hand shall be responsible for creation of DWSMs, regular monitoring of physical and financial performance and management of water supply projects, ensure UCs and audited statements are submitted to GoI on time, take up evaluation studies, impact assessment studies *etc*.

  Audit noticed that the functioning of the Executive Committee was also deficient as it failed to ensure submission of UCs and audited financial statements on time which resulted in short receipt of Central assistance as discussed in Para 4.1.1 of this report.

The State Government furnished (May 2025) the dates of both the Apex Committee meetings and Executive Committee meetings and stated the meetings were conducted regularly and action taken against the decisions of the meetings were rigorously followed in the subsequent meetings. Audit noticed from the data that the Apex Committee had not conducted any meeting during 2023-24. Further as per the records available with Audit, there were no documented action taken reports, timelines for implementation *etc*. Though the Apex Committee included Secretaries from different departments, it was seen that these departments were not adequately represented during the meetings.

2.1.5 Convergence with other schemes

The Apex Committee was responsible for coordination among various departments and other agencies for convergence. Para 6.3 of the guidelines indicates various Central Government schemes and the components under the schemes that can be converged under JJM such as Grey water management under Swachh Bharat Mission Grameen (SBMG), provision of drinking water supply in schools under Samagra Shiksha, Watershed management/artificial recharge, creation/augmentation of water bodies under Pradhan Mantri Krishi Sinchayee Yojana *etc*.

Audit noticed the SWSM had not devised any policy framework for integration. Review of the minutes of the Apex Committee showed that integration with other programmes focussing on water conservation, grey water management *etc.*, were not taken up under JJM. Only 13 out of the 28 test-checked villages incorporated partial convergence strategies in their VAPs as shown in **Table 2.2**.

Table 2.2.: Convergence planned in selected villages

Sl no	Name of Scheme	No. of villages planned
1	Swachh Bharat Mission- Grameen (SBM-G)	10
2	MGNREGS	07
3	Watershed Development Component of PMKSY	04
4	Repair, Renovation and Restoration of Water Bodies	03
5	Rashtriya Krishi Vikas Yojana	01
6	Pradhan Mantri Krishi Sinchayee Yojana	02
7	Compensatory Afforestation fund Management and Planning Authority (CAMPA)	00
8	Pradhan Mantri Kaushal Vikas Kendra	01
9	Samagra Shiksha	00
10	Aspirational District Programme	00
11	District Mineral Development Fund (DMDF)	00
12	MPLAD	03
13	MLALAD	03
14	Grants under Article 275(1) of the constitution/ Tribal Sub Scheme	00
15	National Rural Livelihood Mission/ State Rural Livelihood Mission	00

Source: VAPs of the villages

Audit noticed during field visits that none of these 13 villages had actually taken up any activity under convergence. Non-convergence with other schemes could lead to missed opportunities for infrastructure and resource optimization and weak sustainability of water supply systems.

The State Government stated (May 2025) that convergence activities were implemented with SBM-G, MGNREGS *etc.*, and the expenditure were booked under their respective heads. It further stated that the future Apex Committee meetings would address convergence planning more effectively. The reply is not tenable in the absence of any supporting evidence as Audit noticed during field visits that convergence activities were not carried out in any of the test-checked villages. Further the earlier Apex Committee had not deliberated on the convergence issues.

Recommendation 1: The State Government should direct the committees formed to oversee the implementation of JJM, prepare and implement the convergence plans with other schemes specifying the timelines and measurable outcomes for optimal resource utilisation.

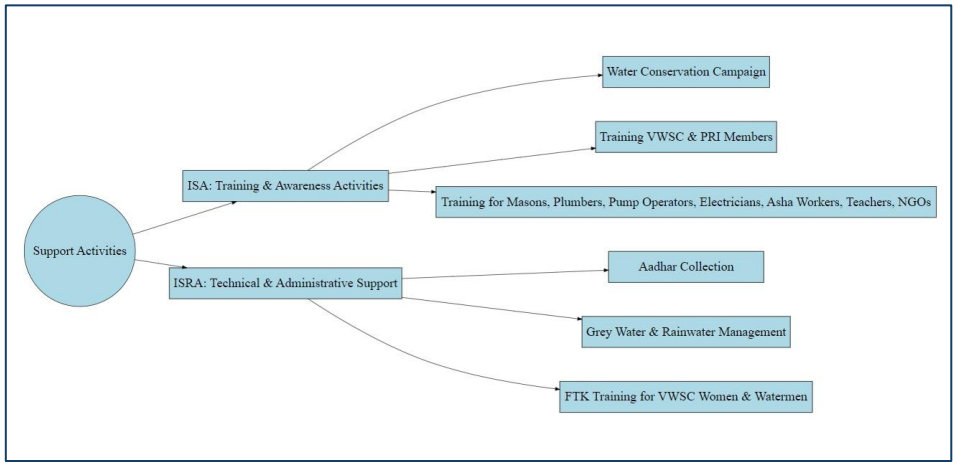
2.2 Implementation Support Agencies

Para 5.5 of the guidelines spells out the functions to be carried out by Implementation Support Agencies (ISAs). The functions of the ISA broadly comprise handholding the GP/VWSC, mobilisation of community contribution, building capacities of functionaries, building awareness on rainwater harvesting and artificial recharge, acting as a coordination platform between DWSM and VWSC *etc*.

ISAs comprise of Self-Help Groups, Non-Government Organisations, Community Based Organisations, Voluntary Organisations *etc*. The SWSM is vested with the responsibility of identification and empanelment of ISAs and the DWSM to facilitate deployment of ISAs from the empanelled list. As per the guidelines, each ISA is responsible for the entire project cycle of maximum 18 months in 40-60 villages at a time. Depending on the requirement in the district and based on the performance of ISA, next set of 40-60 villages would be given to them after four to six months or engage another ISA. In a district there could be many ISAs depending on the need of work to be done and requirement of handholding.

The State had initially empanelled ISAs for 31 districts during 2020-21 and Implementation Support Resource Agencies (ISRAs) for 28 districts during 2022-23. The responsibilities of ISA and ISRA is shown in **Chart 2.2**.

Chart 2.2.: Duties and responsibilities of ISAs and ISRAs



Source: Information furnished by the department

Audit noticed that ISAs were not identified for three districts in 2021-22, eight districts in 2022-23, 18 districts in 2023-24 and 19 districts in 2024-25. Similarly, ISRAs were not identified for three districts in 2022-23, six in 2023-24 and 28 in 2024-25. Currently, there are only 11 ISAs and six ISRAs engaged under JJM in the State.

The department provided to Audit the data on the performance of ISAs for the period 2020-21 to 2022-23 and the data of ISRA for the year 2023-24. The ISA performance in the test-checked districts declined from 103 *per cent* in 2021-22 to 59 *per cent* in 2022-23. As per the data made available to Audit, no support activities were taken up in Bidar district during 2022-23, it was negligible (12 *per cent*) in Uttara Kannada district and was less than 50 *per cent* in Gadag district despite having identified ISAs. Evidently, the performance of ISAs in these districts was poor. The overall target achievement by ISRA during 2023-24 in the selected districts was only 22 *per cent*. It was 21, 26 and 33 *per cent* for Aadhar collection, greywater and rainwater management and FTK training respectively. The support activities were thus inadequate and impacted the mission's ability to provide necessary capacity building as discussed in the subsequent paragraph and community engagement towards water conservation and grey water management.

The State Government stated (May 2025) that the appointment of ISAs for the financial year 2024-25 has been completed in 20 districts and the tendering process is underway in the remaining districts. The reply clearly highlights the delay in appointing ISAs and also does not address the audit findings regarding non-engagement of ISAs/ISRAs during the earlier years, poor performance metrics *etc*.

2.3 Capacity building

Paras 3.5 and 9.2 of the guidelines identifies the need for village level skilled human resources such as masons, plumbers, electricians, pump operators *etc*., for construction and O&M. Audit noticed that in majority of the test-checked villages, no one was trained as provided in **Table 2.3** below. Even where the persons were trained, the actual deployment of these trained personnel was low across masons and plumbers during the audit period.

Table 2.3: Deployment of trained personnel in test-checked villages

Details	Masons	Plumbers	Electricians	Pump operators
No. of villages where no person is trained	23	20	21	12
No. of villages with at least one person trained	05	08	07	16
No. of villages with at least one trained person deployed	01	05	07	15
No. of villages where no skilled person deployed	27	23	21	13

Source: Information furnished by the department and JPV

Further, eight villages[9] did not have trained personnel in any category indicating a gap between training initiatives and workforce requirement. Although three[10] villages had the highest number of pump operators, the concentration of trained personnel in a single category suggests imbalance. While the training imparted

[9] Chowdadenahalli, D N Doddi, Hadigere, Kamadenahalli, Kodihalli, Kulthanahally, Nellahalli and Thippenahalli.

[10] Asundi (3), Hebbal (3) and Hulakoti (5).

across essential trades was inadequate, the transition from skill building to actual deployment was incomplete. The absence of trained/skilled manpower affects the smooth functioning of the water supply systems and can lead to improper maintenance and operational hurdles as discussed in Chapter VI and consequent higher maintenance expenditure.

The State Government stated (May 2025) that as per the instructions issued by Ministry of Jal Shakti and the Ministry of Skill Development and Empowerment, it intends to appoint two women members in each GP in the state and provide them with Nal Jal Mitra training. Accordingly, about 11,900 women trainees have been identified and so far, 1,572 women have been imparted Nal Jal Mitra training. The trained women will carry out plumbing, electric, pipeline repairs *etc*. in their respective villages under the jurisdiction of the GP. Further steps are being taken to provide skill development to all the remaining Nal Jal Mitra trainees by the end of the year 2025-26 from the ITI and GTTC institutions of the Entrepreneurship and Livelihood Department.

Audit appreciates the steps taken by the Government to provide skill development for women which is still in the early stages. The reply however does not address the issue of non-deployment of trained personnel affecting maintenance of the water supply systems.

Recommendation 2: The State Government should ensure that sufficient numbers of ISAs are engaged and their performance monitored to ensure that adequate number of persons are trained and deployed.

CHAPTER-III

IMPLEMENTATION OF JAL JEEVAN MISSION

CHAPTER-III

IMPLEMENTATION OF JAL JEEVAN MISSION

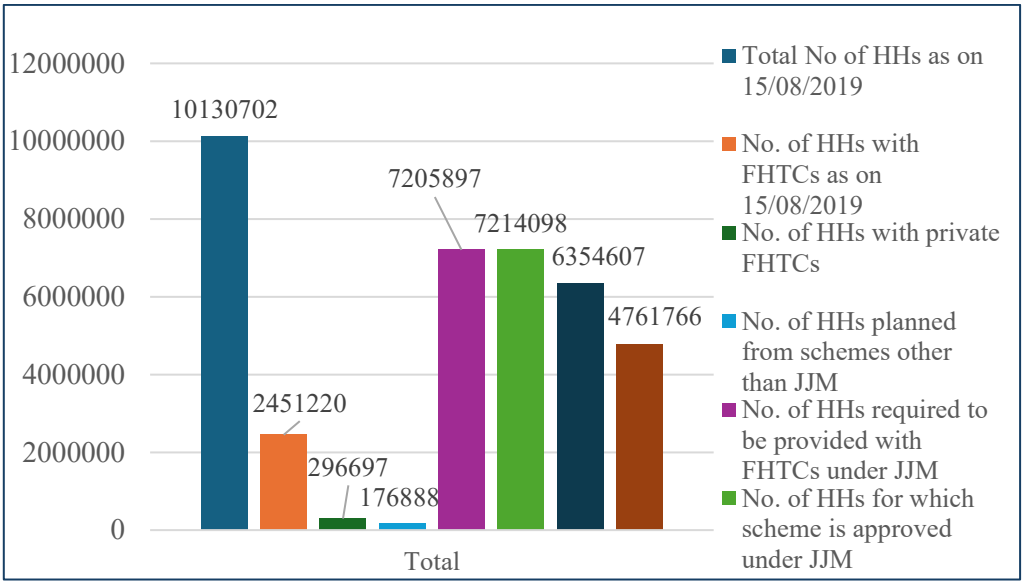
This chapter deals with the identification and execution of works required for the achievement of the objectives of the mission. As of November 2024, only 47.62 lakh (66 *per cent*) FHTCs were provided against the target of 72.14 lakh. Villages were prematurely declared as Har Ghar Jal compliant. Tenders were invited / approved after the stipulated deadlines. Contract management was deficient. The execution of works suffered from delays due to multiple factors such as non-availability land, delayed design approval etc.

The JJM is a time-bound mission mode programme to ensure every rural household has a FHTC. The water supply infrastructure under JJM falls under two categories – creation of in-village infrastructure including source development/strengthening/augmentation and greywater management; and infrastructure for bulk transfer of water, treatment and distribution systems. These include retrofitting of ongoing schemes taken up under erstwhile National Rural Drinking Water Programme (NRDWP) for last mile connectivity, retrofitting of completed rural water supply schemes to make it JJM compliant, Single Village Schemes (SVS), Multi Village Schemes (MVS) and mini solar power based piped water supply in isolated/tribal hamlets.

3.1 Coverage of FHTCs

Out of a total of 1.01 crore households, the department identified 72.07 lakh households as requiring FHTCs at the beginning of August 2019. The status of implementation as of November 2024 is shown in **Chart 3.1**.

Chart 3.1: Status of FHTCs



Source: IMIS data

As can be seen from the Chart, out of 72.14 lakh HHs targeted for FHTC connections, FHTCs were provided to 47.62 lakh (66 *per cent*) HHs as of November 2024.

3.1.1 Variations in FHTCs

As per the minutes of 11th SLSSC Meeting, there was significant variation in the number of FHTCs initially planned and actually required. The FHTCs required increased by 6,09,125 costing ₹3,156.62 crore. The Committee approved the variation proposal received for ₹2,541.04 crore (5,58,379 FHTCs) based on the recommendations received from the DWSM Committees. The balance proposal was kept pending awaiting DWSM recommendations. The Committee directed the department to submit a detailed proposal and seek funding from GoI for the additional cost and in anticipation of the approval from GoI, the excess amount would be borne by the State for continuity in execution of the works. The increase in the number of FHTCs can be attributed to the absence of baseline survey and deficiencies in planning at the ground level.

The State Government stated (May 2025) that the department has forwarded the proposal for variation in cost under JJM to Finance Department for onward submission to Government of India and the variation in FHTCs are attributed to the increase in the households during the mission period.

3.2 Village-wise coverage

The status of villages covered under JJM as per the analysis of the JJM data made available to audit is shown in **Table 3.1**.

Table 3.1: Status of villages covered under FHTC.

Metric	Overall State	Selected villages	
		Status as per IMIS	Status as per field visits
Total Villages as per Census 2011	27,397		
Total Villages with JJM implementation	26,592	28	28
Villages with 100 *per cent* FHTC	11,930	22	21
Villages with ≥ 90 *per cent* to < 100 *per cent* FHTC	4,564	03	07
Villages with ≥ 80 *per cent* to < 90 *per cent* FHTC	2,069	02	
Villages with ≥ 70 *per cent* to < 80 *per cent* FHTC	1,540	00	
Villages with ≥ 50 *per cent* to < 70 *per cent* FHTC	2,287	00	
Villages with ≥ 20 *per cent* to < 50 *per cent* FHTC	2,072	00	
Villages with ≥ 5 *per cent* to < 20 *per cent* FHTC	793	01	
Villages with > 0 *per cent* to < 5 *per cent* FHTC	345	00	
Villages with 0 *per cent* FHTC	992	00	

Source: IMIS

Out of the 22 villages reported as 100 *per cent* FHTC covered, field audit visits showed that in one village (Hebbal), works were yet to be completed.

Further, as mentioned in Para 1.5 of this Report, Audit had to replace four villages that were initially selected. These four villages were officially reported as fully covered. However, verification on the ground indicated that the works had not been completed as claimed. In these cases, either the tap connections were not installed, or the necessary infrastructure was not functional, leading to inaccurate reporting of achievements.

Audit also obtained the status of implementation of JJM works in the GPs selected for test check and noticed that 26 out of 181 villages (other than test-checked villages) in these GPs had reported achievement of 100 *per cent* FHTC or Har Ghar Jal reported or Har Ghar Jal Certified. However, as per the data furnished to Audit and on ground verification, the households in these villages were not receiving water through JJM. The details are given in **Appendix 3.1**.

The State Government stated (May 2025) that households in the villages were provided with tap connections and the related works were either completed and commissioned or efforts are on to complete the same. The reply, however, does not address the core issue of incorrect reporting of achievements even before the actual completion of the works.

3.3 Har Ghar Jal status

The declaration of **Har Ghar Jal (100 *per cent* FHTC coverage)** under JJM ensures that every rural household has access to safe and adequate drinking water through FHTC. Karnataka ranked 14th in terms of Har Ghar Jal villages

reported and 12th in terms of Har Ghar Jal villages certified. The status of achievement of the State as per the data on Har Ghal Jal initiative as of November 2024 is shown in **Table 3.2.**

Table 3.2: Har Ghar Jal status

31 Districts		234 Blocks		5,990 Panchayats		26,457 Villages	
Reported	Certified	Reported	Certified	Reported	Certified	Reported	Certified
00 (00)	00 (00)	05 (02)	01 (00)	878 (15)	428 (07)	6,754 (26)	4,649 (18)
Status in 28 test-checked villages						04	07

Source: IMIS, JJM State of Karnataka ; (Figures in parentheses indicate percentage)

3.3.1 Work of providing FHTCs to 477 households in Hebbal habitation of Hebbal village

Audit noticed during field visits that in Hebbal village of Shirahatti taluk of Gadag district which was Har Ghar Jal 'reported', the works were actually not completed as detailed below:

The work estimated to cost ₹168.25 lakh was entrusted (15 June 2021) to a contractor for ₹148.04 lakh with stipulation to complete the work by 14 November 2021. The work included laying of HDPE pipeline of 8,102m length and providing 477 new FHTCs as per the Bill of Quantities (BOQ). Subsequently a variation proposal for execution of additional quantities which included HDPE pipeline length of 3,115m, additional 80 FHTCs *etc*., was prepared stating that 80 households, certain habitations and extension area were not included at the time of preparation of DPRs.

As per the progress report as of 31 July 2024, the work of 980m pipeline and 50 FHTCs were yet to be completed. However, the department had indicated Hebbal village as Har Ghar Jal 'reported' in Integrated Management Information System (IMIS) which means that all the households in this village were provided with FHTCs and receiving water supply. Audit noticed from the joint physical inspection (August 2024) that the construction of Over Head Tank (OHT) remained incomplete (**Exhibit 3.1**).

Exhibit 3.1 – Under construction OHT

The incomplete implementation of the work resulted in non-utilisation of the infrastructure created and non-supply of water to the 477 households.

Audit was also in receipt of a certificate signed (02 August 2024) by the President, Vice President, Panchayat Development Officer and other members of the GP stating that the contractor has not carried out the work of connecting the taps with the pipeline and quality of work carried out was not satisfactory. Furthermore, the incorrect reporting that the work was completed renders the reporting mechanism unreliable.

The State Government stated (May 2025) that as of 08 April 2025, the construction of Elevated Level Storage Reservoir (ELSR) was completed, the work of 200m pipeline and 20 FHTCs were yet to be completed and the village would be certified in IMIS only after completion of the work and conducting the trial run. The reply confirmed the audit observation on incorrect reporting by the department.

3.4 Identification of projects

As per the data furnished by the department for in-village infrastructure and MVS, the SLSSC had approved (January 2023) a total of 42,719 works (42,559 in-village and 160 MVS works). The department took up the execution of these works in batches. The batch-wise status of in-village infrastructure works and MVS works is shown in **Tables 3.3 and 3.4**.

Table 3.3: Batch-wise status of in-village infrastructure works

Batch No.	Targeted works	Works with DPRs finalised	Works tendered	Works commenced	Works Completed
Batch 1	10,355	9,930	9,930	9,929	9,381
Batch 2	6,598	6,013	6,011	5,983	4,278
Batch 3	10,801	10,524	10,520	10,353	5,004
Batch 4	14,805	12,645	12,645	11,896	2,863
Total	**42,559**	**39,112**	**39,106**	**38,161**	**21,526**

Source: Information furnished by the department

Table 3.4: Batch-wise status of MVS works

Batch No.	No. of works taken up	No of works with zero progress	No of works completed
Batch 1	28	02	01
Batch 2	87	26	00
Batch 3	08	02	00
Batch 4	10	06	00
Total	**133**	**36**	**01**

Source: Information furnished by the department

3.4.1 Not providing options for in-village water supply

Para 3.5 of the Guidelines provides the strategy to be adopted for effective implementation of JJM. As per 3.5 (xxviii), while deciding in-village water supply system, three options with possible least cost water supply system shall be presented before the GPs/VWSCs by the department with complete techno-economic and socio-economic analysis. While deciding the system and its location *etc.*, emphasis on low O&M cost and capacity of local community to operate and maintain the same will be considered.

Audit observed no evidence of these options being presented or community consultations being conducted as required in any of the test checked villages. The lack of inclusive and participatory consultation undermined the ability to tailor water supply systems to the specific needs and capabilities of the communities. This oversight can lead to the risk of dissatisfaction among users, poor maintenance, and eventual failure of the systems and defeating the objective of the mission.

The State Government stated (May 2025) that VAPs are placed before the Gram Sabha and the department engineers have placed the details of the proposed schemes with alternative options. The reply cannot be accepted as no authenticated records such as Gram Sabha resolutions, signed minutes, or documented evaluations comparing the alternatives in terms of cost-effectiveness and utilisation of existing infrastructure as mandated under JJM guidelines were furnished to Audit.

3.4.2 Dropped works

As per the 11th SLSSC meeting (November 2023) proceedings, 1,005 in-village infrastructure works were merged and 2,513 works were dropped. The details of dropped works in the test-checked districts as shown in **Table 3.5**.

Table 3.5: Details of dropped works in the test-checked districts

District	Number of works dropped	Cost of works (₹ in crore)	Reasons as furnished by the district
Bidar	13	1.05	No reply furnished
Chikkaballapura	55	12.98	• Due to lesser number of households • Augmentation exceeding ₹1.50 lakh
Kolar	103	23.58	• Due to lesser number of houses • Households are below 20 and population is less than 100 • Habitation/village does not exist • Augmentation exceeding ₹1.50 lakh • DPR Cost exceeding AAP cost • Habitation belongs to Town Panchayat
Gadag	06	4.59	Five habitations were coming under submerged area and one habitation belongs to Town Panchayat.
Uttara Kannada	783	66.48	• Per FHTC cost exceeding ₹1 lakh • Availability of private sources • Presence of existing sources with sufficient availability of water
Yadgir	03	0.40	Karadkal camp village is located at Krishna Bhagya Jala Nigam Limited campus. Contractor not allowed to commence the work by the landowner. Hence the village is dropped. The village Ramachandra Nayak Tanda of Kanekollur GP comes with the same name in Gundgurthi GP. As the work in Gundgurthi GP is under progress, Kanekollur GP work is dropped.

Source: SLSSC meeting and information furnished by the districts

It can be seen from the replies that identification of habitations/villages for providing FHTCs were not undertaken with a proper survey. Dropping of works due to lesser number of households was against the very spirit and objective of

JJM and Har Ghar Jal and the guidelines did not provide for any exemption to not provide water supply to habitations with lesser number of households. The action taken to provide water supply to the households dropped under JJM was not made available to Audit.

The State Government reiterated (May 2025) the reply furnished by the districts and did not furnish specific reply/assurance on alternative coverage for these habitations.

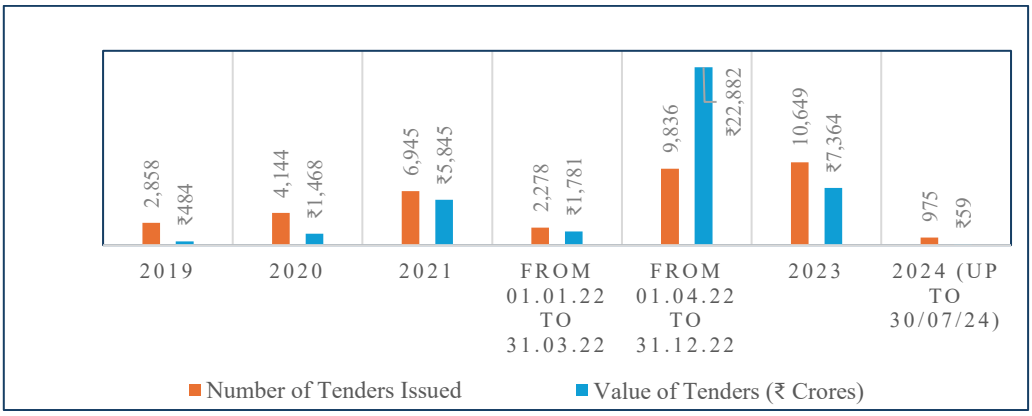
3.5 Tendering process

Para 7.5.2 of the guidelines prescribes the timelines to be adopted for completion of new schemes proposed to be taken up under JJM. The maximum time allowed for completion of in-village and MVS is 18 and 36 months respectively. To align with these timelines, no contracts were to be awarded for schemes requiring up to

- three years to complete after March 2021 and
- two years to complete after March 2022.

The department invited tenders for execution of the projects through the e-procurement portal of the State. During the period 27 August 2019 to 30 July 2024, 37,685 tenders valuing approximately ₹39,883 crores were published, finalised or awarded as shown in **Chart 3.2**.

Chart 3.2: Status of tenders



Source: E-procurement portal

As can be seen from the above, 21,460 tenders (57 *per cent*) valuing ₹30,305 crores (76 *per cent*) were issued after the deadline of 31 March 2022. As per the State Level Scheme Sanctioning Committee (SLSSC) proceedings (November 2024), the State was granted extension for awarding the works under JJM till 15 March 2024 for in-village works and until 31 March 2024 for awarding MVS. Audit noticed that 33 tenders valuing ₹251.75 crores were published/awarded after 31 March 2024 creating uncertainty of getting funds from the centre for these works.

The State Government stated (May 2025) that the administrative approvals for the 33 tenders awarded after 31 March 2024 were accorded well within the stipulated timelines. However, the delay in awarding tenders occurred primarily due to procedural challenges such as non-participation of bidders and the need to recall tenders multiple times to ensure fair competition and adherence to

procurement norms. These delays were beyond the department's control but were managed within the framework of transparency and compliance.

Audit noticed that only 13 of the 33 tenders were recalled and 11 of these were finalised in the second call, one in the third call and one in the fifth call and the reply stands unjustified. Further, the reply is silent on whether, due to delayed tendering, these works would be eligible for Central share of funding.

3.5.1 Time taken for finalising the tenders

As per Rule 22 of the Karnataka Transparency in Public Procurement Rules, 2000 (Rules), the evaluation of tenders and award of contract shall be completed, as far as possible, within the period for which the tenders are held valid. The Tender Accepting Authority (TAA) shall seek extension of the validity of tenders from the tenderers for the completion of evaluation, if it is not completed within the validity period of tender and in case the evaluation of tenders and award of contract is not completed within the extended period, all the tenders shall be deemed to have become invalid and fresh tenders may be called for.

The department had not made available to Audit the data on the validity period of the tenders. However, as per Clause 12 of the model tender document (K/W-4) stipulated by the Government of Karnataka for works, the tenders shall remain valid for a period not less than ninety days after the deadline date for tender submission. Audit analysis of the data made available showed that 30 *per cent* of the tenders were finalised after 90 days from the last date of receipt of bids as shown in **Table 3.6**.

Table 3.6: Timelines showing the finalisation of tenders

No. of days	No. of tenders finalised (Overall)	*per cent* of tenders	No. of tenders finalised (Sampled districts)	*per cent* of tenders
Within 7	632	02	114	02
8-30	7,151	19	1,334	18
31-45	6,392	17	1,213	16
46-90	12,599	33	2,444	33
91-180	7,929	21	1,738	23
181-365	2,994	08	530	07
More than 365	501	01	103	01
Total	**38,198**		**7,476**	

Source: E-procurement portal

Further for 33 tenders, the date of finalisation of tenders was shown as NULL and blank. The delay in finalising the tenders results in delayed entrustment and execution of the works and could impact the receipt of central assistance to the State as discussed in Para 4.1.1.

The State Government stated (May 2025) that the time taken for finalisation of tenders was extended in certain cases due to the nature and requirements of specific projects and extensions of bid validity were duly sought from the participating bidders, in compliance with Rule 22 of the Karnataka Transparency in Public Procurement Rules, 2000. It further stated that for MVS

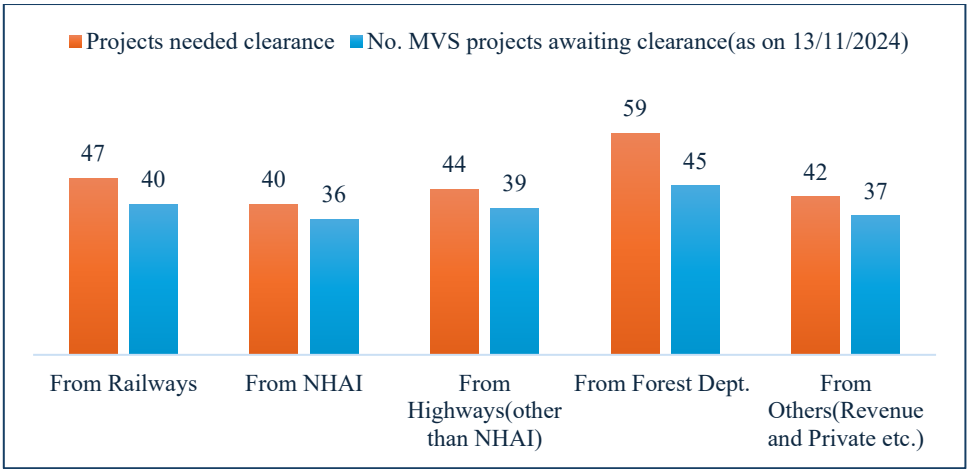
undertaken on DBOT model, the bid validity period of 180 days was sought at the time of tender invitation.

The reply is not tenable as the extent of cases where tenders were finalised beyond 90 days was 21 *per cent* and majority of the tenders related to in-village schemes.

3.5.2 Pending applications for clearances

The execution of the major works involves acquisition of land that belongs to other Government agencies/departments. Audit analysis of the information furnished by the department showed that 170 applications were pending clearance from Forest department, Railways, NHAI *etc*., as shown in **Chart 3.3**.

Chart 3.3: Status of applications pending clearance



Source: Analysis of information furnished by the department

Audit noticed that applications were pending clearances up to two years. The delays in clearances impact on the timely completion of projects and could result in increased costs.

Recommendation 3: The State Government should award works only after ensuring availability of land to avoid delays in completion of works.

The Government stated (May 2025) that the recommendation is duly noted.

3.6 Turnaround time for vetting of designs

The department empaneled certain institutions for vetting and approving the structural hydrological designs under MVS projects. However, no specific time period was prescribed for giving approval. Analysis of the data showed that in 10 cases, approval was given after more than six months. The delays in approval have a recurring effect on the timely execution of these works and achieving the objective of providing drinking water to the beneficiaries.

Case study

The work of providing water supply to Kohinoor and other 47 habitations of Basavakalyan Taluk in Bidar district was entrusted (January 2023) to a contractor for ₹71.23 crore. The work which included construction of Water Treatment Plant (WTP), Zonal Balancing Tanks (ZBT), jack well among other components was to be completed by April 2024. JPV (September 2024) of the work showed the following:

(i) ZBT-1 was under construction and design for ZBT-2 was yet to be approved.

(ii) Jack well was under construction - design approval received in August 2024.

(iii) WTP was yet to be taken up - design approval received in August 2024.

(iv) Four out of seven OHTs were completed.

(v) Pipeline work completed was 61 per cent.

It can be seen that in the instant case, there was delay in according approval for the designs which resulted in delay in taking up the construction works. Though the contractor sought extension of time, it was yet to be approved by the department.

The Government has not furnished any reply.

3.7 Contract management

3.7.1 Identification of works across platforms

Project tracking in the B15 format within the JJM IMIS portal uses a different unique identifier than the one used in the Karnataka e-procurement portal for tendering denying the end-to-end data. The absence of a common identifier complicates tracking a single project from tender initiation to final completion.

The B15 format, used by the Department for monitoring the progress of various works under JJM, did not include contract and tender details for the contractor's name or unique identification number. This omission makes it difficult to link specific contractors to their projects and assess their performance across multiple works. Without contractor identifiers, it was challenging to aggregate and analyse data on contractor performance or identify patterns of non-compliance, delays, or quality issues associated with specific contractors. This restricted the department's ability to make informed decisions about contractor reliability and accountability.

The State Government stated (May 2025) that the department is actively addressing the issues related to project tracking and contractor identification and as part of this initiative, the Contract Management Module developed by the e-Procurement Cell is being implemented. It further stated that this module is designed as an end-to-end solution for contract management, enabling seamless integration of tendering, contractor details, and project progress tracking and implementation of this module has been mandated (March 2025) for all projects.

3.7.2 *Single bidding and entrustment of huge number of works to a single contractor*

Data analysis of the in-village works showed that out of 38,231 works finalised, 9,342 works (24 *per cent*) were awarded through single bidder participation in the very first instance, even though the department had in other instances resorted to retendering multiple times. The receipt of single bids in the very first instance indicates a lack of competitiveness and single bids can be awarded only after receipt of the approval of the competent authority with detailed justification as per the CVC guidelines.

Further, many works were awarded to a single contractor without adequately assessing their capacity to execute multiple projects. The e-procurement system lacks necessary safeguards to cap contractor eligibility when cumulative contract values exceed their capacity. **Table 3.7** shows the number of works entrusted to a single contractor.

Table 3.7: Contractors with multiple works

Bidder's log in ID	No. of contracts won	No. of single bid contracts won	*per cent* of single bids
S42250	210	108	51
S18394	190	100	53
S14816	183	123	67
S60494	157	61	39
S85458	132	50	38
S112998	127	96	76
S128572	111	53	48
S109165	111	68	61
S10744	110	25	23
S148976	99	85	86

Source: E-procurement portal

Interestingly, it can be seen that six out of the top 10 contractors who were entrusted with multiple works were the single bidders for more than 50 *per cent* of the works.

The State Government stated (May 2025) that since JJM was being implemented in mission mode and as the duration for completion of the project was limited, the department with intention to expedite the implementation accepted single bid duly following the direction of Finance Department.

The instructions of the Finance department stipulated that that in case of single bid tenders, the first option for the Tender Inviting Authority (TIA) is to recall the tender and in exceptional cases the TIA can negotiate with the bidders through e-procurement portal if the tender premium is above five *per cent.* Audit noticed that out of the 9,342 cases, there were 791 instances where the tender premium was above five *per cent*. The reply is not acceptable as citing mission mode cannot be treated as exception for all the 791 cases wherein the tender premium ranged from five *per cent* to as high as 61 *per cent*.

Recommendation 4: The State Government should ensure that works are awarded to contractors after considering their available tender capacity.

3.7.3 Lack of crucial features in e-procurement portal

Audit noticed that the e-procurement portal lacked the features for ensuring transparency, prevention of fraud, and proper monitoring in the allocation of contracts as shown in **Table 3.8**.

Table 3.8: Lack of features and their impact

Features	Impact
Data on reasons for tender rejection: The reason for rejecting a particular tender is not mentioned in the portal.	Reduces the Departments' ability to track and analyse the reasons for rejection of a tender. Reduces accountability in the decision-making process and reduces transparency.
Lack of IP tracking for vendor authentication: The e-procurement portal does not record the IP addresses of vendors during submission of tenders.	The absence of IP tracking hampers the ability to verify vendor identities and detect potentially fraudulent or malicious activities on the platform such as cartel formation *etc*.
Inadequate vendor profile management: Vendor profiles on the e-procurement portal are incomplete and lack critical information such as historical performance data, compliance records, and financial capacity assessments.	Makes monitoring difficult as tender accepting authority lacks data to measure the performances of a particular vendor beyond his jurisdiction.
Absence of over-allocation alerts for contractors: An alert system to notify authorities when a contractor is awarded more projects than the specified operational limits.	There is no mechanism to compile all the awarded and ongoing works of a vendor across Karnataka. Without over-allocation alerts, there is a higher likelihood that contractors may overcommit, leading to delays, substandard work quality, or even project abandonment.

Source: Audit analysis of e-procurement portal

The State Government stated (May 2025) that the details of bidder rejections are duly recorded in the proceedings of the Tender Scrutiny Committee, which forms the basis for decision-making during the tender evaluation process and these proceedings are available in the tender-specific documentation. The reply reiterates the fact that the physical files need to be referred to ascertain the reasons for rejection of a particular contractor which would be a cumbersome process.

As regards IP tracking, vendor profiles and alert system for over allocation, the State Government stated that the matter would be referred to e-governance, as suggested by Audit.

3.7.4 Tripartite agreements for JJM works

Audit noticed non-compliance with the mandatory execution of tripartite agreements as per the guidelines, which are essential for ensuring accountability, transparency, and effective coordination among stakeholders. Across selected districts, these agreements meant to formalize roles and responsibilities among the DWSM, GPs/VWSCs and executing agencies, and also ISAs, which are crucial for technical support and capacity-building, were not implemented as required under Sub-Para 3.5, Chapter 3 – xxxviii (e) of the

guidelines. The absence of such agreements weakens the implementation framework, reducing the likelihood of achieving objectives like community engagement and sustainable water management are critical for proper planning and oversight. Their absence compromises the accountability framework, increasing risks of mismanagement, delays in execution, and lack of ownership by local communities, all of which threaten the long-term sustainability of water supply schemes.

The absence of tripartite agreements contributed to project delays and coordination failures, hampering timely execution and affecting work quality. Disputes between executing agencies and GPs have further stalled progress in several instances, while authorities in some areas failed to provide explanations for the non-execution of mandated agreements.

The State Government stated (May 2025) that tripartite agreement is not feasible in the State since in-village infrastructure works taken up under JJM will be implemented by RDWSD as per the approved VAP by VWSC and upon completion will be handed over to the respective VWSC for operation and maintenance. Bulk water supply schemes are implemented by RDWSD along with O&M through contractors onboarded through tendering process.

The reply is not tenable as tripartite agreements can be entered by RDWSD with VWSCs and the executing agencies as mandated to ensure local engagement for successful and sustainable implementation.

3.8 Status of projects in the test-checked districts

The batch-wise status of in-village infrastructure works in the test-checked districts is shown in **Charts 3.4 (a) to (d)**.

Chart 3.4: Batch-wise status of works in test-checked districts

Chart 3.4(a) – Batch I

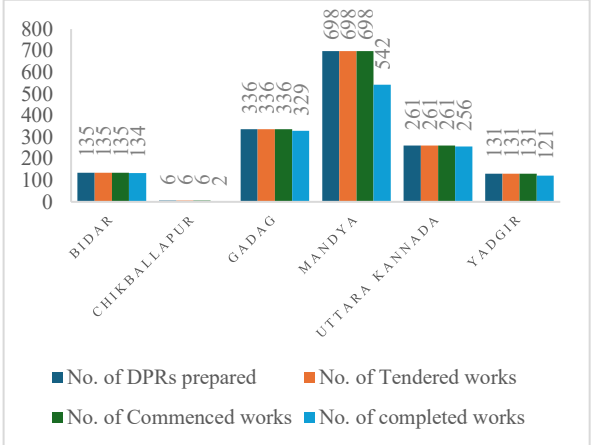


Chart 3.4(b) – Batch II

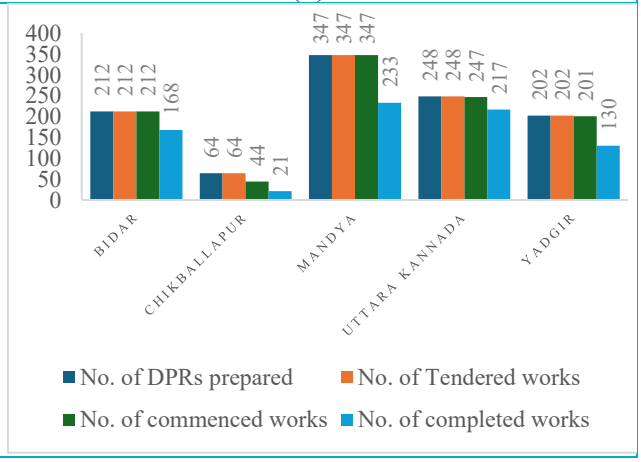


Chart 3.4(c) – Batch III

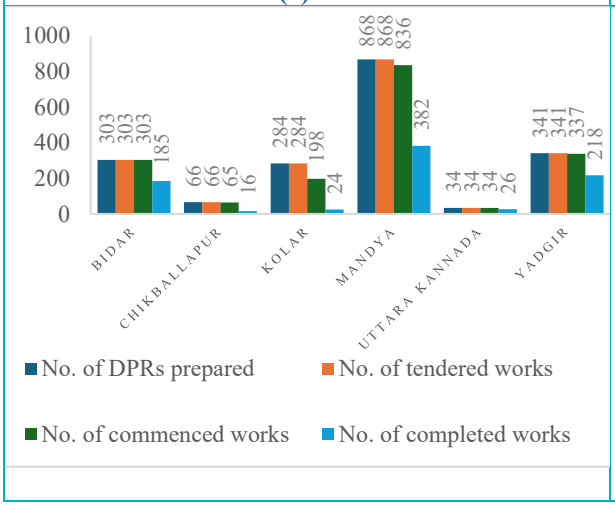
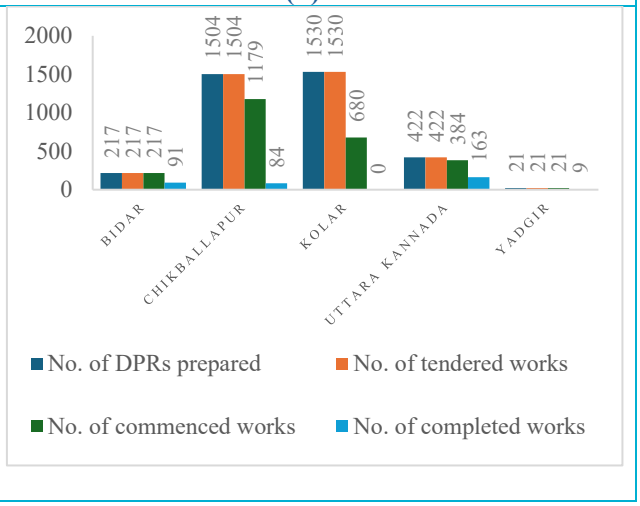


Chart 3.4(d) – Batch IV



Source: information furnished by department

It can be seen from the above charts that-

- ❖ Batch I works were almost completed in all the test-checked districts except Mandya and Chikkaballapura in comparison with the works commenced.
- ❖ Except in Chikkaballapura district, all the works tendered under Batch II commenced. However, some of the works were yet to be completed.
- ❖ In respect of Batch III works, except in Kolar and Mandya districts, almost all tendered works had commenced.
- ❖ Under Batch IV works, significant number of works though tendered were yet to commence in Chikkaballapura, Kolar and Uttara Kannada districts.

The reasons for not commencing the works were not forthcoming from the records made available to Audit.

The State Government stated (May 2025) that in Chikkaballapura district, there was shortage of skilled labour for constructions of Over Head Tanks, some of the contractors take multiple works which causes delay, non-receipt of test reports in time *etc*. It further stated that action would be taken to commence the balance works in all the test-checked districts. The reply acknowledges the fact that entrustment of multiple works to single contractor results in delays in taking up /completing the works.

Audit observations on the in-village works taken up in the 28 test-checked villages and GPs are discussed below:

3.8.1 Work of providing FHTCs to 1,284 households in Hulakoti habitation of Hulakoti village, Gadag taluk

The work estimated to cost ₹4.32 crore was entrusted (16 July 2021) to a contractor for ₹4.53 crore with stipulation to complete the work by 15 December 2021. The work was completed by the contractor in November 2022 with a delay of 11 months. The BOQ for the work provided for laying of pipeline for a total length of 8,104m and interconnection of OHT and pumping main. However, the length of pipelines laid under the scheme was 31,580m (an excess of 390 *per cent*). This led to increase in the cost of work to ₹7.09 crore indicating

a cost overrun of ₹2.56 crore (the increase in cost is only on account of the increase in the length of the pipeline).

Audit noticed that the excess quantity of the work was executed without prior approval/sanction and inspection by the Superintending Engineer (SE). Joint inspection showed that in few of the roads in Hulakoti village, the pipelines were laid and water connections provided despite existence of regular water lines and in few of the roads, the pipelines were laid on both the sides. This resulted in avoidable excess expenditure on the scheme.

The State Government stated (May 2025) that the Variation Committee had initially inspected (May 2022), the concerned SE had inspected (November 2022) the works and the division submitted the variation proposal to SE in March 2023. It further stated that the existing pipeline network in the village was laid approximately 20-25 years ago and sufficient distribution of water was not properly achieved as mentioned by GP and local leaders and GP insisted for replacement of entire pipeline network. The pipes were laid on both sides of the road to avoid unnecessary damage to the newly laid cement concrete roads.

The reply is not acceptable as the need for replacement of the entire pipeline network was not mentioned either in the VAP or the DPR and the exercise of variation proposal was taken up after six months of the stipulated date of completion. It can also be seen that the SE inspected the work after it was completed though the inspection was to have been carried out before commencement of the additional work. The justification for laying pipeline on both sides of the road lacks basis in the absence of any cost benefit analysis and deviates from JJM norms that mandate a central or single-side alignment for cost and maintenance efficiency.

3.8.2 Work of providing FHTC's to 265 households in Halageri habitation of Halageri Village, Siddapura taluk, Uttara Kannada district by augmentation and retrofitting

The work estimated to cost ₹74 lakh was entrusted (March 2022) to a contractor for ₹64.25 lakh and the work was completed (June 2022) after incurring an expenditure of ₹32.92 lakh. As per the SOP issued (May 2021) by the department, the quality of the pipes used on the scheme should invariably be tested by Central Institute for Petrochemicals Engineering and Technology (CIPET), prior to the execution of work.

Audit noticed that as against the targeted 265 households, FHTCs were provided to only 143 households and as against the proposed distribution pipeline for a length of 11,438m the work executed was only for a length of 2,719m (23 *per cent*). However, the third-party inspection report on the scheme (August 2022) indicated the pipeline having been laid for 3,852m. Further, the pipes were tested for quality only during February 2023, six months after the work was handed over (22 August 2022) to the GP.

The State Government stated (May 2025) that the VAP (February 2021) mentioned there are serious leakages in the existing pipeline network and a new pipeline network is to be laid and therefore total pipeline of 11,438m was considered in the project. However, the villagers during a meeting held (March 2022) refused replacement of all old pipelines and stated that parts of existing pipeline are in good condition and can continue to be used. The villagers asked

for new pipelines/replacement only in the areas where necessary and areas with heavy leakages and therefore only 2,719m of pipeline was executed. It further stated that the third-party inspection report had erroneously mentioned the execution of pipeline as 3,852m. As regards the delay in testing of pipes, the Government stated that the area was affected by drought and there was an emergency for replacing the pipes. Though CIPET officials were called upon to collect the pipe samples for testing, there was poor response and because of the villagers' demand a pipe test report from AIPS third party was obtained (May 2022) and the laying of pipeline was done. However, a detailed report from CIPET was later obtained and was submitted along with the final bill dated 05.07.2023.

It is evident from the reply that the preparation of DPR was a mere formality done without reference to the factual data on the existing households and availability of water. The third-party inspection also appears to have been carried out without actually inspecting the work. The fact also remains that around 50 *per cent* of the village population were yet to be provided with safe drinking water under the scheme.

3.8.3 Work of providing FHTCs to 173 households in DN Doddi habitation of DN Doddi village of Malur Taluk by augmentation and retrofitting

The work was entrusted (August 2023) to a contractor at an agreed rate of ₹55.31 lakh with stipulation to complete the work by December 2023. As of August 2024, the work was still under progress with a total expenditure of ₹58.22 lakh. Audit noticed that out of the proposed 173 households, eight houses were not provided with the intended safe drinking water as these houses were situated in an elevated place much above the Full Storage level of the existing OHT.

The State Government did not furnish specific reply to the audit observation on not providing water to eight houses located at an elevated place.

3.8.4 Work of providing FHTCs to 605 households in Bilhar village of Bilhar GP in Shahpur Taluk

The work estimated to cost ₹2.72 crore was awarded (August 2021) to a contractor for ₹2.51 crore with with a stipulation to complete the work within 90 days. The work was reported to be completed and was handed over to GP, Bilhar on 15 March 2023 at a cost of ₹2.39 crore (March 2024).

Verification of records and JPV of the scheme (August 2024) disclosed that the WSS under JJM remained defunct since inception as discussed below:

- The pumping motor at the intake point (cost - ₹1.23 lakh) was merely placed on the floor without any concrete support and proper covering and was found to be defunct. Further, the electric starter provided near the jack well was also not in working condition (**Exhibit 3.2)**.

Exhibit 3.2 – Defunct pumping motor and electric starter

- Though a ELSR[11] of 1.50 lakh litres capacity was constructed under JJM, the same had not been put to use as it was irregularly constructed on a private land along with associated structures like sedimentation tank, storage tank, filters, pump house *etc*. The ELSR of the scheme remained idle also due to the fact that the provision for discharge of wastewater after filtration was not provided and wastewater was let into adjacent private lands, leading to objections from those landowners.
- The households of Bilhar village had already been provided with tap connections under two other water supply schemes (PWS and MVS) and were, hence, not keen to obtain FHTCs under JJM.

The State Government stated (May 2025) that provision was not made in the estimate for pumping motor platform at intake point and for discharge of wastewater after filtration and it is now taken up in the additional work slip estimate for which approval is awaited. It further stated that a private person had given the land as charity to the GP for construction of OHT and temporary arrangements were being made for disposal of wastewater.

The reply is silent on the audit observation regarding the villagers not keen to obtain FHTCs under JJM. This suggests that assets created under JJM remained unutilised.

3.8.5 Work of providing FHTCs to 377 households in Rajnal habitation of Rajnal village in Bidar taluk

The work executed at an agreed cost of ₹123.7 lakh was handed over to the GP, Aliamber on 12 March 2024. The sources of water for the village were borewells and an open well. The village was declared Har Ghar Jal compliant on 12 March 2024.

The joint physical inspection (6 September 2024) showed that the borewells drilled under JJM were not put to use and were yet to be connected to the main pipeline. No electrification was done to one borewell. It was also noticed that three households were not provided with tap connections under JJM and these households were obtaining water from a public cistern located far from their homes. Thus, the claim of the department that the village had achieved Har Ghar Jal status was incorrect.

The State Government stated (May 2025) that the borewell drilled under JJM were connected to the main pipeline and electrification to the borewell were

[11] Elevated Level Storage Reservoir.

done and water also flowing through the new connection pipelines. It further stated that all the households including the three households were also obtaining water under JJM. The claim of the Government needs verification.

3.8.6 *Work of providing FHTCs to 435 households in Inchur Habitation of Inchur Gram Panchayat, Bhalki Taluk, Bidar District*

The work entrusted (October 2023) to a contractor for ₹146.64 lakh was to be completed by July 2024. The work comprised construction of OHT of 50KL capacity among other components. Review of the files showed that land for construction of OHT was not handed over to the contractor. Consequently, the contractor was unable to commence the work. The department had incurred an expenditure of ₹60.41 lakh as of May 2024 towards construction of open well and laying of pipes. The work stands abandoned midway (**Exhibit 3.3**) and the objective of providing water supply of 435 households remained unachieved.

Exhibit 3.3: Work abandoned midway

The State Government stated (May 2025) that the reply was awaited from the respective district.

3.8.7 *Work of providing FHTCs to 239 households in Dharmapur village of Hokarna B Gram Panchayat*

The work was entrusted (18 April 2022) to a contractor for ₹51.86 lakh with stipulation to complete the work within four months (including monsoon) from the date of agreement (13 April 2022). Audit noticed during JPV that the work was yet to commence even after lapse of two years and the HDPE pipes procured for the work was kept alongside of the road. The department had not taken any action to terminate the contract and get the same executed by a different contractor resulting in not achieving the objective of providing drinking water to 239 households. Thus, despite entering into a contract, the work has not commenced. There is a probability of the cost escalating if a new contract is entered into or the original contractor executes the work.

The State Government stated (May 2025) that the reply was awaited from the respective district.

3.9 Execution of Multi-village schemes

As against 133 MVS works taken up, only one work was completed (Table 3.4). Audit analysed the status of the remaining 132 MVS works that were under progress as of 23 September 2024. Analysis showed that the stipulated date of

completion was over in respect of 66 works, of which 10[12] works pertained to the test-checked districts. Further, out of the total 36 works which showed no physical progress, 18 works were entrusted between November 2022 and March 2024. Five of these works were related to three[13] test-checked districts.

The implementation of the MVS in the State was delayed owing to multiple factors such as delay in finalisation of tenders, delay in obtaining clearances for land, absence of dependable source *etc*., as discussed below:

3.9.1 Time taken for entrustment of works

Analysis showed that the time taken for issue of work order from the date of SLSSC approval including tender invitation, scrutiny and finalisation ranged from six months to 43 months. This includes five works in Mandya district (22-38 months), five works in Uttara Kannada district (20-35 months), four works in Chikkaballapura district (10-21 months), eight works in Bidar district (10-29 months) and one work in Yadgir district (17 months). No MVS works were taken in Gadag and Kolar districts.

The State Government stated (May 2025) that the delays were on account of non-participation of bidders, delays in administrative approval *etc*.

3.9.2 Implementation of MVS schemes

Review of the progress of implementation of MVS works showed that the works were delayed owing to issues in land availability, delay in obtaining clearances from various authorities, delay in approval of DPRs by the department, delay in obtaining approvals for hydraulic designs and drawings *etc*. The status of works in the test-checked districts is discussed below:

Bidar district

There were eight MVS works under progress in Bidar district of which six[14] works pertained to the test-checked taluks of Bhalki and Bidar. Review of the progress of implementation of five MVS works taken up in Bhalki taluk of Bidar district at a total tendered cost of ₹187.19 crore showed that two works were taken up (January and December 2023) under Design Build Own and Transfer (DBOT). Both the works under DBOT[15] were taken up without ensuring the complete availability of land and forest clearances was still awaited. In respect of MVS to Malchapur and other 54 habitations, the DPR was still to be approved as of 29 August 2024, though the stipulated date of completion of work was 28 November 2024.

In respect of the balance three works[16], though the stipulated date of completion of the works (30 July 2024) was over, the works were yet to commence as the revised DPR was still to be approved for two works and the third work had

[12] Bidar (5), Chikkaballapura (3) and Uttara Kannada (2).
[13] Chikkaballapura (1), Mandya (3) and Uttara Kannada (1).
[14] The work order for MVS to Bagdal and other 104 habitations in Bidar taluk was issued in November 2024 and hence was not taken up for review.
[15] MVS to Bhalki town and other 60 enroute habitations of Bhalki Taluk and MVS to Malchapur and other 54 Habitations of Bhalki Taluk.
[16] MVS to Wanjarkhed and Other 5 Habitations in Bhalki Taluk; MVS to Mehkar and Other 4 Habitations in Bhalki Taluk and MVS to Alwai and Other 2 Habitations in Bhalki Taluk.

issues with land availability for Water Treatment Plant and Master Balancing Reservoir.

The State Government stated (May 2025) that all the land issues have presently been sorted out and works were under progress. The reply is silent on the approval of the DPRs in respect of two works because of which the works were yet to commence and also does not address the core audit observation on taking up of works without ensuring the complete availability of the required land.

Chikkaballapura district

There were four MVS works under progress in Chikkaballapura district. Review of the progress of these works showed that the works tendered at a total cost of ₹91.51 crore and supposed to be completed by October 2021[17], November 2023[18] and January 2024[19] were still in progress. In respect of two works, the jack well design and WTP drawings were yet to be approved by the Chief Engineer and in one work, there was a delay in approval of hydraulic design of tank. The approval was obtained on 27 November 2024 ten months after the stipulated date of completion. In respect of the work, which was to be completed by October 2021, the connection from Jakalamodagu pipeline was pending from the City Municipal Council (CMC), Chikkaballapura.

The State Government stated (May 2025) that notices were issued to the contractors for the delays in design approvals. In respect of the work - WSS to Mylapanahally village and other four habitation in Chikkaballapura Taluk from Jakalamodagu main pipeline, it stated that the delays were due to getting permission from CMC and Agriculture Produce Market Committee market for laying pipeline and getting permission for tapping from the Jakkalamodagu main water supply which is supplying water to Chikkaballapura town. It is evident from the reply that necessary approvals were not obtained from the authorities concerned before identifying the source and taking up the work. Thus, the delays in getting necessary approvals from various authorities resulted in non-completion of the works.

Mandya district

a) Works taken up under JJM

Review of the progress of implementation of MVS works showed that a total of seven MVS works were taken up in Mandya district of which five were under under DBOT – two[20] in Mandya and Maddur taluk, one[21] in Srirangapatna taluk,

[17] WSS to Mylapanahally village and other 4 habitation in Chikkaballapura Taluk from Jakalamodagu main pipeline.

[18] WSS to Mandikal and other 13 habitations from Yadralahalli lake and WSS to Hampasandra village and other 27 habitations from Amani Byrasagara Tank in Gudibande Taluk.

[19] WSS to Manchenahalli and other 60 habitations from Dandiaganahalli.

[20] MVS to Mandya and Maddur Taluk on Left side of NH-239 habitations under Jaladhare Scheme 2 and MVS to Mandya and Maddur Taluk on Right side of NH-166 habitations under Jaladhare Scheme 4.

[21] MVS to 56 habitations on left side of cauvery river in Srirangapatna taluk under Jaldhare Scheme 3.

one[22] in Malavalli Taluk and one[23] covering KR Pet, Pandavapura and Nagamangala taluks (discussed in detail under Sub-Para (c)).

In respect of the MVS works under Jaladhare Scheme 2 and Scheme 4, the DPR was still to be approved as of 24 March 2025, though the stipulated date of completion of work was 24 April 2025. In respect of the MVS work under Scheme 5, the work was yet to start, though the DPR was approved on 01.03.2025. In respect of the MVS work under Scheme 3, the approval of the DPR, hydraulic design, drawings took nearly a year and the land for the construction of WTP and ZBT was handed over only after 7 months and 10 months from the issuance of the work order. In respect of the two WSS works (WSS to Gamanahalli and other 13 villages of Srirangapatna taluk and WSS to Mahadevapura, Chikkankanahalli, K. Shettahalli and other 16 villages of Srirangapatna taluk), the works were delayed due to the delay caused in obtaining approval for forest land for the Master Balancing Tank (MBT), Zonal Balancing Tank, and Pure Water Rising Main. The total tendered cost of DBOT works was ₹731.58 crore and for the other two MVS works, it was ₹36.62 crore.

The State Government accepted (May 2025) the audit observation and stated that the DPRs in respect of Jaladhare Scheme 2 and Scheme 4 have been received from Indian Institute of Technology, Hyderabad (March 2025) and they have been submitted to the Chief Engineer for approval and were yet to be approved. It further stated that under DBOT projects, it was the responsibility of tender awardee to get DPR, hydraulic design and all drawings approved from the competent authority and also to procure land in co-ordination with the department officials concerned and hence there would be no cost overrun.

The reply is not acceptable as procurement of land by the contractor/agency would involve more time and this would significantly delay the completion of the project.

b) Works taken up under NRDWP and subsumed under JJM

Chapter 4 of the guidelines stipulate that ongoing programmes under erstwhile NRDWP would be subsumed into JJM. Further as per Chapter 6, the JJM would include retrofitting of ongoing schemes taken up under NRDWP for the last mile connectivity. Review of four[24] works taken up under NRDWP in Mandya district and later subsumed under JJM showed that works scheduled for completion between March 2020 and November 2022 remained incomplete even as of March 2025. The tendered cost of these works was ₹126.93 crore.

The reasons for the delay were due to (i) delay caused for approval of water allotment from Water Resources Development Organisation, (ii) delay in allotment of forest land for the construction of MBT, (iii) delay in approval for the construction of jack well from Kere Samrakshana Pradhikara and CNNL, (iv) Non-availability of land for the construction of WTP, (v) change in location of jack well and intake well, (vi) delay in approval of designs and drawings *etc*.

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[22] MVS to 151 habitations in Malavalli Taluk under Jaldhare Scheme-5.

[23] MVS to for providing drinking water supply to 797 habitations in KR Pet, Pandavapura and Nagamangala Taluks.

[24] WSS to Koppa and other 49 villages of Maddur taluk; WSS to Besagarahalli and other 37 villages of Maddur taluk; WSS to Navile, Thoreshettihalli and other 53 villages of Maddur taluk and WSS to Kirugavalu and other 46 villages of Malavalli taluk.

Thus, entrustment of works without ensuring the availability of land violated the provisions of Section 135 of KPWD Code which stipulates that works shall not be taken up without ensuring the availability of land. The delays in obtaining clearances from various authorities, approving DPRs/hydraulic designs and drawings *etc*., resulted in delays in completion of the projects. The delays in execution of works while resulting in time over run could also result in cost over runs besides delaying water supply to the intended beneficiaries.

The State Government, while accepting (May 2025) the audit observations furnished the latest progress of the above works wherein in it was stated the pending schemes are likely to be completed by the end of June 2025.

c) MVS for providing drinking water supply to 797 habitations in KR Pet, Pandavapura and Nagamangala Taluks in Mandya district.

The MVS work tendered at a cost of ₹701 crore aimed to provide potable water to K.R. Pet, Pandavapura and Nagamangala Taluks, as well as Bellur-Pattana Panchayat, Nagamangala Town, BG Nagar, and five residential schools in K.R. Pet Taluk. Review of the work showed that the project encountered significant delays across multiple stages of implementation resulting in the project still remaining incomplete. The timeline of key events and approvals related to the scheme were as shown in below:

Project Sanction Report (PSR) Work Order	09/01/2020
PSR submission	21/09/2020
PSR approval	06/10/2020
SLSSC Approval	10/03/2021
Administrative sanction	03/06/2021
Tender publication	31/05/2022
Letter of Acceptance	05/11/2022
Work order issued	23/01/2023
Due date for completion	22/01/2025
Detailed Survey Report (DSR) submission date	06/04/2023
DSR approved date	27/09/2023
Civil Designs approval	24/01/2024

Though the contract period was to end by January 2025, the physical and financial progress as at the end of January 2025 was 47 and 32 *per cent* respectively. The reasons for the delays are discussed below:

(i) Revision of PSR

The Project Sanction Report, a crucial planning document, was initially prepared for 85 lpcd. With the implementation of JJM, the per capita demand was revised to 55 lpcd. This required a supplementary agreement, which was executed only on 8 July 2020, increasing the cost of PSR preparation by ₹17.85 lakh. The delayed revision of the PSR led to misaligned cost estimates and hampered early-stage approvals, which had a cascading impact on the project timelines.

(ii) Delays in tendering/approvals

As can be seen from the above, half of the project period was consumed just for the approval processes starting from publishing the tender to according approval for civil designs.

(iii) Land acquisition delay for Water Treatment Plant

The department had requested (February 2023) the land for construction of WTP but obtained the clearance only during May 2024. The delay was due to the land ownership claims by the Forest department. The construction of WTP was yet to commence as of March 2025.

(iv) Land acquisition for Maser Balancing Tanks and Zonal Balancing Tanks

Out of the 26 Government land requests from April 2023 and July 2023, four land requests remained unresolved. Delays in land approval ranged from 254 to 704 days causing major bottlenecks in implementation of the project. Similarly, five forest land acquisition requests remained pending for ZBTs.

(v) Forest clearance delays for pipeline and infrastructure

Five hectares of forest land was earmarked for civil structures and pipeline installations. Though the contractor had applied for clearance on 02 June 2023**,** clearances remained pending as of January 2025**.** Lack of expeditious processing of forest clearances impacted the pipeline laying work significantly.

(vi) Delays in quality assurance plan approvals

Audit noticed that the time taken for Quality Assurance Plan (QAP) approvals by the department for essential pipeline materials ranged from 46 to 75 days. The delays in QAP approval have a cascading effect on the procurement and subsequent execution since the contractor can proceed with manufacturing clearance only after QAP approval.

(vii) Right of Way clearances for distribution network

Para 135 of Karnataka Public Works Departmental code specifies that all the works shall be commenced only after handing over the site free of encumbrances. Pipeline laying requires right of way clearances along National Highways (NH), State Highways (SH) and railway crossings. Audit noticed delays ranging from 16 months to 20 months in obtaining clearances. Further, clearance from NH was pending since May 2023 for two instances as of January 2025.

It is, therefore, evident from the above that the implementation of the project had obstacles at different stages and the failure of the department to ensure early clearances resulted in the project not being completed within the stipulated timelines and ultimately delaying the delivery of water supply to the intended beneficiaries. Further delays also carry the risk of cost overruns in execution of the project.

The State Government accepted (May 2025) the audit findings and furnished a detailed reply for each of the audit observations pointed out in respect of the above work wherein it stated that the reasons for delay in execution of the works were beyond the control of the department. The reply is not acceptable as it was

necessary for the department to ensure that land required for the project was available before taking up the project. It can also be seen from the reply that there were lapses/delays at various stages of the project such as preparation of DSR, obtaining approvals from various authorities both for structural designs and quality of pipe *etc*. Further, land for four ZBTs was yet to be acquired.

d) Non-availability of dependable source of water for MVS Scheme

The department took up the MVS work of providing safe drinking water at 40 lpcd to habitations of K Bellur and 33 other villages in Maddur taluk of Mandya district with Shimsa river as the source of water. Audit noticed that the DPR lacked a comprehensive assessment of water availability throughout the year. No seasonal discharge calculations or hydrogeological assessments were provided to verify if the source could sustain continuous supply. Additionally, the water discharge test results were missing, making it impossible to determine whether the current water flow was adequate to support the projected demand. The scheme relied on seepage from the Visvesvaraya Canal's distribution channels to sustain the Shimsha River's water levels, but this was unreliable and raises doubt on the feasibility of the project. Due to the non-availability of water in the backwaters of Iggaluru barrage, the water could not reach the project intake point, making the scheme non-operational. The department had incurred an expenditure of ₹6.15 crore on the scheme so far.

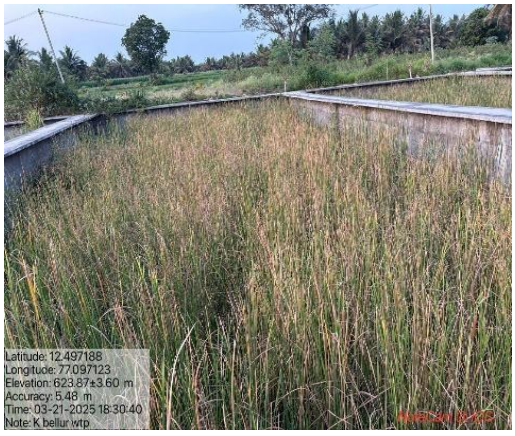
Scrutiny of the records further showed that the project was yet to be completed and the trial run was conducted only for 10 out of the 33 intended villages. JPV conducted in October 2020 revealed that the water supply scheme was not in operation due to non-availability of sufficient water from the source and the slow sand filters were filled with grass vegetations.

The department stated (September 2022) that the project had been taken up under JJM Phase-II and an additional 15 lpcd (totaling 55 lpcd) of water would be provided through the Cauvery river. However, no supporting documentation was provided to confirm the actual implementation of this augmentation. The department subsequently stated (December 2024) that only additional 15 lpcd will be covered under JJM while the existing 40 lpcd will be covered from the infrastructure created under this project. It also stated that sufficient water was available to operate the scheme. However, the project is still not completed and commissioned.

Audit noticed that the department failed to submit a revised DPR to align the project with JJM compliance requirements. The project did not include SCADA monitoring, which was a mandatory requirement under JJM.

The joint physical inspection conducted by Audit with the department staff in March 2025 showed that augmentation work was not taken up till date resulting in the project remaining incomplete even after a lapse of 15 years. Currently, all 33 villages continue to rely solely on borewell water, rendering the scheme a non-starter. The slow sand filters of the treatment plant were overgrown with vegetation, further indicating poor maintenance and complete non-utilization of existing infrastructure (**Exhibit 3.4**).

Exhibit 3.4 - Status as of 21 March 2025



Thus, the amount of ₹6.15 crore already spent on the project did not translate into actual benefits for the intended beneficiaries, as the infrastructure remains incomplete and non-functional. This reflects on the poor planning, resource mismanagement, and ineffective execution, leading to wastage of public funds.

The State Government stated (May 2025) that the project was likely to be operational by end of March 2025 and all the villages were sure of getting pure drinking water. The reply is not tenable since audit noticed during JPV conducted on 21 March 2025 that augmentation work was yet to be taken up.

Out of FGD respondents five per cent reported disruptions in MVS schemes affecting their access to water.

3.10 Non-compliance to prescribed design

The audit of JJM implementation in various villages of Gadag district revealed deviations from Bureau of Indian Standard No. 7634 (Part 2): 2012, which governs the excavation of trenches for laying HDPE pipes. As per the standard, the trench width for HDPE pipes with diameters ranging from 20 to 110 mm should be calculated as 300 mm, ensuring a 150 mm side clearance on either side of the pipe.

However, verification of estimations, running bills, and measurement books showed that the department did not adhere to these specified trench widths in the selected villages of Gadag district where the HDPE pipes used were of diameters ranging from 63 to 90 mm. The department had provided for 600 mm breadth instead of 300 mm as prescribed by the IS code. This led to inflated estimations for road cutting and road restoration, resulting in an excess expenditure of ₹76.05 lakh as shown in **Appendix 3.2**. The inflated breadth also impacted the rates of various related items, such as earthwork excavation and refilling of trenches, further contributing to the excess costs. The calculations presented are illustrative but highlight the potential for similar issues across other projects within the district.

The State Government stated (May 2025) that reply was awaited from the respective district.

3.11 Implementation of 100 days scheme

Government of India launched (October 2020) the JJM 100 days scheme to ensure the provision of piped water supply in Anganwadis, Schools, Ashramashalas, and other public institutions, including Gram Panchayat buildings, community centres, wellness centres, and health centres. Under this initiative, safe and adequate water for drinking, handwashing, kitchen use, and toilets was to be made available by 31 March 2021.

The department stipulated a maximum grant of ₹20,000 per school and ₹15,000 per Anganwadi for implementation of this initiative. Any additional financial requirement was to be met through converging funds from GP grants, 15th Finance Commission grants, MP/MLA LADS funds, and KMERC funds. The status of the implementation in the State under 100 days scheme as of November 2024 is shown in **Table 3.9**.

Table 3.9: Status of implementation of 100 days scheme

Institution	Total targeted	Yet to be provided		
		Drinking water tap connection	Running water in toilets	Hand washing facility
Anganwadis	53,700	479	9,753	7,592
Schools	53,568	7,611	12,208	11,171
Ashramashalas and other public institutions	12,726	690 (with tap connection)		

Source: IMIS formats F26 and F27

It can be seen that as of November 2024, as many as 9,753 anganwadis and 12,208 schools were yet to be provided with running water in toilets indicating that the department failed to meet its own targets even after three and half years of completion of the stipulated timelines. Field audit inspections (July-August 2024) showed that in four test-checked GPs, out of the funds (₹4.7 lakh) transferred (October 2020 – March 2021) to the respective GPs, ₹1.85 lakh was diverted for the GP's own activities and ₹2.36 lakh remained unutilised for the purpose for which it was released. The number of anganwadis and schools where works were not taken up in these four GPs are shown in **Table 3.10**.

Table 3.10: Details of anganwadi and school works not taken up

Name of the GP	No. of anganwadis		No. of schools	
	Existing	Not taken up	Existing	Not taken up
Anoor	11	07	11	00
Arabikothanur	14	06	17	07
Doddaganjur	08	04	10	04
Marjenahalli	10	08	10	06

Source: Field audit inspections

Audit observed that though the works were not taken up, they were reported as completed. This incorrect reporting raises doubt about data integrity and lack of accountability within the department besides highlighting the failure to monitor the progress of the works.

The State Government stated (May 2025) that the department was insisting the Panchayat Development Officers and concerned GPs to complete the work and following it up until completion of the work. The reply is not tenable as it does not address the core issue of diversion of funds and highlights the lack of effective monitoring in ensuring the utilisation of fund for the intended purposes.

CHAPTER-IV

FINANCIAL MANAGEMENT

CHAPTER-IV

FINANCIAL MANAGEMENT

This chapter deals with the availability and utilisation of funds for the implementation of the mission. The State had not drawn the complete central allocation of funds since 2020-21. The utilisation of funds for execution of works, support activities and water quality management was very poor. Interest earnings were misallocated resulting in excess remittance to the Centre. The State failed to mobilise the required community contribution.

4.1 Financial position of JJM

The financial assistance for JJM is through central and state grants in the ratio of 50:50. The details of grants received and expenditure incurred during the period 2019-20 to 2023-24 is shown in **Table 4.1**.

Table 4.1: Expenditure details for the period 2019-20 to 2023-24

(₹ in crore)

Financial Year	Opening Balance*	Central Grant	State Grant	Net Interest#	Central Expenditure	State Expenditure	Closing Balance*	Percentage Utilization
2019-20	53.81	546.06	333.01	14.26	491.01	298.64	157.49	83
2020-21	157.49	446.36	566.17	8.21	349.62	431.40	397.21	66
2021-22	397.21	2,504.40	3,355.44	4.74	1,510.86	1,520.55	3,230.38	48
2022-23	3,230.38	2,725.93	4,917.78	86.64	3,102.62	3,331.73	4,526.38	59
2023-24	4,526.38	4,966.62	6,309.73	0	5,563.37	6,728.68	3,510.68	78
Total		**11,189.37**	**15,482.13**	**113.85**	**11,017.48**	**12,311.00**		**87**

Source: Information furnished by the department
** The opening and closing balances include both central and state funds.*
 # Net interest = Interest earned – Interest remitted to GoI and GoK.

4.1.1 Short receipt of central assistance

In accordance with Para 7.8.1 of the Operational Guidelines, the Central Government will release funds to the States in two instalments (each instalment in two tranches). The release of second instalment was subject to assessment of financial progress based on submission of Provisional Utilisation Certificate (UC) for the current year, Report of the AG for the year preceding the previous year/Audited Statement of Accounts from CAG empanelled CA of the previous year and Final Central and State UC for the previous year.

a) Non-receipt of central assistance

Audit noticed that the State had not received ₹13,630.11 crore towards central assistance during the period 2020-21 to 2023-24 even though it was allocated as indicated in **Table 4.2**.

Table 4.2: Non-receipt of central assistance

(₹ in crore)

Year	Allocation	Release	Balance
2019-20	546.06	546.06	0.00
2020-21	1,189.40	446.36	743.04
2021-22	5,008.80	2,504.40	2,504.40
2022-23	5,451.85	2,725.93	2,725.92
2023-24	12,623.37	4,966.62	7,656.75
Total	**24,819.48**	**11,189.37**	**13,630.11**

Source: IMIS

The State received central assistance ranging from 38 to 50 *per cent* of the allocation during the period 2020-21 to 2023-24. The non-receipt of balance assistance is attributable to the fact that the State failed to utilise the available funds as shown in **Table 4.1** above and there were delays ranging from three to nine months in submission of the UCs and audited accounts by the State Government.

The non-utilisation of funds impacted the State's performance under JJM as it failed to achieve the targets for FHTCs. The underperformance rendered the State ineligible for performance based additional funds and a missed opportunity to access supplementary financial resources. As per the data furnished in response to the Lok Sabha unstarred question, the State was ranked at 20th position and had drawn 45 *per cent* of the allocated funds. Three States had utilised funds more than the allocation indicating that they were given additional funds.

The State Government accepted (May 2025) that the department could not claim central assistance against the allocation and also the additional funds as the targeted works could not be completed within the stipulated time. The reply attributed the slow progress of JJM works to delays in tendering and approvals of competent authority.

b) Non-receipt of share of tender premium

The GoI vide its directions (June 2022) stipulated that for works awarded prior to 21 June 2022, the State would bear the entire tender premium and for schemes awarded after 21 June 2022, the tender premium would be shared between the Centre and the State in the ratio 50:50. In this regard, GoI through IMIS had provisioned entry of corrected cost (estimated cost of scheme approved in SLSSC) and discovered cost (cost discovered through open, transparent and competitive bidding process as per prevailing rules). Accordingly, as per the proceedings of the 7th Apex Committee meeting proceedings, the State was to bear the premium of ₹562.81 crore for works awarded prior to 21 June 2022 and the premium of ₹555.33 crore for works awarded after 21 June 2022 was to be shared equally between the Centre and the State.

Audit noticed that the Apex Committee had directed (March 2023) the department to bring to the notice of the Finance department the premium burden

of ₹562.81 crore. However, it was seen that the claim was yet to be received. The State was yet to receive the Central share of the premium for works awarded after 21 June 2022 as there were delays in communicating the same to GoI.

The State Government stated (May 2025) that as per the decision of the Apex committee the tender premium to be borne by the State is brought to the notice of the Finance department. As regards the central share of the premium, it stated that the central share received by the State was inclusive of the tender premium. Audit noticed that the release orders did not specifically indicate the release of difference of tender premium.

4.1.2 Utilisation of fund for support activities

As per the funding pattern of JJM up to 5 *per cent* of the allocation to the State shall be utilised for support activities. As against the total fund of ₹770.04 crore available for support activities during the period 2019-20 to 2023-24, the department had utilised ₹473.19 crore. The utilisation which was 100 *per cent* during 2020-21 and 2021-22 declined to 88 *per cent* in 2022-23 and further to 41 *per cent* in 2023-24. The underutilisation of funds can be attributed to reduction in engagement of ISAs and ISRAs as discussed in Para 2.2.

The State Government stated (May 2025) that the department would ensure that the funds released for JJM are utilised under all components and will pursue with the Government of India for release of balance funds.

4.1.3 Under utilisation of funds of WQMIS activities

Para 10.2 of the guidelines stipulate the funding for Water Quality Monitoring and Surveillance (WQMS) activities. Up to two *per cent* of the allocation to the State can be utilised for carrying out WQMS activities. The fund was to be utilised for setting up new district/sub divisional laboratories, upgrading the existing water quality testing laboratories which inter alia include procurement of equipment, instruments, chemicals/reagents *etc*., procurement of FTKs, expenses incurred for National Accreditation Board for Testing and Calibration Laboratories (NABL) accreditation process *etc*.

The utilisation of funds for WQMS activities declined from 50 *per cent* in 2019-20 to two *per cent* in 2023-24 as shown in **Table 4.3**.

Table 4.3: Allocation and expenditure for WQMS activities

(₹ in crore)

Financial Year	WQM&S Funds		Percentage Utilization
	Allocation	Expenditure	
2019-20	17.58	8.72	50
2020-21	35.11	11.52	33
2021-22	117.32	17.57	15
2022-23	207.39	20.48	10
2023-24	225.52	4.55	02

Source: Data provided by department

It can be seen that despite allocation of funds, a large portion remained unspent, the impact thereon being shortfall in laboratories for water testing, non-availability of testing for arsenic, bacteriological parameters *etc*., absence of mobile testing units as discussed earlier and non-accreditation of all the existing laboratories with NABL, shortage of equipment in laboratories, non-

establishment of desalination plants *etc*., as discussed below. The State, thus, failed to address the infrastructural gaps existing under WQMS.

Recommendation 5: The State should direct the department to ensure that the funds released for JJM are fully utilised under all components and pursue with the GoI to get the unreleased funds.

The Government accepted the recommendation.

4.1.4 Accounting and repayment of interest

Para 7.9 of the operational guidelines stipulate that SWSM shall open a Single Nodal Account (SNA) in any scheduled commercial bank. The releases by the GoI to the State Government shall be made to their State treasuries from where States shall transfer the fund to the SNA of SWSM within 15 days along with the corresponding matching State share. The money accruing as interest shall be credited to the same account and reflected in the UC of the relevant year. The expenditure out of the interest amount shall be made on items of work as permitted in the guidelines.

4.1.4.1 Excess repayment of interest to the centre

The Ministry of Jal Shakti, GoI issued (April 2023) instructions that the interest earned out of the funds received in SNA shall be apportioned between the Central and the State as per the approved funding pattern of JJM and shall be deposited in the respective consolidated funds.

(a) Audit noticed that the department had earned an interest of ₹136.48 crore for the year 2023-24 and had remitted ₹115.76 crore equally between the centre and the state during the year 2023-24 though the contribution of the state was significantly higher than the central share in 2023-24 as shown in Table 4.1. This resulted in excess remittance of interest of ₹41.75 crore to GoI as shown in **Table 4.4**.

Table 4.4: Excess interest remitted to the Centre

(₹ in crore)

	Opening Balance	Closing Balance	Average Balance	Proportion	Interest as per proportion	Actual Interest Remitted	Difference
Centre	858.39	261.62	560.005	0.139	16.13	57.88	41.75
State	3667.95	3248.81	3458.38	0.861	99.63	57.88	-41.75

Source: Bank pass sheets and UCs

The State Government stated (May 2025) that the department would ascertain the actual amount of excess interest repaid to the Central Government for the year 2023-24, and the necessary initiations would be taken to adjust/ to get the said amount from GoI.

(b) In further deviation from the guidelines, SWSM opened another account in the same bank for remittance of interest earned in SNA to Government.

The State Government stated that the department had opened a separate bank account (Holding account) for transaction of interest earned and remittances thereof in accordance with guidelines as issued by GoI. The reply is not acceptable as the holding account was prescribed for the purpose of holding taxes/duties/levies/municipal charges *etc*., and not for interest remittances.

4.1.5 Inadmissible expenses

In accordance with Para 7.10 of the guidelines, the State Government/SWSM shall finance the expenses which are not eligible to be funded under JJM such as cost escalation, and other programme expenses which are inadmissible under JJM, from its own resources. Audit noticed that ₹4,403.23 crore was reflected as inadmissible in IMIS portal and hence has not been considered as expenditure under JJM. Consequently, the inadmissible cost needs to be borne by the State Government. The inadmissible expenses[25] included costs on account of land (₹276.21 crore), costs apportioned to infrastructure provisioned for water supply to urban households in the schemes covering both rural and urban households (₹2397.75 crore), costs towards O&M (₹232.70 crore), costs incurred for construction/renovation/ repairs of building, office building, extension of building, residential building, vehicle (₹25.51 crore), *etc*. The expenses incurred from out of JJM funds for buildings and vehicle resulted in diversion of funds.

The State Government stated (May 2025) that any inadmissible cost is to be borne out of the State fund and hence there is no diversion of funds. The reply is not acceptable as there was no provision under the scheme to incur expenditure towards creation of office infrastructure.

4.1.6 Community contribution

Para 6.1.2 of the guidelines stipulates the mandatory contribution for in-village infrastructure at five *per cent* of the capital cost in cash/kind/labour in hilly and forested areas and villages having more than 50 *per cent* SC/ST population and 10 *per cent* of the capital cost in other villages. The GPs were entrusted with the responsibility of collecting the contributions. As per Para 7.11 of the guidelines, the contribution made in kind/labour shall be computed and the cash equivalent of the same along with the cash contribution shall be entered and maintained in a separate register by the GP.

Further, GoI clarified (July 2022) that in case no community contribution is collected for any reason, the liabilities for payment to agencies/vendors, to the extent these would have been settled through the funds available through community contribution, shall have to be met by State Government from their own resources.

The community contribution collected was ₹22.57 crore against the estimated contribution of ₹1,594.90 crore for in-village infrastructure. Community contribution was collected in only four of the 28 test checked villages. Even the contribution collected in these four villages was much less than that prescribed in the guidelines. Audit noticed that contributions including cash, kind and labour were not adequately recorded and maintained in separate registers resulting in improper documentation.

The non-collection of community contribution thus, creates additional financial burden on the State Government finances. This also reflects on the failure of the ISAs to help the GP/VWSC in mobilisation of community contribution. It was observed that many works though physically completed were reflected as financially incomplete due to non-receipt of the community contribution.

[25] Works valuing more than ₹5 crore has been considered.

Out of the beneficiaries surveyed 32 per cent were aware of the community contribution and 25 per cent of the beneficiaries expressed interest in giving community contributions.

The State Government stated (May 2025) that in response of the department's request for release of grant for payment of community contribution to the contractors, the Government of Karnataka has agreed in principle to release the grant subject to collection of community contribution by the GPs from out of the water charges collected and deduction from out of the finance commission grants. The Government reply confirms the audit observation that community contribution was not collected upfront.

4.1.7 Alternative financing mobilisation initiatives

Para 7.12 of the guidelines encourage the States to mobilise contributions from elected representatives, various organisations, institutions under Corporate Social Responsibility (CSR) arm and philanthropic organizations to reduce dependency on state and central funds.

Audit noticed that the department/SWSM had neither made attempts to engage institutions with CSR initiatives, elected representatives, philanthropic organizations nor had explored the possibility of adopting innovative financing mechanisms.

The State Government stated (May 2025) that the department was getting some grants from the elected representatives for drinking water works in the division offices. While no evidence was furnished to Audit, the reply does not address whether the works taken up through these grants were integrated into JJM or were carried out independently.

4.1.8 Non-allocation towards Incentive fund

Para 7.13 of the guidelines provide for setting up incentive fund from out of the fund available with the State under JJM (Centre and State matching share) in the prevailing funding pattern. The GPs/VWSCs are eligible to receive the incentive when the scheme has been successfully managed for a year ensuring that every rural household covered under the scheme receives water in adequate quantity of prescribed quality on regular basis and water tariff for O&M has been regularly collected.

The incentive shall be 10 *per cent* of the in-village infrastructure cost distributed in a phased manner over a period of five years. The incentive fund will serve as a revolving fund for meeting any urgent repair costs of in-village infrastructure which might disrupt water supply and the same will be replenished by community.

Audit observed that the department/SWSM had not provided any allocation towards the incentive fund. The non-compliance to the guidelines resulted in the better performing GPs/VWSCs not being incentivised, which could impact the sustainability of the water supply systems in the long run.

The State Government stated (May 2025) that the reply would be submitted later.

4.1.9 Absence of Flexi fund

Para 7.14 provides for setting aside five *per cent* of the annual allocation under JJM towards Flexi fund to take care of unforeseen challenges / issues arising out of natural calamities and internal disturbances. The fund may be used by the State at the end of the financial year, if remained unutilized. Further, States may also plan innovation under JJM as part of Annual Action Plan.

The State had not established the Flexi fund. The absence of flexi fund from out of the annual allocation (including the central and state share in a financial year) could impact the state's financial resources at times of adverse effects caused by natural calamities besides curtailing the opportunity to the State to explore and implement innovative solutions aimed at enhancing water efficiency and optimizing resource utilization.

The State Government stated (May 2025) that it has been releasing a separate grant for the works which are affected by the natural calamities, as and when circumstances warranted and the grant would be utilised for the specific works for which it was released.

The reliance on separate state grants for emergencies does not substitute the mandatory requirement of creating a dedicated JJM Flexi Fund. The reply reflects the gap in financial preparedness and scheme innovation planning.

CHAPTER-V

WATER QUALITY MONITORING AND SURVEILLANCE

CHAPTER-V

WATER QUALITY MONITORING AND SURVEILLANCE

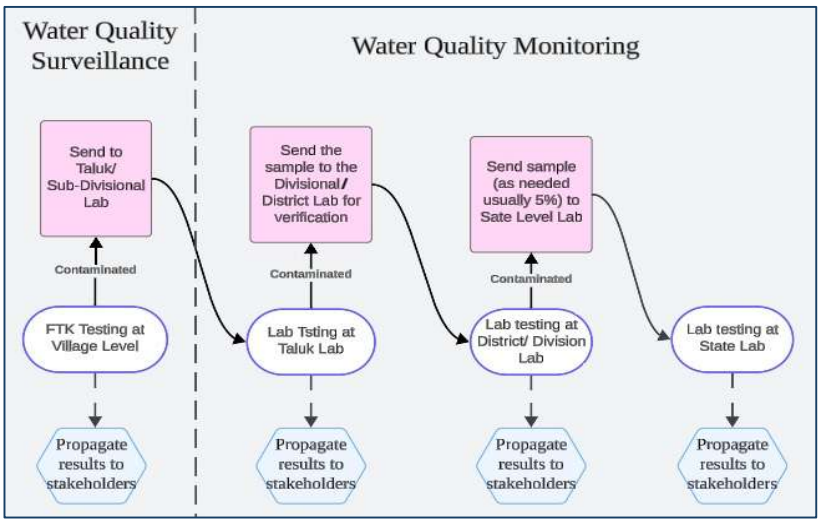
This chapter looks into the mission's objective of providing safe drinking water to the targeted households. The State's infrastructure in terms of the number of laboratories and to undertake the required number of tests fell short both in terms of availability and capacity at all levels. The focus on training women to conduct water sample testing using Field test kits was inadequate. All the water sources were not subjected to water testing and retesting of contaminated samples was largely absent. Turnround time for laboratory testing was high.

In accordance with Para 4.5 of the guidelines, water quality monitoring involves testing of water samples collected from water sources by the department in water quality testing laboratories. Surveillance is undertaken by community using Field Test Kits (FTKs), sanitary inspection *etc*. Under JJM, water samples will also be collected from FHTCs.

5.1 Water Quality testing

The JJM operational guidelines mandates the quality of the water supplied to conform to Bureau of Indian Standards (BIS): 10500. Para 10.1 of the guidelines specifies the broad guidelines for undertaking testing of sources/samples at different levels. The prescribed Water Quality Surveillance Framework is depicted in **Chart 5.1**.

Chart 5.1: Water Quality Surveillance Framework



Source: Para 10.1 of JJM Guidelines

5.1.1 Inadequate testing at GP level

Para 5.4 of the guidelines stipulate that the GP/VWSC should ensure water quality testing using FTKs, periodic testing at laboratories and disseminate the same among the community. The GP/VWSC may engage a dedicated person to ensure water quality test using FTKs or can engage/train rural youth/students/women to carry out these activities. Chapter 10 stipulates the GP/VWSC to identify, train and appoint five women from local community to conduct water quality tests using FTKs/bacteriological vials and report the results. Para 10.1 mandates that GP/VWSC should ensure to test 100 *per cent* drinking water sources including private sources under its jurisdiction using FTKs.

Analysis of the State level data showed that

- FTK tests were not undertaken in all the villages during the period 2021-22 to 2023-24. The extent of villages tested during 2021-22, 2022-23 and 2023-24 was 37, 93 and 83 *per cent* respectively as shown in **Table 5.1**.

Table 5.1: Details of villages and samples tested during the period from 2021-22 to 2023-24.

Year	Total villages	Villages tested	Percentage tested	No. of samples tested	No. of samples found contaminated	Percentage of samples contaminated	No. of samples retested
2021-22	28,335	10,430	37	1,42,838	4,540	3.0	0
2022-23	26,106	24,388	93	6,01,437	7,909	1.3	0
2023-24	26,106	21,770	83	2,15,742	3,078	1.4	559

Source: Information furnished by the department and audit analysis.

- 533 villages in the State did not have women trained in using FTKs. In 10 of the 28 sampled villages, the required number women were not trained in the use of FTKs.
- Analysis of the number of samples tested showed a significant increase during 2022-23 (6.01 lakh) when compared to 2021-22 (1.43 lakh) but decreased during 2023-24 (2.16 lakh) as shown in the above table.
- It can also be seen from the table that only 18 *per cent* of contaminated samples were retested during 2023-24, though the JJM guidelines (introductory Para (i) under Chapter 10) prescribed retesting of all the contaminated samples. Retesting was not carried out during 2021-22 and 2022-23. In the seven selected districts, 910 samples were found contaminated during 2023-24 and 549 (60 *per cent*) of them were retested.
- Audit noticed during field visits that the testing was inadequate in 12 out of 28 sampled villages.
- Only 13 villages had recorded the water test results in the VAPs. Non-inclusion of water results in VAPs carried the risk of not addressing the contaminations if any.

The State Government stated (May 2025) that in Chikkaballapura district, action is being taken to implement strict testing schedule and ensure adherence

and analysis of the samples tested showed a significant increase in the financial year. In Mandya district, FTK tests could not be conducted during 2021-22 and 2022-23 because of pandemic situation and during 2023-24, 22,000 FTK tests were conducted. If any contamination was found alternative remedial measures were suggested and if there were no alternatives, RO plants were suggested to be installed at GP level. No reply was furnished for the other test-checked districts. Further, the reply does not address the audit observations regarding inadequate testing, retesting of samples, recording of water test results *etc*.

5.1.2 Inadequate testing at taluk/district levels

In accordance with Para 10.1 of the Operational Guidelines, the Sub-divisional/block level laboratory will test 100 *per cent* water sources under its jurisdiction - once for chemical parameters and twice for bacteriological parameters (pre and post monsoon) in a year, covering all sources of a block for at least 13[26] basic water quality parameters. Each district lab will test 250 water sources/samples per month (*i.e.,* 3,000 in a year as per the target of roster available on Department/ National Mission IMIS) covering all sources randomly spread geographically including the positively tested samples referred to by the subdivision/block laboratory/mobile laboratory for 13 basic water quality parameters.

There are 31 district level and 48 taluk level laboratories in the State. The department also utilises the service of four private laboratories for testing biological parameters and one laboratory operated by the KSPCB. Of the 13 basic parameters, none of the laboratories were equipped to test for Arsenic. As a result, no water samples were tested for arsenic content. Only 17 district level and 4 taluk level laboratories were equipped to conduct tests for microbiological parameters (total coliform and E.Coli).

There are a total of 2,94,756 Piped Water Supply (PWS) sources and 1,32,177 PWS having FHTC sources across the State. As per the Water Quality Monitoring Information System (WQMIS) data, 71 *per cent* (93,221) of the FHTC sources remained untested during the year 2023-24. The data for the years 2021-22 and 2022-23 were not updated in WQMIS. Further as per the WQMIS data, 636 habitations were identified as water quality affected (413 for fluoride, 142 – nitrate, 63 – iron, 17 – salinity and one – heavy metals) on or after 1 April 2019.

Audit noticed that the laboratories in the sampled districts had not conducted testing of all sources within the district. Only 42 *per cent* of the water sources in sampled districts were tested for chemical parameters and the testing was inconsistent across districts as shown in **Table 5.2**.

[26] pH, Turbidity, Total Dissolved Solids (TDS), Total Hardness, Total Alkalinity, Chloride, Sulphate, Iron, Nitrate, Fluoride, Arsenic, Total Coliform Bacteria and E.Coli.

Table 5.2: Statement showing the status of water sources tested in sampled districts

District	Number of labs in the district		No. of Sources in the district*	Sources tested for chemical parameters	*Per cent* sources tested
	District	Taluk			
Bidar	01	02	6,498	4,025	62
Chikkaballapura	01	02	11,449	3,870	34
Gadag	01	00	5,538	1,852	33
Kolar	01	02	13,447	2,277	17
Mandya	01	02	11,379	5,429	48
Uttara Kannada	01	03	6,284	4,993	79
Yadgir	01	01	7,537	3,627	48
Total	**07**	**12**	**62,132**	**26,073**	**42**

Source: Information furnished by the department.
** FHTC sources*

All the sampled districts had one district laboratory for testing samples. Analysis of the data on samples tested showed that except for Yadgir district lab, none of the other district labs had conducted the mandatory 250 tests per month.

Further of the 19 labs (7+12) in the sampled districts, only seven labs (5+2) had the facilities to test for microbiological parameters. The facility to test microbiological parameters were provided to the district labs of Chikkaballapura (01 August 2023) and Kolar (28 August 2023). Analysis of the data showed that only seven and 11 *per cent* of the sources were subjected to pre and post monsoon testing respectively.

The State Government stated (May 2025) that it had achieved the annual targets for testing of samples for chemical parameters and the annual target for bacteriological tests could not be achieved as only 10 microbiology laboratories were functioning and the remaining were under establishment. The reply is not satisfactory as it does not address the major issue of the coverage of all water sources for both chemical and microbiological parameters testing.

5.1.3 Inadequate testing of samples at State level

The State laboratory will test at least five *per cent* of the total drinking water samples across all district level laboratories with random and uniform geographical spread including positively tested samples referred by district/ sub-division / block/ mobile lab. The department had not established a State level laboratory for water testing. However, it signed (April 2019) a Memorandum of Understanding (MoU) with the KSPCB designating the laboratory under the control of KSPCB as the State Referral laboratory. The MoU provided for testing 100 water samples per year. This arrangement was grossly inadequate considering the mandate of the State laboratory to undertake water testing for 4,650 [27] samples *per* year.

Audit noticed that the department failed to use the services of KSPCB laboratory because of which the number of samples tested by the State Referral

[27] Total samples = 31 districts labs * 3000 samples= 93,000 samples.
five *per cent* of 93,000 samples = 4,650 samples.

laboratory was zero during the period 2019-20 to 2023-24. Though the four private laboratories were classified as State level laboratories, the department utilised their services only for microbiological testing. Thus, the department at the State level failed to complement the district and taluk level efforts reflecting on the least priority accorded for water quality testing.

The State Government stated (May 2025) action is being taken to submit the samples to KSPCB for cross verification of the contaminated samples. It further stated that the renewal of MoU with KSPCB is under process for testing 500 samples. However, the fact remains the samples now proposed for testing constitute only 11 *per cent* of the number of tests mandated as *per* Para 10.1 (iii) of the JJM Operational Guidelines.

5.1.4 Absence of mobile water testing laboratories

The Operation Guidelines provide the State Government to put into operation mobile water quality testing laboratories to the extent possible. Audit noticed that the mobile water testing units which are essential for testing in remote and disaster-prone areas, were absent in all the sampled districts.

The State Government stated (May 2025) that empanelment of mobile testing laboratories is under progress thus validating the audit observation.

5.1.5 Prolonged turnaround time for testing

Turnaround time for laboratory testing is the period from when the sample(s) is received at the laboratory to the time when reports are finalized, verified, and released. The WQMS framework recommended that the turnaround time for testing the chemical parameters should not exceed more than 24 hours, whereas for testing the bacteriological parameters, the turnaround time should not exceed beyond 48 hours[28].

Audit noticed that all the 79 laboratories in the State did not adhere to the turnaround time. The turnaround time ranged between nine to 75 days. In respect of the sampled laboratories, it was nine to 59 days, the turnaround time being more in Uttara Kannada district. Audit also noticed that the average turnaround time in respect of the four private empanelled laboratories was much longer, the time ranging from 71 days to 106 days.

The State Government reiterated (May 2025) the turnaround time required for testing for both chemical and bacteriological parameters but did not furnish the reasons for inordinate delay in testing the samples.

5.2 Status of accreditation and availability of equipment

In the State, 10 out of the 79 laboratories were not NABL accredited. Audit noticed that none of the seven sampled district laboratories had all the critical equipment such as colour comparator, TDS meter and Ion Meter needed to carry out the tests for chemical parameters. The status of availability of equipment in the test-checked district laboratories in given in **Appendix 5.1**.

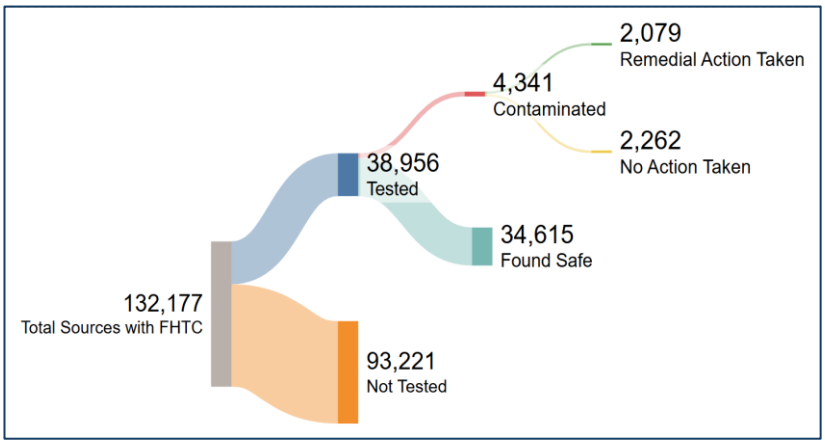
[28] https://jaljeevanmission.gov.in/sites/default/files/guideline/WQMS-Framework.pdf - Para 6.8.

The State Government stated (May 2025) that all the sampled district laboratories had the facilities for testing. However, specific reply to the audit observation on the absence of equipment required for testing was not furnished.

5.3 Inadequate remedial action

Para 10 of the guidelines stipulates the remedial action to be taken once the samples are found contaminated during testing. **Chart 5.2** shows the status of remedial action taken in respect of the samples found contaminated.

Chart 5.2: Status of remedial action taken for contaminated samples



Source: IMIS

Testing was carried out for only 29 *per cent* of the sources, of which 11 *per cent* was found to be contaminated. However, remedial action was not taken for 52 *per cent* of the samples found contaminated. This indicates that water quality monitoring and management were not addressed adequately by the department.

The State Government stated (May 2025) that for the financial year 2024-25, remedial measures were taken for 16,670 samples out of the 18,888 samples found contaminated and for the balance 952 samples remedial measures were yet to be taken. The reply thus validates the audit observation on inadequate remedial action.

Recommendation 6: The State Government should prioritise water quality testing at all levels to ensure that water of mandated quality is supplied to all citizens, the turnaround time for laboratory testing be strictly adhered to and remedial action taken for contaminated samples to prevent outbreak of water borne diseases.

5.4 Non-establishment of desalination plants in coastal regions

Para 8.3.4 of the guidelines provide for establishment of desalination plants in selected coastal regions to address the challenges posed by saline groundwater and ensure the availability of potable water. Audit noticed that no functional desalination plants were established in the test-checked coastal district of Uttara Kannada. The absence of desalination plant could have impacted on the water

quality as all the eight samples collected from the district were not within the permissible limits as shown in Chart 5.3.

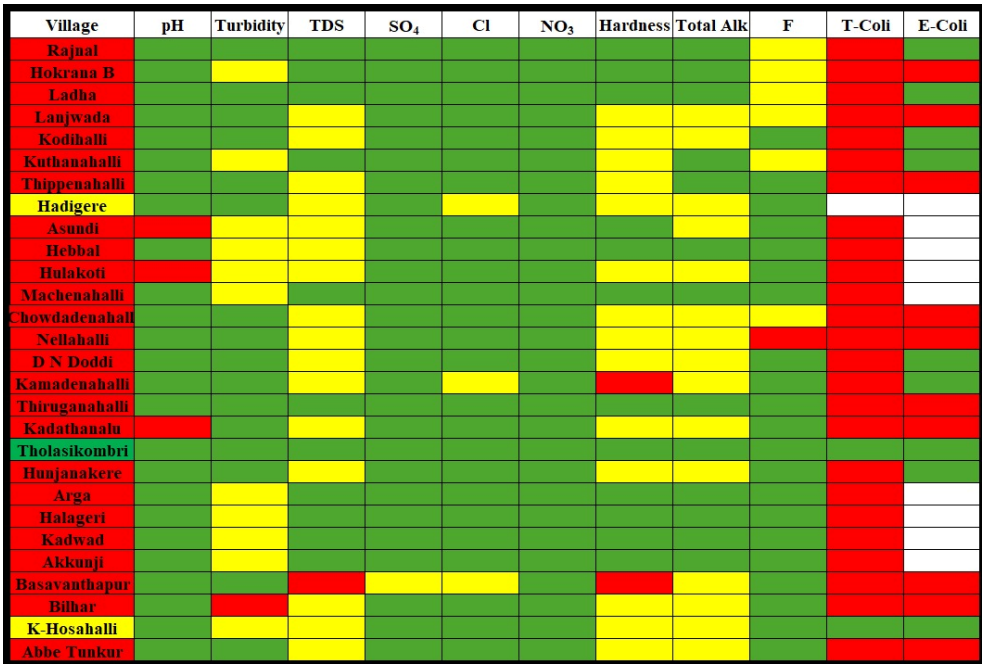
The State Government stated (May 2025) that the audit observation was noted and action would be taken to establish desalination plants in the coastal regions.

5.5 Independent Audit approach for water quality testing

Considering the deficiencies in WQMS as discussed in the preceding paragraphs, Audit undertook the task of collecting water samples from various sources and getting the same tested from the laboratories of KSPCB by involving the district and taluk level staff of the department. The guidelines classify the quality of water into three broad categories based on water quality test results as acceptable[29], permissible[30], and not permissible[31]. The list of basic water quality parameters as prescribed in the Operational Guidelines (Annexure-XI) is given as **Appendix 5.2**.

Audit collected samples from various sources such as FHTCs, water source, open well, Overhead tank *etc*., in the 28 test-checked villages. As per the test results declared by KPSCB, the samples of only one village were acceptable, in two villages it was permissible and the remaining 25 villages it was not permissible as shown in **Chart 5.3**.

Chart 5.3: Status of samples



Source: KSPCB test results

Green – acceptable; yellow – permissible; red – not permissible and white – not tested.

It can be seen from the above Chart that except for two samples in Tholasikambri and K Hosahalli, all the other samples tested for presence of total

[29] values more than those mentioned under 'Acceptable' render the water not suitable.

[30] if the value exceeds the limits indicated under 'permissible limit in the absence of alternate source', the sources will have to be rejected.

[31] (IS 10500 2012 Drinking Water — Specification _ Second Revision, Gr 6) https://www.bis.gov.in/other/DrinWatIS10500.pdf.

coliform. The samples from villages in Gadag and Uttara Kannada districts could not be tested for E coli as the nearest KSPCB laboratory did not have the testing facilities for E coli.

The State Government stated (May 2025) that remedial action is being taken in respect of those samples which are classified as not permissible by providing water through Water Purification Plants, periodic testing of samples, directing the GPs to ensure chlorination of OHTS and WTPs *etc*. It further stated that remedial measures and quality assurance would be ensured by the department in consultation with all the authorities concerned.

5.5.1 Contamination during transmission

Audit further noticed that in five villages, though the samples selected from source/water purification plant tested negative for both total coliform and E. coli, all the samples from FHTCs tested positive for total coliform and two samples tested positive for E coli indicating contamination of the water during distribution. The details are indicated in **Table 5.3**.

Table 5.3: Status of microbial contamination during transmission

District	GP	Source/WPP		FHTC	
		Coliform	E coli	Coliform	E coli
Bidar	Rajnal	X	X	✓	X
Chikkaballapura	Thippenahalli	X	X	✓	✓
Kolar	Chowdadenahalli	✓/ X	X/ X	✓	✓
Kolar	Kamadenahalli	X	X	✓	X
Mandya	Hunjanakere	X	X	✓	X

Source: Test results of KPSCB

Contamination during transmission highlights deficiencies in water treatment, storage, poor maintenance of water pipelines *etc*. The supply of contaminated water, thus, defeated the objective of JJM to supply safe drinking water.

The State Government stated (May 2025) that corrective action was taken through chlorination in Chikkaballapura district. It accepted the contamination during transmission in Mandya district and stated that the department would initiate appropriate action to ensure supply of safe drinking water. In respect of Bidar district, it stated that the testing of source and delivery points was done earlier by the department and found that there was no contamination during transmission. The reply was, however, not substantiated with the necessary test results. No reply was furnished in respect of Kolar district.

5.6 Non-utilisation of water supplied under JJM for drinking purpose

The work of providing FHTCs to 240 households in Basavanthapura village by augmentation of MVS Scheme in Shahpur Taluk of Yadgir district estimated to cost ₹108 lakh was entrusted (May 2021) to a contractor for an amount of ₹83.62 lakh. The work on completion was handed over to the GP on 19 July 2023. The department declared the village as 'Har Ghar Jal' compliant on the same day. The source of water for this village was an open-well constructed at a cost of ₹22.35 lakh. Audit noticed during joint inspection that the open well was not protected and the water in the open well was dirty. There was drain

within 20 metres of the open well and significant drainage water from the entire village was flowing near the catchment area of the open well.

Audit was also in receipt of a certificate signed (05 August 2024) by the PDO and other members of Aikur GP, stating that the drain was constructed during 2023-24 and was not existing when the open well was constructed. They further stated that the water from the open well was not being used for drinking purposes but was being used only for other purposes. The villagers were using the water from the RO plant located near Maramma devi temple for drinking purposes. Even during the Focus Group Discussion, the participants present stated that the water supplied under JJM was not fit for drinking purposes and was being used for washing clothes, bathing and other purposes.

Audit analysed the water samples obtained (08 August 2024) from the source, one FHTC and Water Purification Plant in the village and noticed that the samples were categorized under non-permissible limits as shown in Chart 5.3. Evidently, the very objective of providing drinking water of good quality was defeated in this instance.

The State Government stated (May 2025) that there was no existing drain at the time of construction of open well and the drain was constructed by another department near to the catchment area of the open well after six months of handing over the work It further stated that the PDO was directed to divert the drain far away from the open well catchment area and presently the quality of water is potable in the village. Audit noticed from the test results enclosed (9 August 2024) that the samples were not tested for bacteriological parameters such as Total coliform and Ecoli and the samples tested by Audit during the same period had tested positive for both these parameters.

CHAPTER-VI

POST OPERATIONAL MANAGEMENT, MONITORING AND EVALUATION

CHAPTER-VI

POST OPERATIONAL MANAGEMENT, MONITORING AND EVALUATION

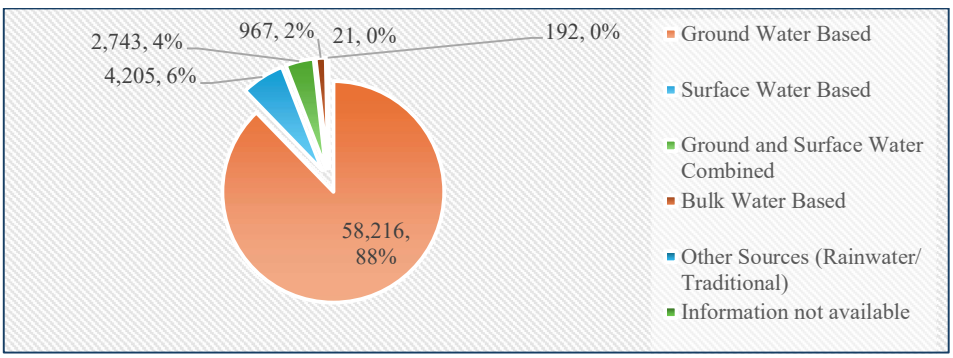
This chapter focuses on the sustainability of water infrastructure and resource management through compliance to the post implementation measures, monitoring and evaluation of the mission. The State at present relies heavily on ground water sources for water supply. Most villages lacked key sustainability measures like greywater reuse and recharge structures, and the O&M framework was absent for a major part of the mission period and was hindered with poor community engagement. Grievance redressal mechanism was deficient and monitoring systems both technological and physical were either absent or lacked rigour.

Sustainability is central to JJM as spelt out in the guidelines and the mission aims to ensure long term functionality of water supply systems and reliable delivery of safe drinking water to rural households. The mission focuses on resilient infrastructure, water conservation and community involvement for effective resource management. The JJM operational guidelines thrust the need for monitoring at all levels for successful implementation of the scheme and sustainability of the projects.

6.1 Types of water sources in the State

The sources for water supply under JJM are either surface based or groundwater. A breakdown of the schemes by source type showed that majority of the schemes relied on groundwater indicating that a significant number of rural households depend on borewells for their drinking water needs. The number of schemes by source in the State is shown in **Chart 6.1**.

Chart 6.1: Implementation of schemes in the State - source wise



Source: Information furnished by the department

It can be seen that 21 schemes were dependent on other sources and 192 schemes (24[32] schemes in the test-checked districts) did not have an identified source of water supply which carry the risk of implementation of FHTCs. As per the Central Ground Water Board report (2024), 45 taluks in the State were over exploited, 15 were in a critical state and 33 were semi-critical. The over reliance on groundwater and absence of a reliable source makes the piped water supply systems unsustainable in the long run and risks the supply of providing safe and mandated 55 litres per capita per day (lpcd) to the rural households.

The State Government stated (May 2025) that roughly 40,000 in-village schemes were approved in SLSSC compared to 160 bulk water supply schemes but when it comes to coverage of villages under surface water, it is about 68 *per cent* showing a marginalised shift from ground water to surface water. The fact that 32 *per cent* of the villages are still to be covered under MVS indicates the dependence on ground water and the reply does not address the core issue of long-term sustainability of water sources and the alternative measures to prevent overdependence on ground water.

6.2 Water audit and water security

Para 8.7 of the guidelines provide for taking up regular water audits of identified systems to improve the efficiency of water supply systems through identification of water losses (both real and apparent[33]) and preparation of water budget of the village by assessing the total available water from all sources (both ground and surface) to ensure that the investments made under JJM lasts on long term basis. The guidelines also provide for preparation of district annual water budget by DWSM and State annual water budget by SWSM to ensure long term drinking water security.

Audit noticed that the department had not conducted any water audits and water budgets were not prepared in the selected districts both at village and district levels. Even the SWSM failed to prepare the State annual water budget. The implementation of JJM in the State thus, carried the risk of improper allocation of available resources and their sustainability, wastage of water remaining undetected *etc*.

The State Government stated (May 2025) that all the schemes planned under JJM have a sustainable source and desired quantity of water is assured to all the schemes. The reply is not specific to the audit observations on non-preparation of water budgets and not conducting water audits.

6.3 Inadequate sustainable measures

Given the fact that majority of the schemes are over reliant on groundwater for water supply, it was important for the SWSM/department to provide for measures such as recharge of ground water through conservation and reuse of water resources, rainwater harvesting, surface water source augmentation

[32] 14 – Uttara Kannada, 8 – Chikkaballapura and 2 – Mandya.

[33] Real loss includes water lost through leakages in the distribution systems, service connections and storage tanks (including overflow). Apparent loss includes meter and recorded inaccuracies and unauthorised water uses such as theft and unauthorised connections.

through restoration/rejuvenation of water bodies, artificial recharge, grey water management *etc*., for long term sustainability. Audit noticed that the plan documents did not incorporate these sustainability measures adequately as discussed below:

6.3.1 Lack of water recharge structures

Recharge structures were absent in 23 of the 28 test-checked villages. The village water supply schemes did not prioritise inclusion of recharge structures in their plans. The initiatives for rejuvenating existing water bodies, which includes desilting and habitat restoration efforts were planned only in four villages. This could be attributed to the absence of convergence with other schemes.

The State Government stated (May 2025) that the reply would be submitted later.

6.3.2 Grey water management

Para 6.3 of the guidelines identified grey water management as a key component under JJM and must be included in the VAPs. This includes collecting, treating, and reusing grey water for agriculture or other non-potable purposes. Grey water management was to be taken up through convergence with SBM(G) to ensure the sustainability and to reduce the health hazards due to improper discharge of grey water.

Audit noticed that 23 of the test-checked villages had not incorporated grey water management in their action plans. While one village (Halageri) had a designated site for grey water management, four villages planned for waste stabilisation ponds. The absence of waste/grey water management could result in contamination of local water bodies and soil and compromise the sustainability of water resources and eventually water security as greywater reuse for non-potable purposes would reduce freshwater demand and enhance conservation.

The State Government stated (May 2025) that all the villages have prepared DPR and approved by the competent authority for taking up grey water management in the action plan of SBM (G). At present grey water management works have been completed in all respects in 6,045 villages and the works are in different stages of progress in the remaining villages and would be completed soon.

The reply cannot be accepted in the absence of any supporting evidence as Audit noticed during field visits that convergence activities were not carried out in any of the test-checked villages.

Recommendation 7: The State Government should ensure that recharge structures and grey water management activities are taken up in all villages to ensure continuous water supply of required quantity and quality.

The Government accepted the recommendation.

6.4 Absence of detailed Operation and Maintenance policy

The SWOT[34] analysis for JJM identifies poor attention on Operation and Maintenance (O&M) of completed schemes as one of the major weaknesses. The JJM guidelines provide for preparation of comprehensive O&M plans at all levels of implementation. The Apex Committee is responsible for developing O&M strategy and monthly tariff/user charges for ensuring financial sustainability of the system/scheme and to firm up the policy on O&M accounts. The GPs are responsible for fixing and collection of O&M costs/water tariff. The State was, therefore, required to bring in an O&M policy covering the above aspects and clearly demarcating the roles and responsibilities at all levels of implementation.

Audit noticed that there was no comprehensive O&M policy in the State during the audit period 2019-20 to 2023-24. The State Cabinet approved the O&M policy for rural drinking water supply schemes on 17 September 2024 and formalised (09 October 2024) through a Government order.

Only three out of the 28 test-checked villages had executed Annual Maintenance contract for repairs and O&M.

The State Government stated (May 2025) that the Karnataka O&M policy was fully aligned with the components mentioned by Audit regarding the policy aspects. It further stated that a joint circular was issued on 30 November 2024 by the Additional Chief Secretaries of RDPR and RDWSD directing all district Chief Executive Officers (CEOs) to facilitate the policy's adoption at the GP level through appropriate resolutions in the Gram Sabha meetings. Another circular was issued (February 2025) along with the policy adoption format for GPs to all CEOs and EEs to ensure streamlined implementation at GP level.

It is evident from the reply that the O&M policy which was brought out recently was yet to be adopted by all the GPs.

6.4.1 Lack of community ownership

The SWOT analysis also identifies lack of community ownership/participatory approach as another of the weakness. Despite the thrust to involve community participation in planning, implementation, management, O&M of in-village water supply systems including drinking water sources, Audit noticed lack of ownership which resulted in removal of taps, broken meters, water wastage *etc*., as shown in **Exhibit 6.1**.

Exhibit 6.1: Broken meters and water wastage

	
Broken meter	*Tap removed – water wastage*

[34] Strength, Weakness, Opportunity and Threat.

Audit also noticed that the department failed to create necessary awareness about the importance of community contributions/collection of user charges. Without proper sensitization, rural communities view these contributions and charges as unnecessary burdens rather than essential components of a self-sustaining water supply system. The status of community contribution has already been discussed in Para 4.1.5 of this report. Only 11 of the sampled villages had collected user charges. A few illustrations of non-collection of user charges in the test checked villages even though the rates were fixed are given in **Table 6.1**.

Table 6.1: Details of non-collection of user charges

Name of the village	GP	Remarks
Tholasikambri	Haradanahalli	Though water supply scheme was commissioned and handed over to the GP on 14.03.2024, no user charges were collected. Audit noticed that the GP incurred ₹8.69 lakh was incurred in 2023-24 on maintenance from out of its own revenue.
Rajnal	Aliamber	The water supply scheme was handed over to GP on 12.03.2024. However, no user charges were collected.

Source: Information furnished by GPs

Audit noticed that water meters were installed under both the projects to measure individual household consumption. However, instead of collecting charges based on the actual usage, a flat fee of ₹50/month (Tholasikambri) and ₹500/year (Rajnal) was prescribed, but in practice, no user charges were actually collected. This methodology of fixing flat rates rendered the water meters redundant and the expenditure incurred for installation wasteful besides not serving the objective of proportional cost recovery.

The State Government did not furnish any reply.

6.4.2 Non-maintenance of prescribed records

Audit noticed that only a few test-checked villages maintained the basic records such as the stock register (nine villages), register of repairs (one village) and water quality register (seven villages). Failure to maintain the basic records reflects on the gaps in O&M practices across the villages.

The State Government did not furnish any reply.

6.5 Post implementation service delivery

The post implementation service delivery comprises of ensuring that the water is supplied at the prescribed quantity and quality and for the prescribed duration, grievance redressal mechanism, O&M, periodic monitoring *etc*.

6.5.1 Quantity and quality of water supplied

The primary objective of JJM comprised of providing continuous supply of minimum 55 lpcd of potable water to every rural household. Chapter 8 of the guidelines suggests technological solutions such as use of Internet of Things

(IoT)[35] to address the challenges in supply of drinking water and Para 11.1.1 of the guidelines reiterate that sensor-based water supply measurement for periodicity of supply, quality and quantity is to be employed. Audit noticed that none of the test-checked villages had installed flow sensors, pressure sensors, water quality sensors and there was no mechanism to measure the quantity of water supplied. Non-installation of sensors not only affects the early detection and remedial action but also results in the absence of centralised and continuous monitoring. The IoT tools, the purpose and the locations to be installed are shown in **Appendix 6.1**. Moreover, in the absence of the sustainable water sources (as discussed in Para 6.1) and the quality of water supplied not meeting the required standards in many instances (Chapter V), the objective of providing continuous water supply of prescribed quality and quantity for the rural population seems a distant achievement.

Only three per cent of the beneficiaries surveyed stated that there were getting 24 hours water supply. While 68 per cent of the FGD respondents reported improved access and availability to water after implementation of JJM, five per cent had reported short supply during summer months.

The State Government stated (May 2025) that reply would be furnished later.

6.5.2 Grievance Redressal Mechanism

Complaints, when dealing with service delivery, are inevitable. Resolution of these complaints and concerns through grievance redressal process is therefore very crucial. A robust public grievance redressal is an important function of any transparent and efficient service oriented organisation. This provides a bridge for citizens to engage with the organisation, voice their concerns, and provide feedback on its functioning and various aspects of service delivery. However, resource constraints can make it difficult to resolve grievances timely. Hence, it is very much necessary for an organisation to define the stages involved in addressing grievances, who will manage them and setting clear timelines for each step of the grievance redressal process.

The department developed (2020) its own portal '*Parihara*' to address public grievance redressal. The portal offered multiple channels for grievance redressal, including a dedicated helpline (9480985555), email, social media, and website. The portal was decommissioned in March 2024 with the integration of all grievance helplines under the Rural Development and Panchayat Raj Department.

The department furnished to Audit the complete data relating to grievance redressal for the audit period only during January 2025. A total of 7,566 complaints pertaining to JJM were registered in the portal as of March 2024. Audit noticed that the grievance redressal mechanism was well defined. However, analysis of the data revealed the following:

- **High resolution time**

The complaints registered mainly related to volumetric water supply, O&M, water quality *etc*. The department had resolved 7,219 complaints – 58 *per cent* within 30 days, 15 *per cent* between 31 to 60 days, 8 *per cent* between 61 to

[35] Sensor based monitoring system will ascertain the supply of water in villages/ habitations with respect to periodicity, quantity and quality.

90 days and 19 *per cent* after 90 days. The average resolution time taken was 56 days. The category wise resolution time is shown in **Table 6.2**.

Table 6.2: Category-wise resolution time

Time period in days	Total	Volumetric Water Supply	Improper / Poor Infrastructure Works	O&M	Pipeline & Leakage	Water Quality	Others
Within 15	3,054	2,125	122	327	151	328	1
16 to 30	1,136	759	59	108	71	139	0
31 to 60	1,103	721	55	126	63	138	0
61 to 90	568	377	39	65	31	56	0
91 to 180	784	530	59	79	36	80	0
180 to 365	450	296	25	54	29	46	0
>1 year	124	92	0	12	8	12	0
Total	**7,219**	**4,900**	**359**	**771**	**389**	**799**	**1**

Source: Analysis of Parihara data

Further analysis of the resolution delays of more than a year showed that the highest delays were reported in Raichur (22 *per cent*), Vijayapura (19 *per cent*) and Chikkodi (15 *per cent*).

The major complaint categories were water not available (23 *per cent*), inadequate supply (seven *per cent*), poor water quality (six *per cent*) *etc*. The resolutions included repairs/maintenance (36 *per cent*), alternate water sources (22 *per cent*), tanker supply (11 *per cent*) *etc*. Audit noticed that in 23 *per cent* of the cases, the complaints were treated as resolved with resolution days ranging from 367 to 847 days and without indicating the nature of action taken to close the same. This included resolution of complaints related to no tap water connection (847 days) and no drinking water facility in school (834 days) in Chikkodi.

➢ **Closure of complaints**

A detailed analysis of the complaints relating to test-checked districts showed a recurring pattern where complaints were closed on a particular day or during a particular period irrespective of when the complaints were registered as shown in **Charts 6.2 (a)** and **(b)**. Further analysis for the other districts also showed a similar pattern - **Charts 6.2 (c) and (d).**

Chart 6.2: Trend analysis for closure of complaints

Chart 6.2(a)

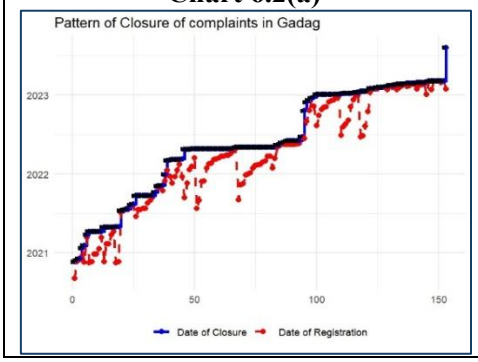


Chart 6.2(b)

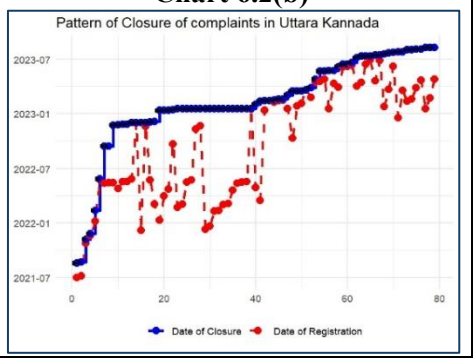


Chart 6.2(c)

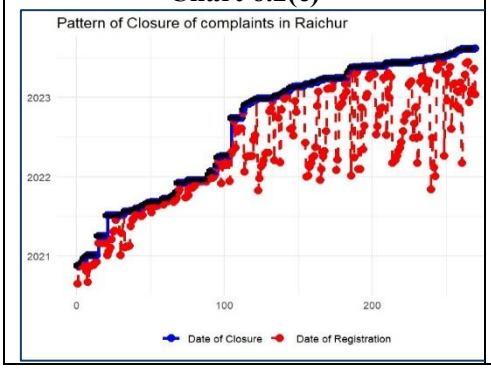
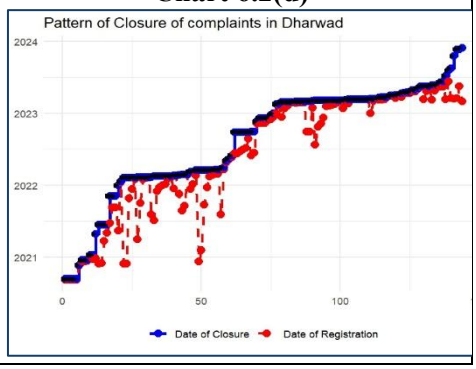


Chart 6.2(d)



Source: Analysis of Parihara data

- **Escalation matrix for complaint redressal**

The mission guidelines provide for creation of a grievance redressal mechanism. Accordingly, the escalation matrix for complaint redressal has been developed by the State which defines clear timelines for grievance resolution ensuring accountability and efficiency across all administrative levels. **Table 6.3** shows the different escalation levels, the authority and the status of complaints.

Table 6.3: Accountability matrix for complaint redressal

Escalation Level	Officer/ Authority	Number of days	Number received	Number solved	Number pending
Level 1	AE/ JE	0-2	704	704	0
Level 2	AEE	2-7	1,077	1,077	0
Level 3	EE- RWS	7-15	1,474	1,273	201
Level 4	SE- RWS	15-30	1,160	1,136	24
Level 5	CEO and CE RWS	30-60	1,132	1,103	29
Level 6	Commissioner RDWSD	> 60	2,019	1,926	93
Total			**7,566**	**7,219**	**347**

Source: Analysis of Parihara portal data

As can be seen, 347 complaints (including reopening of closed cases) remained unresolved which includes 201 that were escalated to EE on priority for resolution. Complaints registered in February 2022 concerning SVS and MVS in Tumakuru district were reopened and continue to remain pending, with delays surpassing two years as of March 2024. Further 232 (66 *per cent*) of the unresolved complaints related to Volumetric Water supply and 65 relate to infrastructure issues. Reopening of closed complaints indicate ineffective grievance redressal – issues were either not resolved properly or were recurring due to poor service quality.

- **Evaluation of remedial measures in *Parihara***

The effectiveness of *Parihara* complaint redressal mechanism, as reflected in the data from October 2023 to March 2024, is concerning. With an average score of 2.78 on a scale of 1-5, the outcome of the complaint resolution process appears to be suboptimal. As many as 53 *per cent* of the beneficiaries gave the lowest rating of 1, signalling greater dissatisfaction. This suggests that the measures are either insufficient or ineffective,

requiring immediate review and enhancement to ensure better resolutions and restore beneficiary trust.

- **Awareness of the grievance redressal mechanism**

The results of the survey conducted by Audit (July to September 2024) showed that 96 *per cent* of the beneficiaries were unaware of the existence of *Parihara* portal for grievance redressal mechanism indicating that the citizen outreach was inadequate. Audit noticed that the grievance data was not published in IMIS.

- **Training and capacity building**

Audit noticed that the grassroots-level workforce, including VWSC members, local operators, and field staff were not adequately trained on the grievance redressal mechanism. Field staff lacked awareness of escalation procedures, complaint tracking systems, and follow-up protocols, resulting in unresolved or prematurely closed cases.

- **Complaints relating to test-checked districts**

The category-wise number of complaints received in the test-checked districts as of March 2024 is shown in **Table 6.4**.

Table 6.4: Category-wise number of complaints in test-checked districts

Total	Volumetric Water Supply	Improper/Poor Infrastructure Works	O&M	Pipeline & Leakage	Water Quality	Others
1,505	1,012	95	146	74	177	01

Source: Analysis of Parihara data

Audit noticed from the JPV (July to September 2024) in the selected villages that O&M issues were a major cause of concern. There were 49 cases of broken pipes/repair of pipes, 22 cases of maintenance and repairs of valves, 10 cases of damages due to power fluctuations, three cases of pump failures *etc*.

The State Government stated (May 2025) that *Parihara* portal was temporarily deactivated in March 2024 due to its integration with the *Panchamitra*-an integrated helpline. It further stated that all pending grievances were later resolved, nodal officers were appointed in each district/division to monitor and validate the effectiveness and timeliness of complaint resolutions and escalation mechanism reinforced. Further awareness campaigns and training programmes were initiated and RDWSD is setting up an Integrated IMIS system where grievance data would be reflected.

The reply highlights the measures now being put in place but does not address the audit observations on high resolution time, closure of complaints during a particular period *etc*. Further, the data furnished along with the reply on complaint resolution in *Panchamitra* during the months of January to March 2025, shows complaints yet to be resolved which reiterates the audit observations of high-resolution time taken for addressing the grievances.

6.6 Monitoring and Evaluation

6.6.1 Integrated Management Information System

In accordance with Para 11.1.1, a dedicated Integrated Management Information System (IMIS) is designed to capture every FHTC. The IMIS shall include

- ✓ Provision for uploading VAPs, DAPs and SAPs
- ✓ Monitoring of constitution of VWSCs, bank account opening, community contribution *etc*.
- ✓ Monitoring ISAs performance in allotted villages
- ✓ Monitoring physical and financial progress of all schemes
- ✓ Monitoring of water quality laboratories and surveillance by communities using FTKs
- ✓ Monitoring of change management activities and
- ✓ Monitoring of support activities *etc*.

Further a digital district inventory of drinking water assets would be created for better management of schemes and monitoring them. Every MVS network system shall be monitored through Supervisory Control and Data Acquisition (SCADA) systems at the State level to ensure its proper functioning.

Audit noticed that the State had uploaded information on to the IMIS. Verification of the IMIS data with the physical records/data furnished by the department showed mismatch as detailed below raising concerns on the correctness of the reporting by the department on the online portal.

1. As per IMIS (B15 format) of November 2024, out of 39,693 works (excluding Anganwadi and schools) only 4,506 works are shown as physically completed. However, as per the data submitted by the department, more than 21,526 in-village infra works are completed.
2. Format PM 2 (program monitoring in terms of FHTC) data reflects the data of July 2023 which indicates the delay in updating data.
3. VAPs, DAPs and State Action Plans are not available on IMIS.
4. Many Anganwadi/School works were marked improperly as infrastructure works and vice versa in IMIS (Format B15).

The State Government stated (May 2025) that the department is developing a state-owned Management Information system where in the details from existing applications will be integrated through APIs and the details of VAPs, DAPs, SAPs, VWSCs, bank account, community contribution and other required details on O&M are intended to be monitored. It further stated that efforts were being made by the department for ground truthing of the data in IMIS with physical as per site through periodical meetings and inspections and the erroneous data is being corrected in data dump exercise by GoI.

Recommendation 8: The State Government should ensure that the data uploaded in the online portal is subject to different levels of verification to prevent incorrect reporting.

6.6.2 Implementation of Supervisory Control and Data Acquisition system

SCADA systems provide real time monitoring and control of water supply infrastructure, are instrumental in managing water flow rates, pressure, tank levels, and quality indicators. However, their implementation within JJM in the State is limited. Even within MVS, deployment of SCADA was uneven. Of the seven districts audited, only Gadag had operational SCADA systems and this was not adequately utilised as discussed below:

- Audit of SCADA systems for water supply schemes under Design, Build, Operate and Transfer (DBOT) Packages I and II in Gadag district showed consistent shortfalls in daily water supply compared to projected demand across villages. Analysis of data for 13 villages under selected GPs for the year 2021-23 highlighted gaps in supply *vis-à-vis* the demand in eight villages as shown in **Table 6.5**.

Table 6.5: Status of water supply in selected villages of Gadag district

Name of the village	Demand in kilolitres	2021 daily average supply	2022 daily average supply	2023 daily average supply (till June)
Asundi	304.70	134.20	192.47	283.90
Malasamudra	321.75	105.95	121.07	127.01
Hulakoti	685.85	832.26	551.24	448.82
Chawadal	94.325	112.68	134.33	105.17
Hebbal	175.73	122.62	121.10	97.62
Kallaganur	42.63	15.54	14.72	60.51
Kanakawad	88.00	19.00	4.77	52.31
Tolali	76.45	0.00	0.00	51.35
Bavanur	83.33	38.68	64.89	77.97
Machenahalli	210.38	178.70	158.03	162.94
Navebavanur	43.45	31.34	75.37	76.89
Tegginabavanur	55.83	99.06	100.09	108.69

Source: Information furnished by the department

- Unauthorised tapping of water supply in locations like Gadag Zoo and Teachers colony resulted in unaccounted water supply.
- Pipeline damage in Kakkur resulted in unaccounted water loss.
- 16 villages of Batch I and II experienced zero water supply days.

Audit analysis of SCADA data revealed that OHT in one village (Kalasapura) was receiving water from both DBOT and SVS sources, leading to unregulated mixing of treated bulk water with borewell groundwater. This mixing raises concerns about water quality, pressure inconsistencies, and the effectiveness of treatment processes, as groundwater and treated bulk water have different treatment needs and quality parameters. There was no systematic tracking of how much of the supplied water was from DBOT and how much from SVS, making quality control and accountability difficult.

The State Government stated (May 2025) that reply would be furnished later.

6.6.3 Geo-tagging of assets

Para 11.1.3 of the guidelines stipulate the States to geo-tag all the assets of water supply schemes. Every infrastructure asset either new or otherwise will be geo-tagged including washing and bathing places, greywater collection and treatment plants, source sustainability structures, *etc*. The department was responsible for geo-tagging of assets. The status of geo-tagging in the State is given in **Table 6.6**.

Table 6.6: Status of geo-tagging of water assets in the State (November 2024)

Asset Type	Total Assets	Geo-Tagged	Untagged assets
Water Sources	78,518	70,837	7,681 (10)
PWS Schemes	66,318	52,665	13,653 (21)
Information Boards	66,318	56,684	9,634 (15)
Storage Structures	1,19,285	12,878	1,06,407 (89)

Source: IMIS data (Figures in parentheses indicate percentage)

It can be seen that large number of storage structures were yet to be geo-tagged in the State. The absence of geo-tagging renders it difficult to monitor the assets created under the schemes.

The State Government did not furnish any reply but furnished only the updated status of geo-tagging as of April 2025 wherein 85 *per cent* of the storage structures and 12 *per cent* of the information bords were yet to be geo-tagged.

6.6.4 Absence of Social Audit

The operational guidelines stipulate that the GP/VWSC undertake social audit of JJM. Social Audit is a process in which, details of resource, both financial and nonfinancial, used by public agencies for development initiatives are shared with the people, often through a public platform. Social Audits allow people to enforce accountability and transparency, providing the ultimate users an opportunity to scrutinize development initiatives. Audit noticed that no social audit of the implementation of the JJM was taken up till now.

The State Government stated (May 2025) that Directorate of Social Audit under RDPR has been requested (February 2025) to conduct social audit and further coordination meeting with Director of Social Audit was held during April 2025.

6.6.5 Engagement of State Quality Monitors

The RDWS&D department invited (January 2022 and June 2022) applications from eligible candidates[36] for empanelment as State Quality Monitors (SQMs) for monitoring the in-village works of JJM across the State. The SQMs were required to visit the assigned districts and submit a report in the prescribed format after conducting necessary survey and tests as per the guidelines.

The department engaged 40 SQMs for monitoring the JJM works in the State. The SQMs had inspected 6,290 works during the period March 2022 to March 2024 and had rated 2,541 works as Satisfactory Requiring Improvement and

[36] Retired persons not below the level of Executive Engineer or equivalent from Government/Public Sector Undertakings; Retired or serving faculty members of Government Engineering colleges/IITs/NITs/Government Research Institutes who have worked /consulted in the field of drinking water supply schemes.

207 works as Unsatisfactory. Thus, 44 *per cent* of the inspected works required corrective actions.

Audit noticed that the extent of inspections carried out by SQMs were inadequate and there was no framework to evaluate the SQMs performance. Analysis of the SQM documentation showed inconsistency in conducting inspections and documentation. The reports did not contain the comprehensive assessments carried out, details of verification of technical specifications, quality of materials and construction *etc*.

The State Government stated (May 2025) that reply would be furnished later.

6.6.6 Third party quality inspection

The Rural Development and Panchayat Raj department engaged Ms Bureau Veritas Ltd., for quality inspection. The agency carried out field verification in 1,500 villages across the State, with at least five villages randomly selected from each taluk focussing on the quality of works, physical and dimensional verification, non-destructive testing and quality of water supplied. The findings in respect of FHTCs revealed non-compliance with approved technical specifications, improper pipeline installation depths, use of unapproved materials for taps and pipes *etc*. Observations relating to water quality included bacterial contamination such as total coliform and E.Coli. Other issues noticed were inadequate water pressure and flow rates, deficiencies in road restoration, incomplete or poorly executed repairs, contamination risks from FHTCs placed near open drains, missing components, leakages in pipelines *etc*. Action taken on the findings by the department was not made available to Audit.

The State Government stated (May 2025) that the compliance reports received from the divisions detailing the corrective actions are being compiled and reviewed to ensure that all issues raised in the report have been adequately addressed.

6.6.7 Third-party inspections

The work orders issued for execution of works provide for third party inspections. Audit observed from the analysis of all third-party inspection reports in the selected villages that third party inspections were routine in nature and lacked detailed assessments. These audits involved certifying contractor bills and works without providing a critical evaluation of the quality and quantity of completed work. There was little evidence of verification against benchmarks, particularly regarding the durability of materials, accuracy in execution, and compliance with approved project plans. The third-party inspections, thus, undermined the objective of quality assurance.

The State Government reiterated (May 2025) the works to be carried out by the third-party agencies but did not reply to the audit observations on performance of these agencies.

6.6.8 Independent evaluation

The department entrusted (July 2022) the evaluation of the implementation of JJM to Karnataka Evaluation Authority (KEA). KEA was yet to submit its report although more than two years have passed since the entrustment.

The State Government stated (May 2025) that reply would be furnished later.

6.7 Findings of the Joint physical inspections

Audit undertook joint physical inspections in the test-checked villages. The findings noticed are outlined in **Table 6.7**.

Table 6.7: Joint inspection findings in test-checked villages

Issue identified	Number of Villages
Overhead Tank (OHT) Issues	**21**
- Structural damages, cracks, leakage	12
- No water level scale, no flow meter, no sensors	16
- OHT not fenced or protected	09
- OHTs not considered in DPR despite being used	03
Distribution Network Issues	**14**
- Leakage in distribution pipelines	07
- Pipelines laid along drains/sewage lines	04
- Pipeline layout not matching with DPR	03
Household Connection Issues	**18**
- Dry connections (no water supply)	07
- Unauthorized bypassing of meters	05
- Missing or broken taps	06
- Meters installed but not functional	04
Water Source Protection & Treatment Issues	**10**
- No water treatment facility	08
- Water source unprotected	05
- Green-coloured or visibly contaminated water	02
Monitoring & Measurement Issues	**15**
- No bulk flow meters installed	02
- No flow meters for monitoring usage	09
- No functional sensors in key infrastructure	12

Source: Joint inspection findings

The findings mainly relate to deficiencies in infrastructure, water distribution, household connections and monitoring across the villages. Structural damages to OHTs, pipeline leakages, dry and non-functional tap connections and absence of essential monitoring mechanisms undermine the scheme's efficiency and sustainability. Inadequate water treatment facilities and unprotected sources highlight the inadequacy of water quality and long-term resource management.

The State Government stated (May 2025) that reply would be furnished later.

CHAPTER-VII

OUTPUTS AND OUTCOMES

CHAPTER-VII

OUTPUTS AND OUTCOMES

This chapter attempts to assess the JJM implementation with reference to the envisaged outcomes. The State's performance under SDG-6 fluctuated reflecting inconsistent progress. JJM implementation had a positive impact on dropout rates of upper primary school girls and reduced burden on women. While the impact on rural employment was found minimal, it remained inconclusive on health-related outcomes.

7.1 Sustainable Development Goal – 6

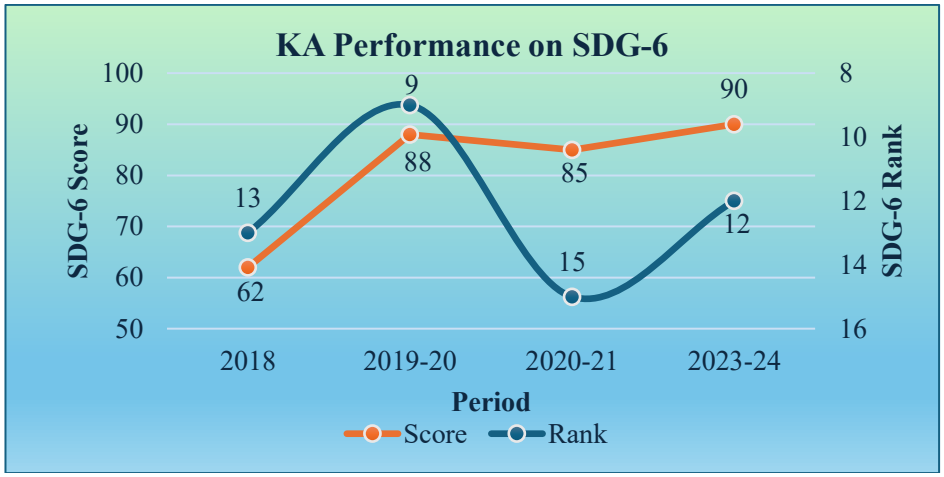
The 2030 agenda of the United Nations is comprised of 17 Sustainable Development Goals (SDGs) and associated 169 targets. The SDGs are a comprehensive list of global goals integrating social, economic and environmental dimensions of development.

India is committed to implementing SDGs. At the national level, NITI Aayog provides leadership, and the Ministry of Statistics and Programme Implementation developed a National Indicator Framework for measuring goal attainment.

SDG 6 on "Clean Water and Sanitation for all" aims to ensure availability and sustainable management of water and sanitation for all. It has eight targets (six outcome targets and two means to achieving targets), the progress of which is monitored through 11 indicators.

The State's performance under this SDG witnessed fluctuations as reflected in the scores and ranks from 2018 to 2023-24. The State's score improved steadily from 62 in 2018 to 90 in 2023-24, indicating progress in implementing measures under SDG-6. The overall score of India during 2023-24 was 89. However, its rank dropped from 9 in 2019-20 to 15 in 2020-21 and increased to 12 in 2023-24, highlighting relatively better performance by other States during that period as shown in **Chart 7.1**.

Chart 7.1: Performance of the State under SDG – 6.



Source: NITI Aayog

The improvement in 2019-20 suggests progressive implementation of water and sanitation initiatives during this period. The further rise in 2023-24 reflects sustained efforts to expand access to clean water, improve sanitation infrastructure, and address water quality issues. Despite these improvements, rank fluctuations indicate challenges. Karnataka's rank improved in 2019-20, showcasing a strong alignment with SDG-6 targets. However, the decline in 2020-21 suggests a slower pace of progress compared to other states, potentially due to delays in infrastructure maintenance or policy implementation gaps. The recovery in 2023-24 indicates renewed focus and effective strategies to address the gaps.

The State Government stated (May 2025) that with the implementation of JJM and O&M policy now in place, it expects a sustainable supply of safe and clean drinking water.

7.2 Outcomes of the mission across sectors

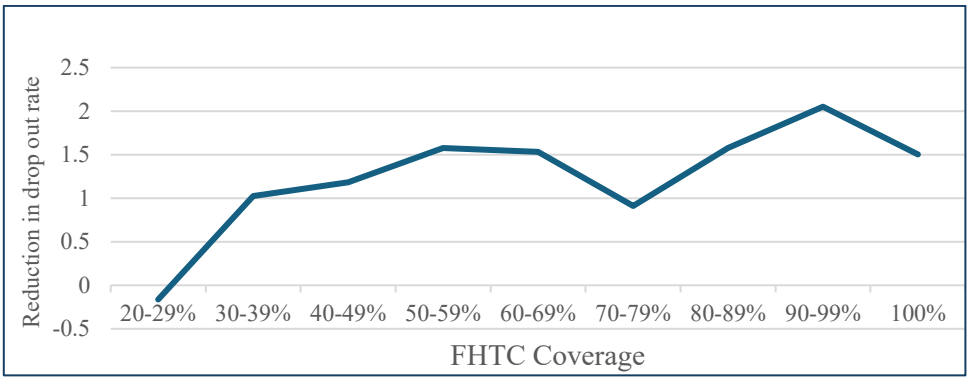
In accordance with Chapter 12 of the guidelines, JJM also strives to achieve four key measurable outcomes such as improved health conditions of rural communities; reduction in drudgery faced by women and girls and empowerment of women; reduced school dropout rates of upper primary level girls; and increase in employment opportunities for rural communities. Measuring these specific outcomes poses a challenge, as these outcomes are also influenced by various government programmes and interventions. Initiatives such as health schemes, educational support programs, women empowerment policies and employment generation schemes contribute to overlapping impacts, making it difficult to isolate JJM's influence.

Audit, however, attempted to gather data from multiple sources (*viz*., Education Department, Health Department *etc.*) analyse trends and collate relevant information for an in-depth analysis. The findings and insights from this analysis are detailed below:

7.2.1 Reduced dropout of upper primary school girls

Audit collected the data on dropout rate of upper primary school girls from the Education Department. The average reduction in dropout rates was plotted against FHTC coverage in the respective blocks as shown in **Chart 7.2**.

Chart 7.2: Average reduction in dropout rate.



Source: information furnished by Department of Education

The analysis indicated a reduction in the average dropout rate of upper primary school girls. While this positive outcome cannot be attributed solely to a single factor, the implementation of JJM-through improved household water access could be considered one of the contributing factors, as it reduced the time and burden on girls for water collection, thereby supporting their continued education.

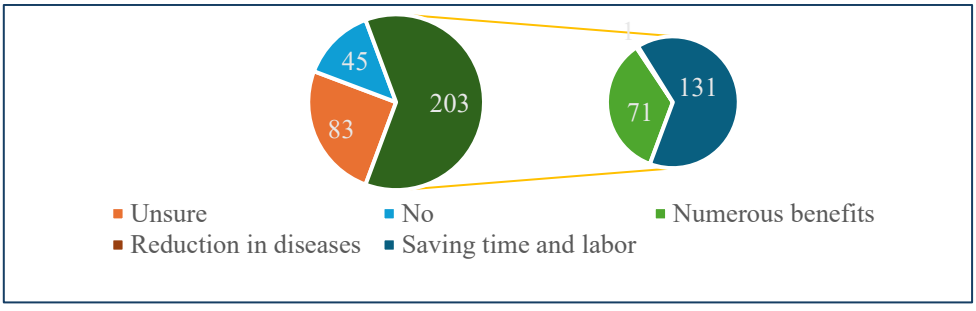
7.2.2 Reduced drudgery of women

Implementation of JJM has contributed to alleviating the hardships faced by women and girls in many households through providing accessible water supply as per the findings of the beneficiary survey conducted by Audit. Analysis of the composition of VWSC in 26 villages showed that

- 55 *per cent* of the total members were women.
- In 11 out of the 26 villages, the Chairperson of VWSC was a woman.

Further, of the 544 respondents surveyed, 203 reported reductions in hardships, a clear indicator of mission's success in improving water accessibility. While 45 stated that they did not experience significant changes, 83 of them were unsure of any improvements. In 209 cases, the respondents had stated it was not applicable, either due to pre-existing access to water supply or other factors such as incomplete works *etc*. The findings are indicated in **Chart 7.3**.

Chart 7.3: Reduction in hardships of women



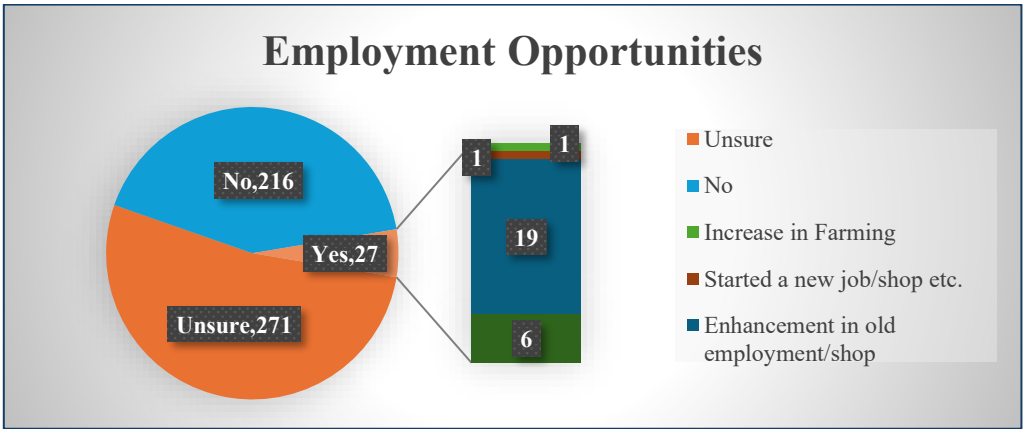
Source: Beneficiary survey findings

Of the 203 who reported improvements, 131 highlighted savings in time and labour, which allowed them to redirect their time towards domestic activities, self-care, or economic opportunities, contributing to an overall improvement in quality of life. Seventy-one of them stated that it has increased safety by reducing the exposure to risks like crime or wild animals during long water-fetching journeys.

7.2.3 Increase employment opportunities for rural communities

The findings of the survey showed the impact of JJM on employment opportunities was limited. Of the 544 surveyed, only 28 reported increased employment opportunities, 216 stated no significant changes and 273 were unsure of any impact (**Chart 7.4**). The balance 27 beneficiaries stated that they had not received water under JJM and hence were unable to provide any feedback on employment-related outcomes.

Chart 7.4: Impact on employment opportunities



Source: Beneficiary survey findings

The employment opportunities reported were diverse - 19 beneficiaries stated that they were able to enhance their existing work, six reported an increase in animal husbandry activities, one stated an increase in farming income and one started a new shop.

7.2.4 Reduced waterborne diseases and healthy rural communities

The health-related outcomes of JJM remain inconclusive due to relatively short period of implementation of the mission and uncertainty among the beneficiaries surveyed. Only 4 of the 544 surveyed reported reduction in water borne diseases. While 69 explicitly stated no reduction, 443 of them were unsure, indicating a possible lack of awareness. Audit noticed that only three (Hokrana B, Lanjewada and Rajnal) out of the 28 sampled villages had documented waterborne disease prevalent in their VAPs.

Audit sought for the data on water-borne diseases from the Health department and compared the data of 2019 with that of 2024 *i.e.* pre JJM and post JJM. Analysis of the data showed the following:

- 10 districts reported reduction and 18 districts reported increase in acute diarrheal diseases.
- In three districts (Bengaluru Rural, Kodagu and Kolar), no acute diarrheal diseases were reported prior to JJM or after implementation of JJM.
- Of the six selected districts excluding Kolar, only Chikkaballapura showed reduction in acute diarrheal diseases. Four of the districts that had not reported any acute diarrheal diseases in 2019 reported significant number of cases in 2024.

The increase in number of cases can be attributed to supply of water that did not meet the prescribed BIS standards under JJM as discussed in Chapter V.

The State Government stated (May 2025) that a long-term study is essential to arrive at the results of health-related outcome of JJM.

Overall conclusion:

The Performance Audit of Jal Jeevan Mission in Karnataka highlights gaps in planning, execution, financial management, water quality assurance, post-implementation sustainability, and achievement of intended outcomes. While the State made progress in expanding access to household tap connections and aligning with SDG-6 objectives, the Audit revealed systemic deficiencies in institutional arrangements, inadequate convergence with other schemes, delayed tendering, underperformance of support agencies, ineffective water quality monitoring, and weak grievance redressal implementation and monitoring though well-defined redressal system exist in the State. This led to a shortfall in the achievement of Functional Household Tap Connections (FHTCs), even after considering the overstated claims. Against the target of 72.14 lakh FHTCs, only 47.62 lakh were delivered. Root causes include non-compliance with guidelines, fragmented planning, poor deployment of trained personnel, poor financial controls, and insufficient community engagement.

The recommendations outlined in the report aim to strengthen implementation structures, ensure fund utilisation efficiency, enhance quality assurance, and promote sustainability of water supply systems across rural Karnataka. Timely and earnest action on these recommendations is essential to realign the Mission with its core objective of providing safe, adequate, and sustainable drinking water to all rural households.

Bengaluru
The 16-02-2026

(Jahangir Inamdar)
Accountant General (Audit-I)
Karnataka

Countersigned

New Delhi
The 24-02-2026

(K. Sanjay Murthy)
Comptroller and Auditor General of India

APPENDICES

Appendix 1.1
Details of sampled units
(Ref: Paragraph 1.5, Page 3)

District	Taluk	Village
Bidar	Bhalki	Ladha Lanjwada
	Bidar	Hokrana (B) Rajnal
Chikkaballapura	Chikkaballapura	Kuthanahally Thippenahally
	Chintamani	Hadigere Kodihalli
Gadag	Gadag	Asundi Hulakoti
	Shirahatti	Hebbal Machenahalli
Kolar	Kolar	Chowdadenhalli Kamadenahalli
	Malur	D.N.Doddi Nellahalli
Mandya	Nagamangala	Thirugana Halli Tholasi Kombri
	Srirangapatna	Hunjanakere Kadathanalu
Uttar Kannada	Karwar	Arga Kadwad
	Siddapur	Akkunji Halgeri
Yadgir	Wadagera	K. Hossahalli Tumkur
	Yadgir	Basavanthpur Bilhar

Appendix 3.1
Details of mismatch in reporting
(Ref: Paragraph 3.2, Page 17)

Sl. No.	GP	Village name	Households	No. of house connections	Village status as per IMIS	Status as per Audit
1	Thippenahalli	Kanajenahalli	242	242	Har ghar jal reported	Not completed
2	Anur	Dhoddabommanahalli	274	274	100 *per cent* FHTC done	Not Started
3	Anur	Hosur	72	72	100 *per cent* FHTC done	Not Started
4	Anur	Panasachaudana hally	156	156	100 *per cent* FHTC done	Not completed
5	Anur	Vishwanathapura	36	36	100 *per cent* FHTC done	Not completed
6	Arabi Kothanur	Arabi Kothanur	402	402	100 *per cent* FHTC done	Not completed
7	Doddaganjur	Dhoddanetha	24	24	100 *per cent* FHTC done	Not completed
8	Doddaganjur	Siddimata	114	114	100 *per cent* FHTC done	Not completed
9	Hokrana B	Dharmapur	221	221	100 *per cent* FHTC done	Work not started
10	Hebbal	Kallaganur	155	155	Har ghar jal reported	Not completed
11	Banahalli	Kanagala	131	131	100 *per cent* FHTC done	Not Started
12	Banahalli	Kshethranahalli	78	78	100 *per cent* FHTC done	Not completed
13	Banahalli	Yaluvahalli	124	124	100 *per cent* FHTC done	Not started
14	Darasaguppe	Darasaguppe	488	488	100 *per cent* FHTC done	Not completed
15	Darasaguppe	Doddegowdana koppalu	95	95	100 *per cent* FHTC done	Not completed
16	Darasaguppe	Rampura	227	227	100 *per cent* FHTC done	Not completed
17	Tadagavadi	Alagud	344	344	100 *per cent* FHTC done	Not completed
18	Tadagavadi	Chikka Horohalli	173	173	100 *per cent* FHTC done	Not completed
19	Tadagavadi	Garakahalli	76	76	Har ghar jal reported	Not completed

20	Tadagavadi	Mallenahalli	76	76	100 *per cent* FHTC done	Not completed
21	Tadagavadi	Tadagawadi	783	783	100 *per cent* FHTC done	Not completed
22	Kavanchoor	Nejjur	421	421	Har ghar jal reported	Partially completed
23	Aikur	Aikur	590	590	100 *per cent* FHTC done	Not completed
24	Aikur	Munmutagi	260	260	100 *per cent* FHTC done	Not completed
25	Kalasapura	Pandurangapura	800	800	Har Ghar Certified	Not completed
26	Kirangoor	Kirangoor	1936	1936	100 *per cent* FHTC done	Not completed

Source: IMIS and JPV

Appendix 3.2
Excess expenditure due to non-compliance to prescribed design
(Ref: Paragraph 3.10, Page 39)

Item no in 6th and final bill	Item name	Quoted rate (in ₹)	Quantity	Breadth taken in MB (in meter)	Breadth taken in estimates (in meter)	Pipe size diameter (in mm)	Pipe size diameter (in meter)	Max. size of breadth taken as per standards (in meter)	Calculated quantity based on new width breadth (d/e*i) in cum	Calculated savings (d-j) *c (₹ in lakh)
a	b	c	d	e	f	g	h	i	j	k
Providing 786 FHTCs to Asundi Habitation										
1	Road cutting	1169.94	1022.40	0.60	0.60	63 to 90	0.063 to 0.09	0.3	511.2	**5.98**
10	OPC M20 cc laying	6025.29	982.01	0.60	0.60	63 to 90	0.063 to 0.09	0.3	491.05	**29.58**
44	Road cutting	1169.94	45	0.60	0.60	90	0.09	0.3	22.5	**0.26**
49	OPC M20 cc laying	6025.29	45	0.60	0.60	90	0.09	0.3	22.5	**1.36**
Providing 748 FHTCs To Mallasamudra Habitation										
1	Road cutting	1191.24	619.66	0.55	0.55	63	0.063	0.3	338.00	**3.36**
15	OPC M20 cc laying	6135	619.66	0.55	0.55	63	0.063	0.3	338.00	**17.28**
Providing 1,984s FHTC To Beladhadi, Kalasapura, Chincholi Habitation										
5	Road cutting	1193.29	577.58	0.65	0.65	63 to 90	0.063 to 0.09	0.3	266.58	**3.72**
13	OPC M10 cc laying	5970.77	110.37	0.65	0.65	63 to 90	0.063 to 0.09	0.3	50.94	**3.55**
14	OPC M20 cc laying	6145.56	331.11	0.65	0.65	63 to 90	0.063 to 0.09	0.3	152.82	**10.96**
										76.05

Source: Information furnished by the department

Appendix 5.1
Details of availability of equipment in test-checked laboratories
(Ref: Paragraph 5.2, Page 55)

Sl. No	Equipment Name	Bidar	Chikka ballapur	Gadag	Kolar	Mandya	Uttara Kannada	Yadgir
1	pH Meter	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Balance	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Colour Comparator	Yes	Yes	No	No	No	No	Yes
4	TDS Meter	Yes	Yes	No	Yes	Yes	Yes	No
5	Turbidity Meter	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	Refrigerator	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	Wet and Dry Thermometer	Yes	Yes	Yes	Yes	Yes	Yes	No
8	Thermometer (1° C -100° C)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	Spectrophotometer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	Ion Meter	No	Yes	No	No	No	No	No
11	Biosafety cabinet	No	Yes	No	Yes	No	No	No
12	Incubator (35° C to 37° C)	No	Yes	No	Yes	No	No	No
13	Incubator (44° C to 45° C)	No	Yes	No	Yes	No	No	No
14	Water Bath (44° C to 45° C)	No	Yes	No	Yes	No	No	No
15	Autoclave for sterilization	No	Yes	No	Yes	No	No	No
16	Autoclave for disposal	No	Yes	No	Yes	No	No	No
17	Colony Counter	No	Yes	No	Yes	No	No	No
18	Membrane filtration Assembly with vacuum pump	No	MPN method used	No	Yes	No	No	No
19	Balance (Separate from Chemical division Balance)	No	Yes	No	Yes	No	No	No
20	Refrigerator (Separate from Chemical division Refrigerator)	No	Yes	No	Yes	No	No	No

Source: Information furnished by the department

Appendix 5.2
Details of water quality parameters
(Ref: Paragraph 5.5, Page 57)

Sl. No.	Characteristic	Unit	Requirement (Acceptable Limit)	Permissible Limit (in the absence of alternate source)
1	pH value		6.5-8.5	No relaxation
2	Total dissolved solids	Milligram/litre	500	2000
3	Turbidity	NTU	1	5
4	Chloride	Milligram/litre	250	1000
5	Total Alkalinity	Milligram/litre	200	600
6	Total Hardness	Milligram/litre	200	600
7	Sulphate	Milligram/litre	200	400
8	Iron	Milligram/litre	1	No relaxation
9	Total Arsenic	Milligram/litre	0.01	No relaxation
10	Fluoride	Milligram/litre	1	1.5
11	Nitrate	Milligram/litre	45	No relaxation
12	Total Coliform Bacteria	Shall not be detectable in any 100 ml sample		
13	E.Coli or Thermotolerant Coliform Bacteria	Shall not be detectable in any 100 ml sample		

Source: JJM Operational Guidelines, Annexure XI

Appendix 6.1
Details of IoT implementation
(Ref: Paragraph 6.5.1, Page 66)

IoT Tool	Purpose	Locations to be installed
Flow Sensors	Measure water flow rates to monitor distribution and detect leaks	Pipelines, pumping stations, treatment plants
Pressure Sensors	Monitor water pressure to prevent pipe bursts and ensure even distribution	Distribution mains, reservoirs, pipelines
Water Quality Sensors	Track water quality parameters like pH, turbidity, chlorine, and dissolved oxygen	Treatment plants, reservoirs, distribution network
Level Sensors	Monitor water levels to prevent overflows and ensure adequate reserves	Storage tanks, reservoirs, sumps
Smart Water Meters	Measure household water usage in real-time to promote conservation and monitor consumption	Residential, commercial, and industrial connections
Turbidity Sensors	Detect particulate matter in water to identify contamination and maintain clarity	Treatment plants, reservoirs, network points
Chlorine Residual Sensors	Measure residual chlorine to ensure adequate disinfection without excessive chlorination	Post-treatment points, key distribution points
Temperature Sensors	Monitor water temperature, which can influence chemical reactions and water quality	Treatment facilities, pipelines
pH Sensors	Monitor acidity/alkalinity of water to maintain safe and palatable levels	Treatment plants, distribution lines
Humidity Sensors (Equipment Monitoring)	Protect sensitive equipment from moisture, enhancing lifespan and reducing maintenance costs	Pumping stations, control rooms
Leak Detection Sensors	Identify leaks in real-time to minimize water loss and reduce maintenance costs	Pipelines, pumping stations
Data Analytics and Dashboard Systems	Aggregate and visualize sensor data to aid in decision-making and reporting	Central monitoring offices

Source: JJM Operational Guidelines

Glossary of Abbreviations

Abbreviation	Full Form
BIS	Bureau of Indian Standards
CAA	Constitutional Amendment Act
CFC	Central Finance Commission
CGWD	Central Ground Water Division
CGWP	Central Ground Water Board
CIPET	Central Institute of Petrochemicals Engineering & Technology
CSR	Corporate Social Responsibility
DAP	District Action Plan
DMA	District Metering Area
DPR	Detailed Project Report
DBOT	Design Build Operate Transfer
DWSM	District Water and Sanitation Mission
ELSR	Elevated Level Surface Reservoir
FGD	Focussed Group Discussions
FHTC	Functional Household Tap Connection
FTK	Field Testing Kits
GP	Gram Panchayat
GPDP	Gram Panchayat Development Plan
IMIS	Integrated Management Information System
ISA	Implementation Support Agency
ISRA	Implementation Support Resource Agencies
JJM	Jal Jeevan Mission
KPR Act	Karnataka Gram Swaraj and Panchayat Raj Act
KSPCB	Karnataka State Pollution & Control Board
MVS	Multi Village Scheme
NRDWP	National Rural Drinking Water Programme
OHT	Overhead Tanks
O&M	Operation and Maintenance
PRI	Panchayat Raj Institution
RWS	Rural Water Supply
SBM	Swachh Bharat Mission
SCADA	Supervisory Control and Data Acquisition
SFC	State Finance Commission
SLSSC	State Level Scheme Sanctioning Committee
SVS	Single Village Scheme
SWSM	State Water and Sanitation Mission
TP	Taluk Panchayat
VAP	Village Action Plan
VWSC	Village Water Sanitation Committee
WPP	Water Purification Plant
WTP	Water Treatment Plant
WQMS	Water Quality Monitoring and Surveillance
ZBT	Zonal Balancing Tanks
ZP	Zilla Panchayat

Glossary of Terms

Bureau of Indian Standards (BIS):	The national standards body of India, responsible for setting quality standards for various products, including drinking water.
Constitutional Amendment Act	An act that amends the Constitution of India, such as the 73rd CAA, which gave constitutional status to Panchayat Raj Institutions.
Central Finance Commission	A constitutional body that determines the financial relations between the central government and individual state governments in India.
Central Ground Water Board	A national organization under the Ministry of Water Resources, responsible for the development and management of groundwater resources in India.
Corporate Social Responsibility	A self-regulating business model that helps a company be socially accountable to itself, its stakeholders, and the public.
District Metering Area	A defined area of a water distribution network that is monitored and managed to reduce water loss and ensure efficient water supply.
Detailed Project Report	A comprehensive document that provides detailed information about a project, including its feasibility, planning, design, and implementation.
Functional Household Tap Connection	An individual household tap connection that provides safe and adequate drinking water on a regular basis.
Field Testing Kits	Portable kits used for testing the quality of water in the field, particularly for parameters like bacterial contamination and chemical pollutants.
Gram Panchayat	The village-level administrative body in India responsible for local governance.
Gram Panchayat Development Plan	A comprehensive plan prepared by a Gram Panchayat for the development of the village, integrating various sectoral plans and resources.
Integrated Management Information System	A system that integrates data collection, processing, and analysis to support decision-making and management in organizations.
Implementation Support Agency	Agencies that support the implementation of development projects by providing technical assistance, capacity building, and monitoring support.
Jal Jeevan Mission	A flagship program of the Government of India aimed at providing safe and adequate drinking water through individual household tap connections by 2024.
Karnataka Gram Swaraj and Panchayat Raj Act	A state legislation enacted to provide a uniform three-tier system of Panchayat Raj Institutions in Karnataka.

Multi Village Scheme	A water supply scheme designed to serve multiple villages.
Operation and Maintenance	Activities required to ensure that water supply infrastructure operates efficiently and effectively over its intended lifespan.
Panchayat Raj Institution	Local self-government institutions in rural India, established as per the 73rd Constitutional Amendment Act.
Rural Water Supply	Programs and activities aimed at providing safe and adequate drinking water to rural areas.
Swachh Bharat Mission	A national campaign initiated by the Government of India to clean the streets, roads, and infrastructure of India's cities and rural areas.
Supervisory Control and Data Acquisition	A control system architecture comprising computers, networked data communications, and graphical user interfaces for high-level process supervisory management.
State Finance Commission	A commission constituted by each state government in India to review the financial position of Panchayats and municipal bodies and recommend measures to improve their financial status.
Single Village Scheme	A water supply scheme designed to serve a single village.
Taluk Panchayat	The intermediate-level administrative body in India's three-tier Panchayati Raj system, responsible for governance at the block level.
Village Action Plan	A detailed plan prepared at the village level outlining the activities and resources required for implementing development projects, including water supply schemes.
Water Purification Plant	A facility designed to remove contaminants from raw water to produce safe and potable drinking water.
Zilla Panchayat	The district-level administrative body in India's three-tier Panchayati Raj system, responsible for governance at the district level.