CHAPTER - I

Performance Audit on Jal Jeevan Mission in West Bengal

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PUBLIC HEALTH ENGINEERING DEPARTMENT

1 Performance Audit on Jal Jeevan Mission in West Bengal

1.1 Introduction

Jal Jeevan Mission (JJM) is a flagship scheme launched by the Ministry of Jalshakti, Government of India (GoI) on 15 August 2019, to provide access to safe and sufficient drinking water to each rural household (HH) through Functional Household Tap Connections (FHTCs)[1] by 2024. Under JJM, provision of tap water was envisaged to be made to every rural HH so that every family gets potable water in adequate quantity and of prescribed quality on regular and long-term basis.

In West Bengal, as of March 2019, out of 1.63 crore rural household, FHTCs were available to 2.15 lakh rural households i.e., 1.31 *per cent* only. The JJM scheme aimed to provide piped water supply to the remaining 1.61 crore rural households of the State through FHTCs by the end of 2024[2]. Subsequently the number of households of West Bengal to be provided FHTCs increased to 1.75 crore (17 October 2024) as per JJM-IMIS portal.

1.2 Salient features of JJM

JJM has adopted a completely different approach to address the problems of rural water supply in the following ways:

- By giving assurance to provide adequate quantity of water supply (*at least 55 lpcd[3] to every rural population*);
- Assurance of quality of water supplied (BIS 10500 standard[4]) for the whole year, especially in quality affected areas;
- focus on functionality of water supply assets instead of mere infrastructure creation;
- Bottom-up planning by involving community in planning, implementation and operation & maintenance as well as community ownership;
- Central role of women and weaker sections in managing water supply;
- Compulsory piped water supply in schools and Anganwadi centres (AWCs);
- Surveillance of water quality by the local community involving women;
- Community contribution for maintaining water supply assets;
- Technological interventions for transparency and accountability;
- Performance grant as incentive to States/ UTs;

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[1] *A tap connection to a rural household for providing drinking water in adequate quantity of prescribed quality on regular basis.*

[2] *The date was revised to 2028 in the Union Budget of 2025-26.*

[3] *Litre per capita per day.*

[4] *IS 10500: 2012 'Indian Standard-Drinking water specification' as amended from time to time.*

- 'Sensor-based Internet of Things[5]' system to measure and monitor water supply in villages;
- Assurance of source sustainability- water conservation *etc.*

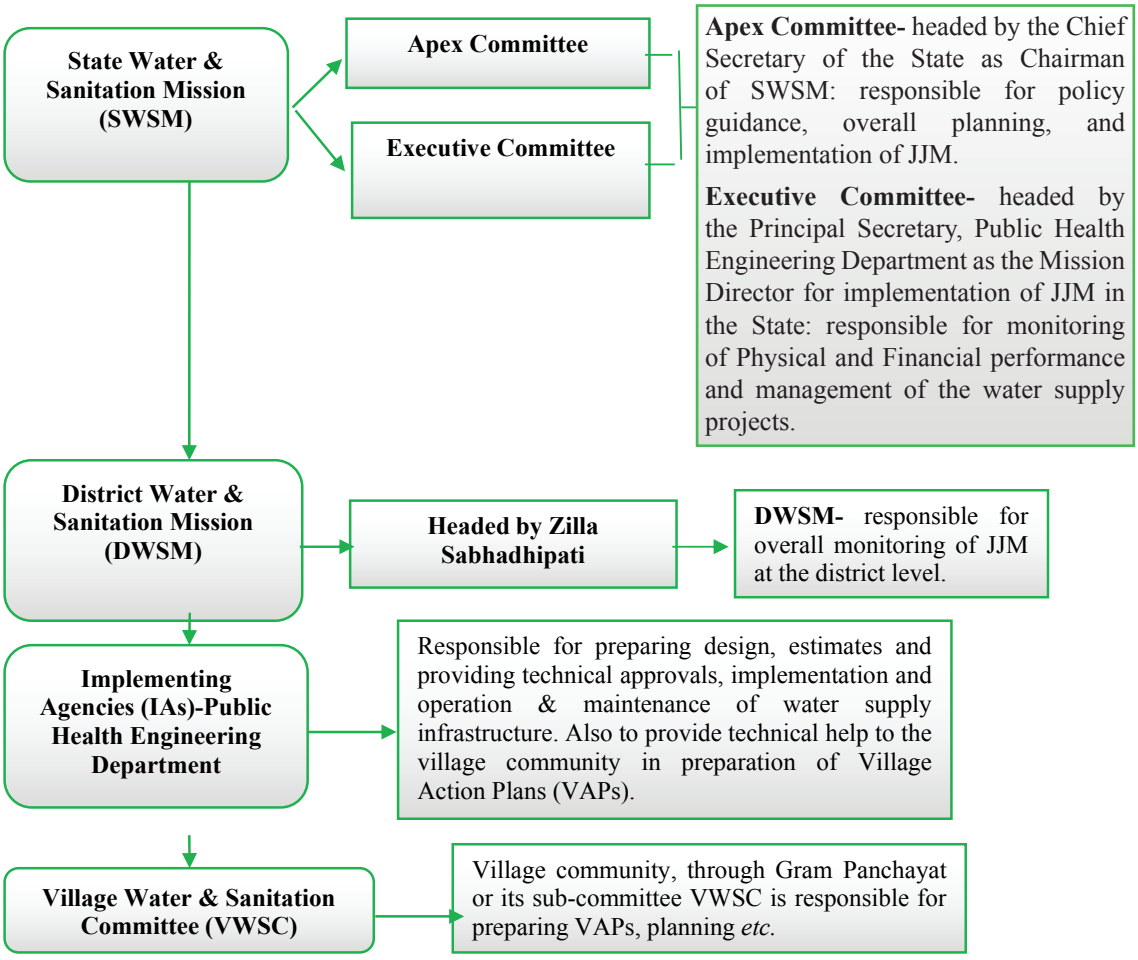
1.3 Physical progress Under JJM

As on 31 March 2019, the coverage of FHTCs in West Bengal was 1.31 *per cent* of rural households (i.e., 2.15 lakh out of 1.63 crore rural households), *vis-à-vis* all India coverage of 18.33 *per cent*. After five years of the implementation of JJM in the State, the coverage of FHTCs in the State was only 58.74 lakh[6] (37 *per cent*) against the overall target of covering the remaining 1.61 crore households (subsequently increased to 1.75 crore).

1.4 Institutional Arrangement for JJM

For the successful implementation of JJM in a time bound manner, Chapter V of the JJM Guidelines[7] suggested setting up of a four-tier institutional mechanism at the National, State, District and Village levels. Organisational structure in the State for the implementation of JJM was as mentioned in **Chart 1.1**:

Chart 1.1: Organisational Structure of JJM in West Bengal



[5] *A network of physical devices embedded with sensors that collect data about their surroundings and transmit this information over the internet.*

[6] *As per JJM-IMIS Portal as of 01.04.2024.*

[7] *Issued by Ministry of Jalshakti, GoI in December 2019.*

1.5 Financial progress

JJM is a time-bound mission mode programme and for its successful implementation, robust financial planning, timely funding, mobilisation of adequate resources and prudent utilisation of funds are pre-requisites. The fund sharing pattern between the Central and State Government under JJM was 50:50 for coverage (creation of assets) and 60:40 for support activities (IEC, human resource development and training, Community mobilization *etc*.) and Water Quality Monitoring and Surveillance (WQMS). As per JJM guidelines, GoI would release its annual allocation of fund in two equal instalments, and each instalment was to be released in two equal tranches. The releases were made automatically based on utilization as shown in PFMS portal/ IMIS.

State Government released JJM fund (both central share and State share) to the bank account of the State Water and Sanitation Mission (SWSM)[8]. Details of receipt of fund *vis-à-vis* expenditure from the account of SWSM for JJM during the period from 2019-20 to 2023-24 are shown in **Table 1.1**:

Table 1.1: Allocation *vis-à-vis* Expenditure under JJM (₹in crore)

Year	Central share/State Share	Opening Balance	Central share Allocation	Central share Released	Matching State share	Share Received in SWSM A/c by Central and State	Fund available	Expenditure booked as per ASA*/ PFMS	Closing Balance
1	*2*	*3*	*4*	*5*	*6*	*7*	*8=3+7*	*9*	*10*
2019-20	Central share	860.20	995.33	994.75	-	699.33	1,559.53	460.64	1,098.89
	State share	921.20		-	994.75	398.49	1,319.69	346.82	972.87
2020-21	Central share	1,098.89	1,614.18	807.08	-	296.06	1,394.95	903.21	491.74
	State share	972.87	-	-	807.08	0.00	972.87	595.05	377.82
2021-22	Central share	491.74	6,998.97	1,404.61	-	1,883.31	2,375.05	1,747.05	628.00
	State share	377.82	-	-	1,404.61	2,750.87	3,128.69	758.30	2,370.39
2022-23	Central share	628.00	6,180.25	3,090.12	-	3,417.87	4,045.87	2,007.16	2,038.71
	State share	2,370.39	-	-	3,018.02	1,564.80	3,935.19	3,404.65	530.54
2023-24	Central share	2,038.71	3,806.29	4,206.29	-	4,206.29	6,245.00	5,448.15	796.85
	State share	530.54	-	-	4,108.14	5,617.15	6,147.70	5,448.45	699.25
Total			**19,595.02**	**10,502.85**	**10,332.60**	**20,834.17**		**21,119.48**	

*(Source: Departmental reply)*Audited Statement of Account*

Out of total Central allocation of ₹19,595.02 crore (during 2019-24), ₹10,502.85 crore (53.60 *per cent*) was released by GoI, due to poor financial progress of expenditure by the State. State also did not release its matching share of ₹1,403.34 crore during 2019-20 and 2020-21. Against the total available fund of ₹22,615.57 crore, ₹21,119.48 crore (93 *per cent*) was spent during 2019-2024 (up to March 2024).

JJM being time-bound country-wide programme, GoI made additional fund available to better performing States/ UTs to incentivise their good performance. Audit observed that financial performance of the State in implementation of JJM programme was very poor except for the year 2023-24. During 2019-23,

[8] *The State Water and Sanitation Mission (SWSM) under JJM was headed by the Chief Secretary and set up for coordination with other departments such as PRI, Health Department etc., convergence and policy guidance at the State level.*

the State was not able to avail any additional funding from GoI due to poor financial performance. Only in the year 2023-24, the State availed additional fund of ₹400 crore as performance reward from GoI.

1.6 Audit Objectives

PA of JJM in West Bengal was taken up to ascertain whether:

i. *programme objectives (output and outcomes) have been achieved successfully;*

ii. *an efficient institutional framework was in place for planning, implementation, and post operational management of the schemes;*

iii. *Financial resources have been employed in an economic and efficient manner; and*

iv. *Assets created under the Scheme, were sustainable for the next two to three decades and do not compromise water security for future generations.*

1.7 Audit Criteria

Audit findings were based on criteria derived from the following:

- Operational Guidelines for Implementation of JJM (December 2019) (JJM Guidelines);
- *Margdarshika*[9] for Gram Panchayat & VWSC to Provide Safe Drinking Water in Rural Households;
- Drinking Water Quality Monitoring & Surveillance Framework (October 2021) issued by Ministry of Jal Shakti, Government of India;
- Uniform Drinking Water Quality Monitoring Protocol (February 2013) issued by the then Ministry of Drinking Water and Sanitation, Government of India;
- SDG obligations and Standard Operating Procedure for Water, Sanitation and Hygiene (WASH) standards;
- General Financial Rules, 2017;
- Orders issued by the State Government facilitating implementation of JJM in the State.

1.8 Audit Scope and Methodology

This Performance Audit covers JJM implementation during the period 2019-20 to 2023-24. The Audit involved scrutiny of records of PHED, PHE Directorate, Resources Division, Planning Circle, Planning Division and thirteen working divisions[10], two State Water Testing Laboratories, six District laboratories, 80 Sub-district laboratories, State Water & Sanitation Mission (SWSM) and District Water & Sanitation Mission (DWSM).

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[9] *Issued by Ministry of Jal Shakti in the year 2020.*

[10] *Bankura Division, Bankura Mechanical Division, Berhampore Division-I, Berhampore Mechanical/Electrical Division, Burdwan Division, Central Mechanical Division, Jalpaiguri Division, Midnapore Mechanical Division, Murshidabad Division, Northern Mechanical Division, Purulia Division, Purulia Mechanical Division and Tamluk Division.*

Out of 23 districts of the State, JJM was being implemented in 22 districts[11]. Out of these 22 districts, six districts[12] were selected through random sampling by using IDEA software**.** Two blocks from each selected district were selected and two villages from each selected block were also selected randomly. List of selected blocks and villages is shown in ***Appendix- 1.1***. A beneficiary survey covering 480 beneficiaries of 24 selected villages was conducted to assess the achievement of outcomes of JJM. The concerned 21 GPs of the selected villages were also covered under focused group discussion and Village Water and Sanitation Committee (VWSC) survey. Joint site inspections of schemes were also conducted along with departmental officials.

An Entry Conference was held with the Principal Secretary to Government of West Bengal, PHED, GoWB in April 2024 wherein the objectives, scope, criteria and methodology of audit were discussed. Audit findings were discussed in an Exit Conference on 05 February 2025 with the Pr. Secretary of the Department. The replies received from the Department have been suitably incorporated in the Report.

Audit findings

The Audit findings emerging from the Performance Audit, are discussed in the succeeding paragraphs.

1.9 Coverage

As per operational guidelines of JJM, the primary aim of the Scheme was to provide all rural households with one FHTC by 2024[13].

1.9.1 Coverage of FHTCs

JJM scheme was taken up for implementation in the State only from July 2020 i.e., almost 11 months after launching of the programme by GoI (August 2019). Further, no annual action plan was prepared by the PHED (Department) and no FHTC targets were fixed by the State for the year 2019-20. Reasons for delay in taking up the Scheme were not produced to Audit though called for.

During the first five years of implementation of JJM, PHED provided only 58.74 lakh FHTCs (as of 01 April 2024) to rural households as per JJM Integrated Management Information System (JJM-IMIS) Portal of GoI. However, as per reply furnished by the Department, the coverage of FHTC was 70.70 lakh as of 31 March 2024. Reasons for mismatch of figures were not available on records.

The Department stated (March 2025) that difference of coverage between JJM-IMIS data and Department data was rectified. However, the Department did not provide details of such rectification and also remained silent on non-fulfilment of targets of FHTCs.

Thus, out of 1.61 crore households, 1.02 crore[14] households remained uncovered as of 31 March 2024. Considering the revised number of households[15],

[11] *JJM was not implemented in Kolkata district due to absence of any rural area in it.*

[12] *Bankura, Jalpaiguri, Murshidabad, Purba Bardhaman, Purba Medinipur and Purulia.*

[13] *Subsequently revised to 2028 in the Union Budget 2025-26.*

[14] *1.61 crore minus 58.74 lakh.*

[15] *1.75 crore as per format C-54 of JJM-IMIS Portal.*

1.16 crore[16] households (66.45 *per cent*) were yet to be provided FHTCs. Thus, the target of coverage of 100 *per cent* of rural habitations by March 2024 remained unachieved.

Out of six selected districts[17], coverage of FHTCs was maximum in Bankura district (47.83 *per cent*) and minimum in Purulia district (17 *per cent*). In the arsenic affected district i.e., Murshidabad, 68 *per cent* rural households remained uncovered as of March 2024. Thus, the State could not ensure provision of FHTCs to all rural households, including those in quality-affected areas, by March 2024.

Chief Engineer (Headquarters) of the PHE Directorate stated (April 2024) that yearly targets were not achieved due to delay in launch of JJM in the State (July 2020), delay in commencement of formulation of Detailed Project Reports (DPRs) for Piped Water Supply Scheme (PWSS), requirement of augmentation of sources after taking up of retrofitting works, augmentation of delivery system and delays in completion of augmentation and new schemes.

It was evident from the reply that the assessment of availability of water sources to cater to the targeted households, necessity of augmentation of delivery systems, timely finalisation of DPRs *etc.,* were not ensured before taking up schemes, leading to non-achievement of targets.

1.9.2 Coverage of villages and declaration of "Har Ghar Jal village"

As per para 3.6.1 of JJM Guidelines, a village that had provided FHTC to all its households, was to be declared as 100 *per cent* FHTC Village. The procedure to be followed for Har Ghar Jal (HGJ) Certification for villages with 100 *per cent* tap connection, was issued by the Ministry of Jal Shakti in October 2021. As per this[18], for HGJ Certification, after provision for tap water connections for all rural households, and all schools and anganwadis in a village was made, the concerned Executive Engineer would provide a completion certificate to the Gram Panchayat (GP). The rural community would confirm this certification through a meeting of the Gram Sabha and provide a HGJ Village Certificate in the format as mentioned in Annexure-6 of the JJM Margdarshika for GP and VWSC (2020), issued by Ministry of Jal Shakti. This Certificate would then be uploaded on the JJM-IMIS[19] Portal for declaration as HGJ village.

As per JJM-IMIS portal, as of August 2024, out of 38,173 villages in West Bengal, 3,627 villages had been reported as HGJ village. However, out of these 3,627 HGJ villages, only 2,005 villages had been certified as HGJ Village by the concerned GPs as of August 2024 in violation of the applicable guidelines/ provisions. Reasons for non-certification of 1,622 villages (3,627 minus 2,005) were not on records.

The Department stated (March 2025) that the number of villages declared as HGJ was lower, as the actual household count in these villages exceeded that reflected on the JJM-IMIS portal. The Department's response is not specific

[16] *1.75 crore minus 58.74 lakh.*

[17] *Bankura, Jalpaiguri, Murshidabad, Purba Bardhaman, Purba Medinipur and Purulia.*

[18] *Memo No 11042/101/2021-JJM.I date 17 May 2023 of Department of Drinking Water and Sanitation, Ministry of Jal Shakti, GoI.*

[19] *Integrated Management Information System.*

to the audit observation. A village cannot be reported as *Har Ghar Jal* unless *all* households have been provided with functional tap connections, and the certification process, including Gram Sabha validation, has been duly completed as per JJM guidelines. The reporting of HGJ status without certification violates the prescribed procedure and raises concerns regarding the veracity of data reported on the JJM-IMIS portal.

1.9.3 Coverage of quality affected areas

Para 3.5(xi) of JJM Guidelines advocates that in water quality-affected habitations, especially those with arsenic and fluoride contaminants, potable water has to be ensured on priority. As per Para 3.6.1 of JJM Guidelines, SWSM had to give priority to quality-water affected areas, by providing FHTCs to every rural household. Deficiencies noticed regarding coverage of quality affected areas are discussed in the succeeding paragraphs.

1.9.3.1 Japanese Encephalitis-Acute Encephalitis Syndrome (JE-AES) affected districts

Japanese Encephalitis (JE) disease can cause high fever, headache, neck stiffness, coma, seizures *etc*. Fatality rate can be as high as 30 *per cent*. For those who survive, approximately 20-30 *per cent* may have permanent cognitive, behavioural, or neurological effects, such as seizures, hearing or vision loss, speech problem, memory problems *etc*.

The Ministry of Health and Family Welfare, GoI had identified 10 districts in the State of West Bengal as affected with Japanse Encephalities-Acute Encephelities Syndrom (JE-AES). As per JJM Guidelines, in case of such districts, the States were to take measures to provide FHTCs (at service level of 55 lpcd) to every rural household by retrofitting and making it JJM compliant by 2021. Status of achievement of FHTCs in JE-AES affected districts of the State as of 01 April 2024 is as detailed in the **Table 1.2**.

Table 1.2: Status of FHTCs in JE-AES affected districts

Sl.No.	District Name	Number of Households	FHTCs provided to Households as on 01 April 2024	Percentage
1	Bankura	7,41,390	3,54,600	47.83
2	Birbhum	8,50,505	2,57,039	30.22
3	Dakshin Dinajpur	3,38,228	1,08,777	32.16
4	Darjeeling	3,40,699	79,696	23.39
5	Hooghly	9,64,446	3,55,611	36.87
6	Howrah	6,73,557	2,23,182	33.13
7	Jalpaiguri	4,36,525	1,45,211	33.27
8	Malda	8,70,803	2,21,335	25.42
9	Paschim Medinipur	10,42,526	2,26,527	21.73
10	Purba Bardhaman	11,22,770	4,80,040	42.75
Total		**73,81,449**	**24,52,018**	**33.21**

(Source: JJM- IMIS Portal Format C-54)

From the **Table 1.2**, it is clear that out of 73.81 lakh households in these 10 districts, only 24.52 lakh households were provided FHTCs (33.22 *per cent*) by March 2024. Thus, the State could not provide 100 *per cent* FHTCs in JE-AES affected areas even after three years of the scheduled date (March 2021), leading to beneficiaries of JE-AES affected areas being deprived of assured water supply.

The Department did not provide any specific reason for less coverage in JE-AES affected areas and stated (March 2025) that JJM works are ongoing.

1.9.3.2 Arsenic affected areas

Arsenic is a highly toxic metalloid and long-term use of drinking water having high concentration of arsenic can lead to a wide range of health problems in humans. As per the Ground Water Assessment Report 2022 of the Central Ground Water Board (CGWB), out of 341 blocks, 104 blocks in the State were affected by arsenic. The Drinking Water Quality Monitoring & Surveillance Framework of October 2021 (DWQMSF) issued by the Ministry of Jal Shakti, GoI, stipulated permissible limit for arsenic as 0.01 mg/ litre. Observations with regard to arsenic affected area are as follows:

a) Coverage in arsenic affected test-checked districts

Out of 23 districts,10 districts in West Bengal were arsenic affected. The worst-affected districts of the State were Malda, Murshidabad, Nadia, and North 24 Parganas. Further as per JJM-IMIS portal, as of August 2017, a total of 8,066 habitations with a population of 89.50 lakh[20] were affected by arsenic contamination in West Bengal.

Of these affected districts, Murshidabad was one of the test checked districts covered under Audit. Out of 26 blocks of Murshidabad district, 23 blocks were arsenic affected. As per information available on JJM-IMIS portal (07 October 2024) out of total 3,155 habitations in Murshidabad district, 22 habitations were outside the coverage of any piped water supply scheme. Out of the remaining 3,133 habitations, (*covering 16.64 lakh households*), only 256 habitations had achieved 100 *per cent* physical progress in providing FHTCs. Further, 1,034 habitations showed no physical progress and the remaining 1,843 habitations were at various stages of implementation of FHTC connections.

Accepting the Audit observations, the Department stated (March 2025) that till date, out of 22 habitations,14 are outside the coverage of any PWSS.

b) Analysis of arsenic test reports

During 2019-20 to 2023-24 total 1,24,940 water samples from different ground water sources of Murshidabad district were tested by district and sub-district laboratories of Murshidabad to test the arsenic level in the water. On analysis of the test reports, Audit observed that out of 1,24,940 samples, 54,007 samples (42.40 *per cent*) had arsenic beyond permissible limit. It was also noticed that out of 1,24,940 samples, 17,130 samples were from Piped Water Supply Scheme (PWSS) sources where 6,027 samples had arsenic beyond permissible limit.

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[20] *As per JJM-IMIS Portal of the then Ministry of Drinking Water & Sanitation (data valid 06.08.2017).*

The findings reveal serious health risks from arsenic contamination, in Murshidabad where 42 *per cent* of samples, including 6,027 from PWSS sources, exceeded permissible limits. This indicates that PWSS water is unsafe, exposing communities to long-term health hazards and undermining JJM's goal of providing safe drinking water.

The Department stated (March 2025) that certain remedial measures like implementation of surface water based PWSS, ground water based PWSS with water treatment units, and installation of CWPP had been taken to provide safe drinking water during 2019-24. The reply is not acceptable, as despite the remedial measures cited, a large number of samples from both groundwater sources and PWSS still contained arsenic beyond permissible limits during 2019-24, indicating that the interventions were insufficient to ensure safe drinking water in the affected areas.

c) Construction of Arsenic-cum-Iron Removal Plants (AIRPs)

Para 3.5(xi) of JJM Guidelines advocates that in water quality-affected habitations, especially those with high levels of arsenic and fluoride, potable water has to be ensured on priority. Arsenic cum Iron Removal Plants (AIRPs) are low-cost, large-scale water treatment plants designed to remove arsenic and high levels of iron from groundwater. Instances of unfruitful expenditure on construction of AIRPs noticed in the test-checked divisions are as follows:

- Audit observed significant deficiencies in the installation and commissioning of Arsenic & Iron Removal Plants (AIRPs) under JJM in Murshidabad district. The work for construction an AIRP of 30.56 m^3/hour capacity at the headworks site of Hurshi PWSS was awarded in February 2021 at a tendered cost of ₹1.65 crore with a scheduled completion by February 2022, including operation and maintenance by the agency for five years after a three-month trial run. Although the AIRP was completed at a cost of ₹1.42 crore, it had not been declared commissioned as of August 2024, resulting in a delay of 30 months from the stipulated completion date.

  During a joint site visit (August 2024), Audit found that treated water from this non-commissioned AIRP was already being supplied to the public. Laboratory testing of the treated water sample showed arsenic concentration of 0.013 mg/litre, exceeding the permissible limit of 0.01 mg/litre, indicating that arsenic-free water could not be ensured despite the expenditure of ₹1.42 crore. Consequently, 1,313 inhabitants remained exposed to arsenic-contaminated water.

- Further examination revealed that the Mechanical/Electrical Division, Berhampore, had installed and commissioned SCADA-based automatic AIRPs at six PWSS locations between August 2022 and January 2023 at a total expenditure of ₹16.72 crore. Analysis of 233 water-sample test reports (August 2022-March 2024) from four of these AIRPs showed that 128 samples (54.94 *per cent*) contained arsenic beyond permissible limits (0.012-0.153 mg/l), indicating that these AIRPs did not achieve the intended arsenic-removal standards.

  As a result, 44,392 inhabitants in the command areas of these PWSS continued to remain exposed to arsenic contamination despite the expenditure of ₹10.92 crore on installation of these AIRPs.

The Department stated (March 2025) that the water test report of the AIRPs showed arsenic within permissible limit. However, no test reports were furnished to support the claim.

1.9.3.3 Fluoride affected areas

Excessive fluoride in drinking water can cause a number of side effects, including dental fluorosis[21], skeletal fluorosis[22] and other health problems like damage to the heart, arteries, kidneys, liver, endocrine glands and neuron system. As per the Ground Water Assessment Report 2022 of the Central Ground Water Board (CGWB), 43 blocks (Out of 341 blocks) in the State were affected by fluoride. The Drinking Water Quality Monitoring & Surveillance Framework of October 2021 (DWQMSF) issued by the Ministry of Jal Shakti, GoI, stipulated permissible limit for fluoride (as F) as 1.5 mg/litre.

a) Coverage in fluoride affected areas

As per Central Ground Water Board Report, 2022, out of 23 districts, seven districts[23] of West Bengal were fluoride affected. Out of these, two districts Bankura and Purulia were covered as test checked districts under Audit. As per information available on JJM-IMIS portal, out of 38,945 habitations in the seven fluoride affected districts, 18 habitations were outside the coverage of any piped water supply scheme (as of 22 October 2024). Status of coverage of the remaining 38,927 habitations was detailed in **Table 1.3**.

Table 1.3: Status of coverage of FHTC in fluoride affected seven districts

Coverage status of FHTC	No of Habitations	Households	FHTC provided	Coverage of households (in *per cent*)
With FHTC Coverage = 0 %	13,308	14,64,177	0	0.00
With FHTC Coverage >0 %and< 25%	7,782	13,29,443	64,411	4.84
With FHTC Coverage >25% and< 50%	2,124	4,20,152	1,59,050	37.86
With FHTC Coverage >50% and< 75%	2,640	4,93,877	3,10,625	62.90
With FHTC Coverage >75% and< 100%	4,607	9,07,077	8,17,698	90.15
With FHTC Coverage 100%	8,466	12,26,030	12,26,030	100
	38,927	**58,40,756**	**25,77,814**	**44.13**

(Source: JJM - IMIS Portal, Format J-5)

From the **Table 1.3**, it was observed that even after four years of implementation of JJM, only 44.13 *per cent* households in fluoride affected seven districts were brought under any water supply scheme.

The Department stated (March 2025) that a DPR has been prepared for left out fluoride affected habitations which is pending for approval by SLSSC.

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[21] *Discoloration or pitting of the tooth enamel.*

[22] *Long-term exposure to high levels of fluoride can weaken bones by incorporating fluoride into the bone's mineral matrix. This can lead to bone deformities, calcification of tendons and ligaments, and osteosclerosis.*

[23] *Bankura, Birbhum, Malda, North Dinajpur, Purulia, South Dinajpur and South 24 Parganas.*

b) Analysis of fluoride test reports

Out of 2,34,439 water samples tested for fluoride in two selected fluoride affected districts[24] during 2019-24, 2,631 samples (1.12 *per cent*) had fluoride beyond permissible limit. The presence of samples with fluoride contamination indicates continued risk of exposure to unsafe drinking water in the affected areas. This reflects inadequacy in ensuring safe and potable water supply despite identification of these districts as fluoride affected. Prolonged consumption of water with fluoride beyond permissible limits can lead to severe health impacts such as dental and skeletal fluorosis.

The Department stated (March 2025) that the present situation will be permanently solved after completion of ongoing PWSSs. The reply is not tenable as the Department should have ensured safe potable to the fluoride affected habitations by March 2021 as per JJM guidelines.

Recommendation 1: The Department may draw up a time-bound action plan to provide FHTCs to the left out households by giving priority to households living in quality affected districts.

1.9.4 Coverage of schools and Anganwadi Centres

The JJM Scheme aims to ensure potable drinking water security on long-term basis to every rural household and public institution, including schools and Anganwadi centres. As per available records, there were a total of 72,755 rural schools and 1,11,074 Anganwadi centres in the State. Of these, the JJM-IMIS Portal provided a status of tap water connection and related infrastructure in 63,875 rural schools and 75,528 Anganwadi centres (as of August 2024), as detailed in **Table 1.4**.

Table 1.4: Status of water supply infrastructure in rural school and Anganwadi centre

Description	School		Anganwadi centre	
	Number	*Per cent*	Number	*Per cent*
Total entry in JJM IMIS	63,875	--	75,528	--
Availability of drinking water through tap connection	52,383	82.00	37,833	50.09
Running water in toilets/ urinals	28,377	44.43	15,234	20.17
Availability of hand washing facility	29,184	45.69	17,507	23.18
Separate toilets for girls and boys	46,124	72.21	25,862	34.24
Rain Water Harvesting structure installed	106	0.17	46	0.06
Availability of dry toilets/ urinals	526	0.82	928	1.23
Grey water management	198	0.31	958	1.27

(Source: Format F26 as of 29 August.2024_JJM-IMIS Portal)

From the **Table 1.4**, it was evident that there were no tap connections in 18 *per cent* schools and around 50 *per cent* Anganwadi centres. Provision for running water in toilets/urinals was available in only 44.43 *per cent* of rural schools and 20.17 *per cent* of Anganwadi centres.

Thus, while JJM aimed to provide potable water supply to all schools and

[24] *Bankura and Purulia.*

Anganwadi centres by 2024, PHED could not provide FHTCs to all schools and Anganwadi centres (as of August 2024). As a result, teachers, students, *Anganwadi karmis*, expecting mothers of Anganwadi centres remained exposed to water borne diseases due to consumption of water from unsafe sources.

During the beneficiary survey in the 24 selected villages, Audit team visited nine schools and seven Anganwadi centres (AWCs) in the districts of Bankura, Jalpaiguri, and Murshidabad to assess the availability of potable water as envisaged in JJM. Audit noticed that:

i. No FHTC connections were provided to two schools[25] and three AWCs in Murshidabad which is an arsenic affected district.

ii. Water storage facility was not available in two primary schools in Bankura district, resulting in non-availability of potable water in the schools during the school hours (10 am to 4 pm) as water was supplied before school hours (7 am to 9 am) and after school hours (4 pm to 6 pm).

iii. FHTCs provided to two primary schools, one each in Jalpaiguri and Murshidabad districts and two AWCs in Murshidabad district (arsenic affected) were found defunct. No water storage facility was also available in these schools and AWCs. It was found that students of the surveyed school in Jalpaiguri district were collecting untreated water directly from nearby PHED water supply pump house.

iv. In the absence of tap connection, students/teachers/children of one school and two Anganwadi centres were using water from hand pumps in Murshidabad district. During joint site inspection with officials of PHED (July 2024), water samples from these hand pumps were collected for quality testing at district/sub-district laboratories of PHED. Test reports revealed that all three water samples were found arsenic contaminated. Thus, the students/teachers/children of these surveyed school and Anganwadi centres remained exposed to significant health risks due to arsenic.

The Department stated (March 2025) that proposal for augmentation of Azmatpur PWSS in Murshidabad district was pending for approval of SLSSC. However, the Department remained silent on the overall poor coverage of schools and AWCs.

1.9.5 Supply of adequate quantity of safe drinking water on regular basis

JJM focuses on service delivery at the household level i.e. water supply on regular basis (on daily basis) in adequate quantity (at least 55 lpcd) and of prescribed quality[26].

During the survey of 480 beneficiaries (June-August 2024) in 24 selected villages of six selected districts, 149 beneficiaries (31 *per cent*) stated that they were not getting any water supply since installation of tap connection under JJM, 111 beneficiaries (23 *per cent*) stated that they were not getting adequate

[25] *One Shishu Siksha Kendra and one primary school.*

[26] *The Drinking water supplied should adhere to Indian Standard "IS 10500:2012-Drinking water Specification" as amended from time to time.*

(55 lpcd) water and 11 beneficiaries (2.29 *per cent*) stated that they were not getting regular supply of water. Beneficiaries facing shortages of water stated that they were meeting their needs of water through hand pumps/tube wells/ stand posts/purchased water. Out of 331 beneficiaries who were getting water supply, 87 beneficiaries (18.13 *per cent*) were not satisfied with the quality of water being supplied. Thus, the Department could not provide regular supply of safe/potable water to the beneficiaries as per prescribed norms.

Reasons for non-supply/short supply of water were defects in the delivery system, low pressure, low capacity of existing overhead reservoir, non-operation of valves by operators, insufficient availability of water at source, pending augmentation work, wastage of water *etc*.

The Department accepted the audit observation and stated (March 2025) that after completion of augmentation/new schemes[27], the problem would be resolved.

1.10 Planning

Planning with adequate participation at all levels is critical for the successful implementation of various components of a programme/scheme. Through proper planning, the State was to ensure supply of potable water on a long-term basis to every rural household and public institution, *viz*. Gram Panchayat building, school, anganwadi centres (AWCs), health centres, wellness centres, *etc*. As per Para 3.6.1 of JJM guidelines-2019, three types of plans were required to be prepared for implementation of JJM - Village Action Plan (VAP), District Action Plan (DAP) and State Action Plan (SAP).

1.10.1 Delay in preparation of Village Action Plans

As per Para 3.5 (xxiv) of JJM Guidelines, VAP was the main document of a village for all water supply and related works. Village-wise VAP was to be prepared by the GP or the Village Water & Sanitation Committee[28] (VWSC) with support from the Implementation Support Agency (ISA)[29] based on baseline survey, resource mapping and as per needs of the village community. The VAPs were required to be approved by the concerned Gram Sabha with the consent of at least 80 *per cent* of the community present in the meeting.

VAPs were to be subsequently used for the preparation of DAPs by the DWSM. The DWSMs prepared DAPs by consolidating the VAPs for the district and submitting the same to SWSM for preparation of SAP.

For preparation of VAPs of all villages, PHED engaged (May-November

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[27] *Augmentation of water supply schemes means increasing the supply and availability of water for public use, often by enhancing existing infrastructure, developing new sources, etc. to meet growing demand and address shortages. New water schemes means water supply schemes taken up to cover new areas under water supply.*

[28] *A Village Water and Sanitation Committee, is a community-based, legally recognized sub-committee of the Gram Panchayat in India that leads the planning, implementation, and management of in-village water supply and sanitation infrastructure under programs like the Jal Jeevan Mission (JJM).*

[29] *ISAs are NGOs/SHG/Trust etc. will play critical role as partners in mobilizing and engaging the communities to plan, design, implement, manage, operate and maintained in village water supply infrastructure.*

2022) 15 ISAs in 22 districts in the State through open tendering. Test check of VAPs of 24 selected villages revealed that VAPs were prepared between June 2022 and June 2024 instead of initial stage of implementation of JJM *i.e.* July 2020. Thus, VAPs, that were meant to guide planning from the very inception of JJM in July 2020, were delayed until 2022-24, and in some cases were prepared after works had started, undermining participatory planning and community ownership.

1.10.2 Preparation of VAPs as per JJM Guidelines

As per Para 3.6.1 of JJM Guidelines-2019, a baseline survey was required to be conducted prior to preparation of the VAPs. Information regarding population, assessment of water demand, agricultural cropping pattern, rainfall data, history of water supply, source sustainability measures, cattle population, grey water management, requirement of washing/bathing blocks, *etc.* was to be incorporated in VAPs. Further, long-term O&M plan for the infrastructure created under JJM were also to be incorporated in VAPs.

Annex-XA of JJM Guidelines provides a detailed format of a VAP. As per guidelines, the VAPs were required to be prepared after incorporating requisite information as mentioned in the detailed format. On scrutiny of the VAPs of 24 selected villages in the selected districts[30], Audit observed the following deficiencies in VAPs:

i. Data regarding agricultural cropping pattern, cattle population, rainfall data, history of water supply of villages *etc*., was not included in VAPs.

ii. Although population and number of households of the villages were mentioned in the VAPs but population details (number of men, women and children and current population details) were not mentioned.

iii. Water demand of a village was required to be calculated based on the population of that village. However, Audit observed that VAPs of two selected villages[31] in Jalpaiguri district had no population data, but despite this the water demand of these villages was calculated as 352.33 kilo litre per day (KLD) and 268.51 KLD.

iv. Similarly, in VAPs of other two selected villages of Jalpaiguri district, the water demand of one village[32] was calculated as 159.39 KLD against actual requirement of 1158.80 KLD[33] and the water demand of another village[34] was shown as 336.16 KLD against requirement of 179.36 KLD[35].

v. Further, augmentation of existing drinking water sources, construction of intake well, water treatment plant, pumping arrangement, underground sump, overhead tank, distribution network, bore well recharge structure, washing and bathing complex, cattle trough, *etc*., were proposed in VAPs without any details such as number and locations of such installation.

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[30] *Bankura, Jalpaiguri, Murshidabad, Purba Bardhaman, Purulia and Purba Medinipur.*

[31] *Lataguri village and Jogesh Chandra Tea Garden village in Kranti block.*

[32] *Yongttong Tea Garden village in Matiali block.*

[33] *21,069 X 55 ltr = 11,58,795 ltr = 1,158.80 KLD.*

[34] *Juranti Tea Garden village in Matiali block.*

[35] *3,261 X 55 ltr = 1,79,355 ltr = 179.36 KLD.*

vi. Audit noted that while the VAPs mentioned sources of water supply, sustainability measures like the number of bore well recharge structures required, water bodies to be rejuvenated *etc*., were neither assessed nor identified in VAPs as mentioned in the Annex-XA of JJM Guidelines.

vii. Required number of water stabilisation ponds and soak pits of household, community, school, Anganwadi were not assessed and identified for the purpose of grey water management.

viii. Manpower required for water quality monitoring and surveillance were not assessed and identified in the VAPs in accordance with Para 3.6.1 of JJM guidelines.

ix. Besides the above, overall roles and responsibilities of GPs/VWSCs for implementation and O&M of the in-village infrastructures created under JJM were not included in the VAPs.

Thus, it was evident that VAPs were not prepared as per JJM Guidelines which impacted the implementation of the schemes and delivery of adequate water to targeted beneficiaries.

1.10.3 District Action Plan (DAP)

As per Para 5.3 and Annex-XB of JJM Guidelines (2019), the District Water and Sanitation Mission (DWSM), headed by Deputy Commissioner/ District Collector was responsible for preparation and finalisation of DAP. The DAP was to be an aggregation of all VAPs prepared in the district and was to outline a road-map for providing FHTCs to households of the district by 2024.

Scrutiny of records of six selected Divisions revealed that DAPs were not prepared or approved by any of the selected DWSMs. Audit also sought copies of the DAPs from the PHED, however, the same was not furnished. The State Action Plan (SAP) for JJM was to be prepared by taking into consideration DAPs but in the absence of the latter, there is a risk that SAPs were prepared without taking into consideration the actual requirements of the districts and in contravention of JJM Guidelines.

In reply, the Department stated (March 2025) that DAPs were prepared as per State guidance and not as per JJM guidelines. However, none of the test checked divisions could provide copies of DAPs to Audit to substantiate whether these had been prepared or not, leading to the possibility that planning for JJM had not taken place as per Guidelines of the Scheme.

1.10.4 State Action Plan (SAP)

As per Para 7.5 and Annex-XC of JJM Guidelines, the State Action Plan (SAP) for JJM was to be prepared and finalised by SWSM with the help of the PHED for the period from 2019-20 to 2023-24. The SAP was to be based on DAPs prepared by DWSMs. SAP was to include (a) priority work to be executed in water quality affected areas; (b) works related to rainwater harvesting, artificial recharge of drinking water sources through convergence of resources and efforts; (c) schemes to be taken up in Public Private Partnership mode; (d) detailed action plans for ensuring functionality of household tap connections and water quality monitoring and surveillance; (e) details of district-wise list of villages with number of FHTCs provided in each village, balance FHTCs

to be provided; (f) annual financial outlay, *etc*. The SAP was to be approved by the Department of Drinking Water and Sanitation (DDWS), GoI based on consultations with the State.

Audit sought from PHED a copy of the SAP prepared for JJM. In reply, PHED furnished only an excel file, as compiled on 15 May 2020. As per this document 4,062 works (1,290 retrofitting schemes, 1,090 augmentation schemes and 1,682 new schemes) having an estimated cost of ₹58,890.09 crore were to be implemented in 22 districts of the State under JJM during the period from 2020-21 to 2023-24. Further, the document lacked information regarding State Water Budget, conservation efforts required to be taken up, land requirement for execution of schemes, requirement of human resources, requirement of ISAs, IEC activities to be undertaken, Operation & Maintenance of schemes, Third Party Inspection, grievance redressal Mechanism *etc*.

The Department stated (March 2025) that the SAP was prepared as per State guidance and not as per JJM guidelines. However, the fact remains that PHED identified JJM schemes worth ₹58,890.09 crore, without preparing VAPs, DAPs and SAP for effective implementation of these.

1.10.5 Convergence with other programmes/schemes

Chapter-1 of JJM Guidelines provided for convergence with other programmes/ schemes like National Rural Livelihood Mission (NRLM), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) *etc*.

Scrutiny of Annual Action Plans (AAPs) for the years from 2020-21 to 2023-24 revealed that a total financial provision of ₹2,154.98 crore was made in the AAPs for (i) sources strengthening like bore well recharge structure - ₹40.56 crore, (ii) water harvesting and aquifer recharge structure -₹45.31 crore, (iii) grey water treatment and reuse-₹1,841.49 crore and (iv) others like cattle troughs, washing and bathing places - ₹227.62 crore *etc*. in convergence with the schemes of MGNREGA, 15th FC and SBM-G.

There was also a provision in the VAPs to take up water supply projects in convergence with other schemes but the actual works proposed to be taken up (under convergence) were not specified in the VAPs of 24 test checked villages in six selected districts. Further, working divisions in the six selected districts also stated that convergence works had not been taken up yet.

1.11 Implementation of works

Audit found that due to deficiencies on the part of PHED, most of the schemes taken up under JJM remained incomplete and there were cases of excess, avoidable, wasteful and unfruitful expenditure, as discussed in the succeeding paragraphs:

1.11.1 Status of schemes taken up under JJM

As per Para 7.1 of JJM Guidelines, FHTCs were to be provided to every rural household by creating in-village water supply infrastructure including source development.

From the Department's portal (WB-JJM Dashboard), it was noticed that during 2019-23 total 9,336 schemes (2,496 retrofitting schemes, 2,933 augmentation

schemes and 3,907 new schemes) were approved by the State Level Scheme Sanctioning Committee (SLSSC) at an estimated cost of ₹56,983.50 crore. No scheme was sanctioned by SLSSC during 2023-24.

Out of these 9,336 schemes, 1,375 schemes (14.73 *per cent*) were completed and the remaining 7,961 schemes (85.27 *per cent*) were incomplete as of December 2024.

Audit observed that the reasons for delay in completion of schemes included taking up of retrofitting work without augmentation of source and delivery system, dropping of works, land issues, delay in energisation *etc*., as discussed in the succeeding paragraphs:

1.11.1.1 Retrofitting schemes

As per Chapter VI of JJM Guidelines, SWSM was to accord priority to retrofitting of existing infrastructure, *viz*., completed piped water supply schemes and ongoing piped water supply schemes that were to be completed in the first two financial years i.e. by March 2021.

Out of 2,496 retrofitting schemes taken up during the period 2019-23, only 1,177 works were completed and the remaining 1,319 works were at different stages of completion. Main reasons for non-completion/delay in completion of retrofitting work were non-assessment of requirement of water to serve the targeted households, non-assessment of capacity of delivery system (capacity of OHR, thickness of pipelines), inadequate availability of water at source *etc*. On test check of records of divisions in the six selected districts and joint site inspection, Audit observed the following:

Rejuvenation work after retrofitting works

In case of Jalpaiguri district, two ground water based PWS schemes[36] with a design life of up to 2040, were commissioned in 2018 and 2019 under NRDWP. Both the schemes were then taken up under JJM in 2020. As of July 2024, 677 FHTCs were provided under the Scheme to the Youngttong Tea Garden (YTG) village and 933 FHTCs in the Juranti Tea Garden (JTG) village.

After providing FHTCs, the division found that the farthest habitations of these tea gardens were not getting water due to low pressure. Out of a total of 1,610 households in the two villages, 400 households were not getting water (as of July 2024). It was noted that lower diameter pipes (50 to 75 mm dia) worth ₹80.05 lakh had been laid in the distribution networks against the minimum requirement of 90 mm diameter pipe[37] resulting in low pressure of water.

Audit observed that the division thus planned (Year 2021) rejuvenation works worth ₹3.83 crore for these two newly commissioned schemes of YTG and JTG. The scope of works under rejuvenation included replacement of existing distribution pipelines, sinking of additional tube wells, construction of pump

[36] *Youngtong Tea Garden and Juranti Tea Garden PWSS in Matiali block.*

[37] *Stated in DPRs for Rejuvenation of the schemes and as per CPHEEO Manual 1999, minimum 100 mm dia pipe to be laid in distribution network. In YTG out of total distribution network of 8,944 m, 6,355 m (71%) was laid with lower dia pipes and in JTG out of total distribution network of 20,210 m, 17,560 m (87%) was laid with lower dia pipes during execution of original work under NRDWP.*

houses and boundary walls, construction of overhead reservoir *etc*. Work orders for rejuvenation works were issued between March 2022 and June 2024. As of July 2024, the works remained incomplete due to non-availability of land for construction of tube-wells and the overhead reservoir, along with other local issues. Thus, in the instant case, FHTC works were taken up without assessing the capacity of existing delivery systems.

The Department stated (March 2025) that rejuvenation work of YTG village was now completed. However, the Department remained silent on rejuvenation of the Juranti Tea Garden.

Dry tap connections

During 2021-23, Burdwan Division (PHED) had taken up 25 new water supply schemes under JJM to provide 41,610 FTHCs. Against this, 15,091 FHTCs were provided (December 2024) at a cost of ₹ 45.64 crore and were also entered into the JJM-IMIS portal. However, Audit observed that mechanical works like installation of pumps, energisation had not been completed in any of these 25 schemes till September 2024, though work orders had been issued (June 2023 and September 2024) by the Central Mechanical Division (PHED). Due to non-completion of mechanical works, none of the 15,091 FHTC households were getting water leading to unfruitful expenditure of ₹45.64 crore on these 25 schemes.

This number of 15,091 FHTCs should not have been entered in the JJM-IMIS portal without ensuring supply of water to the beneficiaries. Hence, it was evident that physical progress of FHTCs of the district was inflated to the tune of 15,091 due to uploading in JJM-IMIS portal without actual availability of water.

The Department stated (March 2025) that most of the FHTCs were functional now. However, the fact remains that JJM schemes had been declared as 'complete', without ensuring water supply to intended beneficiaries, defeating the main purpose of the Scheme.

Unfruitful Expenditure on FHTCs

The Berhampore Division-I (PHED) had taken up (August 2020) a retrofitting scheme under JJM to provide 1,653 FHTCs in Begampur village (FHTCs-321) and Daulatpur village (FHTCs-1332). These villages were falling in the command area of the Hurshi PWS scheme of Zone-I, which was commissioned in 2019. The villages covered under the scheme were situated in the arsenic affected Murshidabad district.

Retrofitting of 321 FHTCs in Begampur village was awarded to an agency in January 2021 at a tendered cost of ₹17.92 lakh for completion in 20 days. The work was completed and the agency was paid ₹13.45 lakh for the work done.

Retrofitting of 1,332 FHTCs in the Daulatpur village was awarded to another agency in July 2021 at a tendered amount of ₹71.98 lakh for completion in 180 days. Audit noticed that the work in Daulatpur village was stopped midway after providing 535 FHTCs out of targeted 1,332 FHTCs due to non-availability of safe drinking water from the existing ground water source. The agency was

paid ₹20.60 lakh in November 2021 for the partial work done. After retrofitting work in Begampur and Daulatpur villages, the division engaged a third agency[38] (September 2023), at a tendered amount of ₹4.24 crore, for augmentation of Hurshi PWSS Zone-I for completion in 310 days. The work comprised laying of additional pipelines, sinking of an additional tube well, construction of overhead reservoirs and balance FHTCs. Till July 2024 augmentation work was in progress with expenditure of ₹1.55 crore.

During joint site visit of Daulatpur and Begampur in August 2024, Audit found that none of the surveyed beneficiaries was getting water through the installed FHTC due to non-completion of augmentation work. As a result, expenditure of ₹34.05 (₹20.60 lakh + ₹13.45 lakh) incurred on retrofitting of 856 FHTCs remained unfruitful.

Thus, due to undertaking of retrofitting work without ensuring availability of water and sufficiency of pipelines in Hursi PWSS Zone-I, the work of retrofitting remained incomplete and 7,244 people living in Daulatpur and Begampur village**s** were deprived of potable water as of July 2024.

The Department confirmed (March 2025) that augmentation work of the PWSS was in progress and balance FHTCs were yet to be provided.

1.11.1.2 Augmentation works

In the 1st SLSSC meeting (2022-23), GoI stipulated that all augmentation schemes should be completed by March 2022, and this timeline was subsequently extended to September 2022. However, Audit observed that during 2019-23, total 2,933 augmentation schemes were approved by SLSSC out of which 1,904 schemes (65 *per cent*) were approved during 2022-23. Audit further noted that 984 schemes (34 *per cent*) were approved (between November 2022 and March 2023) after the targeted date (September 2022).

As discussed in **Paragraph 1.11.1**, out of 2,933 augmentation schemes taken up, only 96 schemes were completed and the remaining 2,837 schemes were at different stages of completion (December 2024). It was observed that the reasons for non-completion/delay in completion of augmentation schemes were land issues, delay in supply of DI pipes, local issues, and labour related issues as noted in case of eight test-checked augmentation schemes (out of 20 test-checked) in six selected districts (***Appendix-1.2***). On test check of records of two selected divisions of PHED and joint site inspections, Audit observed the following:

i. Augmentation of Lataguri PWSS of Jalpaiguri district was approved by SLSSC in 2021-22 at an estimated cost of ₹18.35 crore. 12 work orders were issued (January 2022 to June 2024) to contractors for completion of the work within 15 to 180 days. Scrutiny revealed that as of July 2024, out of the 12 works, seven were under progress (80 *per cent* to 98 *per cent* complete). Non-completion of works was due to scarcity of ductile iron pipes being used in the work, local issues, labour issues *etc*.

ii. Augmentation of Raghunathpur PWS scheme was approved in October 2022 at an estimated cost of ₹10.78 crore. Purulia Division (PHED) issued

[38] *M/s B.M. Industries for civil work of source augmentation, FHTC, OHR, distribution system, pump-house, AIRP etc.*

the first work order in March 2023 and it was targeted to be completed by March 2024. However, as of November 2024, only 20 *per cent* of the work was completed due to scarcity in supply of ductile iron pipes, land problems *etc*.

The Department confirmed (March 2025) that the augmentation works of Lataguri PWSS and Raghunathpur PWSS were yet to be completed.

1.11.1.3 New Water Supply Schemes

During the period 2019-23, 3,907 new water supply schemes under JJM were taken up by the PHED in the State for providing water supply in uncovered areas, at a total estimated cost of ₹29,109.12 crore to be completed by March 2024. However, as of December 2024, only 87 water supply schemes were completed while the remaining 3,820 works were at different stages of completion.

On test check of records of selected divisions of PHED in the six selected districts and joint site inspection, Audit observed that reasons for non-completion of new water supply schemes were land problem, shifting of locations of the pump-houses, reservoirs *etc.*

1) Para 3.5 of the JJM Guidelines *inter alia* stipulated that the work was to be awarded to agencies where land was in possession of the Department. In order to ensure efficient implementation of water supply schemes, identification of land plots was required to be done before preparation of DPRs, as layout of distribution lines, laying out of pipes of different diameters, location of valves, overall project cost of the schemes *etc*., were dependent on exact location of head works/intake point/tube wells/pump house/overhead reservoirs sites *etc*. However, Audit observed that execution of works was taken up prior to acquisition/direct purchase/donation/transfer of land which hampered 45 schemes in three (Murshidabad, Purulia and Purba Bardhaman) out of six selected districts as shown in ***Appendix-1.3***.

2) Bankura Division issued (August 2022) work order for execution of 431 mini PWSS in 20 blocks of Bankura district with January 2023 as the stipulated date of completion. The contractor requested (January 2023) for time extension on the grounds that they could not complete the work due to delays in land identification/allotment (land of 74 villages was yet to be handed over to the agency as on 28 January 2023), local obstructions, delay in getting power connections, change in drawings, delay in obtaining approved designs *etc.* Due to this, out of 431 mini schemes, 81 schemes were subsequently required to be shifted, after issue of work orders, due to land problems. As of May 2024, out of 431 schemes, only 104 schemes were commissioned till August 2024.

1.11.2 Wasteful expenditure on dropped schemes

From the West Bengal-JJM Dashboard, Audit noted that in 18 districts a total of 707 schemes involving 3,54,535 FHTCs were approved by SLSSC at an estimated cost of ₹1,123.53 crore. However, these were subsequently dropped (as of 16 December 2024) due to improper planning, overlapping/duplicating *etc*. On test check of records of two working divisions in the two selected districts Audit observed the following:

i. During 2022-23, 641 mini PWSSs[39] of Purulia district were approved (September 2022 to December 2022) by the SLSSC, out of which 555 schemes were later dropped (505 schemes in August 2023 and 50 schemes in January 2024) by PHED. These schemes were dropped as the mini PWSSs were falling under the command area of two mega PWSS namely, the Northern and Southern Sector PWSSs that had already been approved by SLSSC in May 2022. Thus, PHED cancelled the administrative approval orders in order to avoid duplication of projects. Purulia Division (PHED) had already incurred ₹0.21 crore on preparation (January-April 2022) of total 24 DPRs in respect of these dropped schemes and ₹0.52 crore on 18 different works like survey and investigation, road fixing map *etc*. Dropping of schemes resulted in wasteful expenditure of ₹0.73 crore.

ii. Murshidabad Division (PHED) issued 11 work orders (October 2021 to November 2022) to five agencies for preparation of 28 DPRs (26 DPRs for augmentation of existing PWSS and two DPRs for new schemes) in Murshidabad district (***Appendix-1.4***). DPRs prepared by the agencies were approved by SLSSC during 2022-23. After preparation of the DPRs, the division found out that the augmentation schemes of six DPRs were within the jurisdiction of the Domkal Municipality (urban area) and 22 DPRs were related to duplicate schemes (falling under the command area of other schemes). Due to this duplication, all the 28 schemes were dropped by the Department. Further, the Division had already incurred ₹89.12 lakh on the preparation of these DPRs.

Dropping of schemes after approval by SLSSC not only resulted in wasteful expenditure of ₹162.12 lakh but also showed lack of proper survey/investigation and planning before taking up the schemes. In reply the Department accepted (March 2025) the Audit observation.

1.11.3 Implementation of Community Water Purification Plants (CWPP)

Audit noted that Purulia Division (PHED) had taken up (October 2020) installation of 113 stand-alone Community Water Purification Plants (CWPP) in 27 fluoride affected habitations of the district under JJM with a view to provide fluoride free water. The estimated cost of each CWPP was between ₹18.09 lakh to ₹24.14 lakh.

The Division installed 99 CWPPs by April 2023, after spending ₹10.82 crore. However, the remaining 14 CWPPs remained incomplete (till August 2024) due to dry bore well. Out of 99 completed CWPPs, 18 CWPPs were found non-working as of August 2024. Further, out of 81 working CWPPs, 25 CWPPs did not have the capability to treat raw water properly due to non-conduction of back wash and non-replacement of top up of fluoride media of the fluoride treatment plant by the contractors (August 2024).

[39] *231 schemes approved in the 7th meeting of SLSSC (September 2022), 48 schemes approved in the 8th meeting of SLSSC (September 2022), 182 schemes in the 9th meeting SLSSC (November 2022) and 180 schemes approved in the 10th meeting of SLSSC (December 2022).*

As a result, the purpose of providing fluoride free water to 21,069 people of 14 incomplete CWPPs and 18 non-functional CWPPs could not be achieved even after incurring ₹2.13 crore on their construction resulting in wasteful expenditure of ₹2.13 crore. Further, as the 25 functional schemes costing ₹2.96 crore were unable to treat the fluoride contaminated water within the permissible limit of fluoride, expenditure of ₹2.96 crore on their construction remained unfruitful (as of August 2024).

The Department stated (March 2025) that the present situation of most of the reported CWPPs had improved. However, no records in support of the same were furnished to Audit.

1.11.4 Engagement of Implementation Support Agency (ISA)

As per Para 5.5 of the JJM Guidelines, Non-profit organizations (NGOs)/ Village Organizations (VOs)/ Self Help Groups (SHGs)/ referred to as Implementation Support Agency (ISA) would play critical role as partners in mobilizing and engaging the communities to plan, design, implement, manage, operate & maintain in-village water supply infrastructure. Further, as per Annex-V of JJM guidelines, an ISA organization was to be a non-profit organization or was to use its profits, if any, or other income in promoting charitable objectives. Scrutiny of the records of the Resources Division-PHED revealed that:

Delay in engagement of ISA

Since ISAs were to play a critical role in mobilising communities, planning and implementation of JJM, it was required that they be appointed on time. Resources Division (PHED) engaged 14 agencies as ISAs (during May 2022 to November 2022) in 21 districts for a periods ranging from 150 to 365 days. Audit noticed that ISAs were engaged after 28 to 34 months from the issuance of JJM Guidelines in December 2019. The delay in engagement of IASs delayed the preparation of VAPs.

Undue financial benefit to ISAs

As per the eligibility criteria of Annexure-V of JJM guideline, ISA should be a non-profit organization or use its profits, if any, or other income in promoting charitable objectives. However, scrutiny of DPRs on "Engagement of ISA for implementation of community mobilisation and capacity building activities under JJM support activities" revealed that 10 *per cent* of cost of the works was added as agency profit with the cost of each item rate which led to undue benefit to the agency. During 2022-25 (till 23 July 2024) total payment of ₹94.15 crore including profit component and GST at the rate of 18 *per cent* was made to 14 ISAs (***Appendix-1.5***). Thus, due to inclusion of agency profit in the estimated cost of the tenders, an undue financial benefit of ₹7.25 crore[40] was extended to the ISAs till July 2024.

The Department stated (March 2025) that ISAs were asked to submit affidavits in support of use of profit in promoting charitable activities. However, Audit is of the view that the Departments should have made payment of profit component after obtaining such affidavits.

[40] *Total payment ₹94,15,19,891.00, GST= ₹94,15,19,891.00X18/118= ₹14,36,21,678.29 Contractor profit= (₹94,15,19,891.00 - ₹14,36,21,678.29)X10/110= ₹7,25,36,205.70 = say ₹7.25 crore.*

1.11.5 Inadmissible Payment of GST under JJM

As per Government of India notification (June 2017), *pure services* (*i.e.* services without any supply of goods or works contracts) provided to Government in relation to functions entrusted to Panchayats under Article 243G of the Constitution are exempt from GST. The Government of West Bengal also reiterated this exemption through a Gazette Notification[41] issued in June 2017. Since supply of safe drinking water is a function of Panchayats under Article 243G, all services procured under Jal Jeevan Mission (JJM) for this purpose were covered under the exemption. Moreover, as per an advance ruling[42], preparation of DPR related to civil works/infrastructure or construction works falls under pure service.

Audit scrutiny, however, revealed that GST was still paid to different categories of agencies engaged under JJM, even though their services clearly fell under the exempted category of *pure services*:

- **Implementation Support Agencies (ISAs):** The ISAs were engaged during May-November 2022 for community mobilisation, Information, Education and Communication (IEC), and capacity building activities relating to drinking water, at a tendered cost of ₹144.48 crore. Payments of ₹94.15 crore were made by PHED during January 2023-June 2024. Although these services were exempted from GST, tax at 18 *per cent* was paid, resulting in inadmissible payment of ₹14.36 crore up to July 2024.
- **Consultant Agencies:** Consultant Agencies were engaged by PHED in November–December 2021 for preparation of DPRs of JJM schemes, with consultancy fees payable as a percentage of the project cost (excluding GST). However, GST at 18 *per cent* amounting to ₹10.30 crore was paid during June 2022–January 2023. In addition, consultancy fees were supposed to be calculated on project cost *excluding GST*, as per agreement. Instead, project costs including GST were taken into account, which led to excess payment of ₹2.67 crore as consultancy fees during the same period.
- **Third Party Inspection Agencies (TPIAs)** were engaged by PHED in June 2022 for inspection and quality checks of JJM works. These services also fall under the exempt category of "pure services". Despite this, GST at 18 *per cent* amounting to ₹2.78 crore was paid till April 2024.

Thus, a total of ₹27.44 crore was inadmissibly paid towards GST, over and above ₹2.67 crore excess consultancy fees also paid by the PHED, due to incorrect interpretation and application of GST provisions. These funds could have been utilised for additional works or schemes under JJM.

The Department stated (January/March 2025), that project cost includes all taxes and that the issue of GST applicability had been placed before the advance ruling authority. The reply was not tenable since exemption notifications were already in force since June 2017, and the agreements themselves clearly stipulated calculation of consultancy fees on project costs excluding GST. The

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[41] *No. WB (Part-I)/2017/SAR-382 dated 28 June 2017 and its ruling dated 21 October 2022.*

[42] *No. KER/140/2021 Dated- 05.06.2022.*

Department should have ensured proper applicability of GST before awarding contracts and making payments.

1.11.6 Engagement of agencies other than ISA for preparation of VAPs

As mentioned in **Paragraph 1.10.1**, Implementation Support Agencies **(**ISAs) were engaged for preparation of VAPs and other activities in 22 districts. Audit, however, observed that other agencies had also been engaged in some districts for preparation of VAPs. During test check of the six selected districts, it was noticed that:

i. In Purulia district, ISA[43] was engaged by the Resource Division, PHED (in August 2022) for a period of 365 days to prepare VAPs of all 170 GPs of the district, through community involvement. Purulia Division (PHED) also engaged (in September 2022) additional two agencies through tendering for the preparation of VAPs of 152 GPs of 18 blocks in the district and payment amounting to ₹30.18 lakh was made to these additional agencies. This resulted in excess expenditure to that extent because the work should have been done by the ISA engaged earlier by the Resource Division, PHED for the purpose.

ii. In Bankura district, ISA[44] was engaged by the Resource Division (PHED) in May 2022 for a period of 150 days and the ISA was to prepare VAPs of all 190 GPs of the district by involving GP officials/VWSC members. However, Bankura Division (PHED) engaged another agency in July 2022 for preparation of VAPs of the district and payment amounting to ₹38.87 lakh was made to these contractors for preparation of VAPs resulting in excess expenditure to that extent.

The Department stated (March 2025) that VAPs were prepared before the engagement of ISAs. However, records show that the Resources Division, PHED engaged ISAs before the other agencies responsible for preparing the VAPs were appointed.

1.11.7 Deviation from approved DPR and SoRs

Jalpaiguri Division (PHED) had prepared (December 2020) a DPR for water supply arrangement under JJM to 603 Aanganwadi centers (AWCs) within the command area of existing PWS schemes at an estimated cost of ₹4.79 crore (₹79,495 per AWC). The scope of work proposed in the DPR for an AWC included providing FHTCs, laying pipeline, construction of 500 ltr capacity ground level masonry tank, installation centrifugal pump, 1,000 ltr capacity PVC tank, soak pit *etc*. Department accorded administrative approval of ₹4.79 crore in October 2021.

Test check of available three tender documents relating to the drinking water arrangement at AWCs revealed that as per DPR there was no requirement for construction of rig bored tube wells. However, the Division had installed 93 rig bored tube wells outside the command areas of existing PWSSs by diverting amount earmarked for execution of FHTCs, construction of 500 ltr masonry tank, centrifugal pump, 1,000 liter PVC tank, soak pit *etc.*

[43] *Kultikari Mother Teresa Social Welfare Society (NGO).*

[44] *Karnajora Agnibina Seva Samity (NGO).*

This led to excess expenditure of ₹1.73 crore (***Appendix-1.6***) due to execution of work in deviation from the approved scheme.

The Department stated (March 2025) that excess expenditure was due to increase of the depth of tube wells. The reply is not tenable as the excess expenditure pointed out by Audit was due to execution of works outside the command areas of existing PWSSs, which were not provided for in the approved DPR.

1.11.8 Inadmissible Expenditure

Annexure-IV of JJM Guidelines *inter alia* stipulated that no expenditure should be incurred from JJM fund for purchase of land, construction/renovation/repair of building, construction of office building, extension of building, conference hall, guest house, residential building, expenditure on operation and maintenance activities.

However, Audit found that in five selected districts an amount of ₹6.41 crore was spent by six Divisions of PHED during 2019-24 for repair and maintenance works, and renovation of office building purposes which was inadmissible as per JJM Guidelines as detailed in ***Appendix-1.7***.

In reply, the Department stated (March 2025) that such expenditure was made considering the maintenance work as essential part of water supply schemes. The reply is not tenable as expenditure on such items is not permissible as per JJM guideline.

1.11.9 Wasteful expenditure due to expiry of Field Test Kits

Field Test Kit (FTK) is an assembly of simple portable equipment/accessory to measure various chemical constituents in the water sample obtained from the field. The FTKs generally give a qualitative estimate with the help of standard chemical reagents. FTKs are often used in rural areas where there are concerns about the availability of safe drinking water. Its estimated that 50 water quality tests can be conducted using one FTK. The life of an FTK was generally one year and each FTK should be used before its expiry date.

Scrutiny of records of six working divisions in the selected districts revealed that FTKs were procured locally by the divisions or, supplied by the agencies engaged by the Resources Division. Available FTKs were given to laboratories and *ASHA Karmis* for conducting water quality tests.

Audit observed that 15,120 FTKs were procured at the cost of ₹2.57 crore (during 2021-23) for six selected divisions by the Resources Division (PHED) and the selected divisions themselves. Out of this 6,582 FTKs were used for testing of water quality and the remaining 8,538 FTKs expired due to non-utilisation. Main reason for shortfall in carrying out water sample tests by using FTKs was shortage of *ASHA*[45] *Karmis* (49 to 98 *per cent)* and non-identification and training of women from each village for carrying out these water sample test by using FTKs. This resulted in wasteful expenditure of ₹1.45 crore as shown in ***Appendix-1.8***.

The Department stated (March 2025) that several meetings have been conducted to take necessary action to improve testing via FTKs.

[45] *Accredited Social Health Activist.*

1.12 Post Operational Management and Sustainability

1.12.1 Operation and Maintenance and long term self-sustainability of schemes.

As per the Jal Jeevan Mission (JJM) Guidelines (Paras 6.1.3, 6.1.4, and 5.4), operation and maintenance (O&M) of household tap connections is critical to ensure functionality of water supply schemes, and community-managed implementation was envisaged to instil a sense of ownership, promote transparency, and ensure long-term sustainability. Local communities were to be rewarded with 10 *per cent* of the capital expenditure as a revolving fund to meet emergency repairs and maintenance needs. Additionally, GPs/VWSCs were required to open bank accounts or use existing accounts to collect community contributions and O&M charges, maintaining a separate ledger for tracking. Audit observed that as of September 2024, 455 schemes were completed under JJM in the test-checked districts; however, none of the schemes were handed over to local communities, nor were any incentive funds provided. All O&M activities were undertaken by PHED divisions, and VWSC bank accounts remained non-operational due to non-collection of user charges following a State Government policy decision. Consequently, GPs and beneficiaries were not involved in maintenance, and instances of poor maintenance, damaged taps, intermittent water supply, and substandard water quality were observed during joint site visits in 16 villages of Purulia district (December 2023, February 2024, and July–August 2024). Thus, the intended objectives of community-managed operation and maintenance, fostering a sense of ownership, and ensuring long-term sustainability through beneficiary participation have not been realized.

Recommendation 2: The Department may consider handing over the completed schemes to GPs or VWSCs to ensure community partnership and ownership as envisaged in the JJM guidelines.

1.12.2 Skill development

As per Para 9.4 of JJM Guidelines, to achieve the goal of providing FHTC to every rural household, skilled human resource in areas like masonry, plumbing, fitting, electricity, *etc*., would be required. Also, agencies executing the schemes will need high quality human resources besides requirement of local skilled persons for continuous O&M of schemes.

Para 9.4 of JJM Guidelines emphasised that the State would have to identify district-wise requirement of such skilled human resources and train them on priority through Pradhan Mantri Kaushal Vikas Kendra (PMKVK). Proper training manual in local vernacular language was to be prepared. It was recommended to issue certificates to such trained persons and services of such people could be utilised in the schemes/work taken up under JJM.

The Chief Engineer (Headquarters) PHED stated (April 2024) that district-wise requirement of such skilled human resource had been assessed and the requirement of skilled human resource in 22 districts was 51,984 out of whom 20,886 (40 *per cent*) were imparted training through Government ITI. However, no training manual in the local vernacular language *i.e*., Bengali had been prepared.

Audit observed that out of six selected districts, only one Nodal Division[46] of Jalpaiguri district stated that 54 plumbers were imparted training in the district and certificates were issued to them as of July 2024. Further, the Division had no information regarding engagement of such trained plumbers in JJM works. No information in this regard was also provided by the other five test checked Divisions. During FGD with 10 GPs[47] of three test-checked districts[48] it was stated that no skilled human resource was engaged by GP/ VWSCs for creating in-village infrastructure under JJM.

Thus, PHED was not able to converge with training requirements under JJM with PMKVK to create a pool of skilled human resource who could be engaged by Gram Panchayat /VWSC in creating in-village infrastructure.

1.12.3 Grid-connected Solarization of PWS System

To lower the O&M cost by using renewable energy, PHED took up (2023-24) a project[49] for installation of solar power plant at pump house premises of different water supply schemes. As per project proposal, excess solar energy / surplus electricity thus generated, would be sold to the West Bengal State Electricity Distribution Company Limited (WBSEDCL). For this, net metering arrangement was to be made at the solar plant pump house site and through this net billing arrangement, WBSEDCL would raise electricity bills after giving credit for surplus electricity sold.

Audit observed that the work of installation of total 226 solar power plants under JJM was taken up by the concerned Mechanical Divisions[50], PHED in five selected districts[51]. Audit observed that work orders for solar power plants in premises of 226 PWSS were issued to the agencies (April 2022 -August 2023) at a total tendered amount of ₹14.89 crore against which expenditure incurred was ₹9.07 crore till September 2024. Scheduled period of completion of each solar plant was 45 to180 days from the date of issue of work orders. As of September 2024, solar panels of the solar power plants were installed at the premises of 165 PWSS (73 *per cent*) at a cost of ₹9.07 crore.

Five test-checked Mechanical divisions submitted applications to WBSEDCL in August 2024 for installation of net metering system but no meter was installed till September 2024 due to non-payment of electricity bills of WBSEDCL. Since the solar plants installed at the PWSS are grid-connected systems, net metering is an essential prerequisite for their operation. Without net meter, the solar system cannot be energised, as operating it would result in unsafe back-feeding of electricity into the grid. As a result, solar panels installed at the premises of 165 PWSS at a cost of ₹9.07 crore remained idle since 2022-23.

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[46] *Executive Engineer, Jalpaiguri Division (PHED).*

[47] *Bakadah, Bhora, Lakshxmisagar, Parsola, Chengmari, Lataguri, Matialihat, Indong Matiali, Belkash and Kshetia.*

[48] *Bankura, Jalpaiguri and Murshidabad.*

[49] *Constructing of Grid-connected Solar Photo-voltaic System.*

[50] *Northern Mechanical Division, Bankura Mechanical Division, Medinipur Mechanical Division, Purulia Mechanical Division and Central Mechanical Division.*

[51] *Jalpaiguri, Bankura, Purulia, Purba Bardhaman and Purba Medinipur.*

During joint site visit (July 2024) it was also observed that the solar panels at Lakshmisagar pump house premises in Simlapal block of Bankura district were almost covered with creepers due to non-maintenance of the premises of PWSS by the Department.

Fig.1.1: Newly installed solar panels at Lakshmisagar Pump House

Fig 1.2: Newly installed solar panels at Lakshmisagar Pump House (from different angle)

The Department stated (March 2025) that this was due to non-payment of pending electricity bills and the problem would be solved after payment of dues. The reply of the Department is not tenable as it should have taken steps to ensure timely bill payment to make the systems fully operational.

1.13 Water Quality Monitoring and Surveillance

As per Chapter 10 of JJM Guidelines 2019, drinking water quality was to be monitored by PHED whereas the surveillance of water quality at grass roots was the responsibility of the GPs/ rural community. Para 10.1 of JJM Guidelines stipulated testing of sources/ samples at different levels *i.e.,* (i) Sub-divisional/ block laboratory, (ii) District laboratory, and (iii) State laboratory.

In West Bengal there were a total of 219 laboratories at three different levels[52]. Test check of records of 88 laboratories (two state laboratories, six district laboratories and 80 sub-district laboratories of six test-checked districts), analysis of test reports, joint site inspections in the selected districts revealed several deficiencies in respect of Drinking Water Quality Monitoring and Surveillance as discussed in the succeeding paragraphs.

1.13.1 NABL accreditation/ recognition of laboratories

The Drinking Water Quality Monitoring & Surveillance Framework issued (October 2021) by the Ministry of Jal Shakti advocates that accreditation from National Accreditation Board for Testing and Calibration Laboratories (NABL) should be obtained for all laboratories.

Audit found that out of total 219 laboratories in the State, only 22 laboratories[53] were NABL accredited, 194 laboratories were NABL recognized and three[54] were yet to get NABL accreditation/ recognition. In addition, the State currently

[52] *Two state level, 22 district level and 192 sub-district level laboratories.*

[53] *2 State level and 20 district level.*

[54] *one in Malda district and two in South 24 Parganas district.*

operates seven Mobile Laboratory Vans (MLVs) in seven districts[55] for collection and testing of water samples from remote areas.

All of the 88 test-checked laboratories were conducting water quality tests for both chemical and biological parameters. However, these 88 test-checked laboratories were permitted by NABL to test against chemical parameters only, and not biological ones. Hence, the results of bacteriological and chemical tests being conducted by the laboratories without NABL permitted criteria, could not provide assurance regarding accuracy and reliability.

Scrutiny of records of Murshidabad Division (PHED) revealed that the Division engaged (September-October 2021) agencies for the purpose of acquiring NABL recognition for 12 sub-district laboratories. However, the work was taken up to obtain NABL recognition for 11 parameters instead of 13 parameters as suggested by Para 10.1 of JJM Guidelines. The two parameters- *i.e.*, arsenic and fluoride testing were left out despite the fact that the State had both arsenic and fluoride affected districts that were to be covered under JJM.

The Department stated (March 2025) that action would be taken for NABL accreditation/recognition to test bacteriological parameter.

Recommendation 3: Department may take steps to ensure that all laboratories are NABL in the State accredited for testing against all chemical and bacteriological parameters.

1.13.2 Infrastructure facility in laboratories

The Uniform Drinking Water Quality Monitoring Protocol (UDWQMP) was issued (February 2013) by the Ministry of Jal Shakti regarding minimum requirement of infrastructures such as required space, computers, internet, UPS, inverters (for back up), printer, telephone facility, air conditioners and provision of gas (LPG) in State, district and sub-district level laboratories. However, Audit found that out of nine such infrastructure[56] requirements, only one[57] was fully available in all the 88 test-checked laboratories. Status of availability of infrastructure in different laboratories shown in **Table 1.5**.

Table 1.5 : Details of deficiencies of infrastructure in test-checked laboratories

Type of lab	No. of test-checked lab	No. of labs where infrastructure available								
		adequate space[58]	adequate computers	internet	UPS	inverters (for back up)	printers	telephone	AC	LPG
State lab	2	1	2	2	2	2	2	0	2	2
District lab	6	4	6	6	6	2	6	5	6	0
Sub-district lab	80	17	78	79	71	71	77	73	80	1
TOTAL	**88**	**22**	**86**	**87**	**79**	**75**	**85**	**78**	**88**	**3**

(Source: Information supplied by the divisions)

[55] *Seven districts: South 24 Parganas, Malda, Howrah, Nadia, Paschim Medinipur, Purba Medinipur and Purulia.*

[56] *Required space, computers, internet, UPS, inverters (for back up), printer, telephone facility, air conditioners and provision of gas (LPG).*

[57] *air conditioners.*

[58] *Minimum space required for State laboratory: 170 sqm, District laboratory: 100 sqm and Sub-district laboratory: 80 sqm.*

During site visit by the Audit team to Islampur sub-district laboratory (23 July 2024), it was observed that water quality testing was being performed on a bench, in the absence of a proper workstation. Further the laboratory had only 18 sqm space for storage of testing equipment, performing testing and official works against requirement of 80 square meter (sqm).

The Department stated (March 2025) that a DPR has been prepared and is pending approval for providing adequate space in the laboratories. The Department, however, remained silent on the other deficient infrastructure like LPGs, inverters, UPS of the laboratories.

1.13.3 Availability of equipment in laboratories

As per UDWQMP, a State laboratory should have 43 different equipment while a district laboratory should have 32 of these. Further, 25 pieces of equipment were prescribed for a sub-district laboratory. Audit, however, found that out of the two State laboratories, one laboratory[59] did not have eight equipment[60] in place and the other State laboratory[61] lacked 13 pieces of equipment[62], out of the 43 prescribed (***Appendix-1.9***).

Out of 32 equipment prescribed, five equipment[63] were not available in any of the six test-checked district laboratories and there was also shortage of other types of equipment in the district laboratories. Details of non-availability and shortage of equipment are given in ***Appendix-1.10***. Similarly, out of 25 pieces of equipment, nine equipment[64] were not available in any of the 80 test-checked sub-district laboratories and there was also shortage of other types of equipment in the sub-district labs. Details are given in ***Appendix-1.11***.

Thus, in absence of required equipment for testing of water samples according to prescribed protocol, possibility of inaccurate results or lack of testing against important parameters could not be ruled out.

The Department had accepted the audit observation and stated (March 2025) that gap assessment has already been done and required equipment would be procured for smooth functioning.

Recommendation 4: The Department may ensure all laboratories are fully equipped with the required infrastructure, space, and prescribed testing equipment to enable accurate water quality testing.

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[59] *Dakshin Roypur Water Treatment Plant State Referral Laboratory.*

[60] *Flame Photometer, arsenic testing instrumentation (portable type), GC-MS/HPLC, Auto Burette and Auto pipette, Uranium Analyser, Kjeldahl distillation apparatus, Pressure Pump and PCR Machine.*

[61] *Kalyani State Referral Laboratory.*

[62] *Heating mantle, Magnetic stirrer (2 nos.), Flame Photometer, DO meter, Specific ion meter along with Electrodes (For Fluoride and Nitrate etc.), Auto Burette and Auto pipette, Uranium Analyser, Kjeldahl distillation apparatus, Pressure Pump, PCR Machine, Deep Freezer (- 20°C), Centrifuge and Reflux Apparatus/ COD Digester.*

[63] *Plate count and Colony Counter, Centrifuge, Microscope, Flame Protector and Kjeldahl distillation apparatus.*

[64] *pH meter (both, lab based and potable type), TDS/ conductivity meter (both, lab based and potable type), Nephelometer (turbidimeter), Digital balance, Refrigerator, 2 Hot air ovens, 1 Autoclave, Vacuum pump, UV laminar air flow chamber for bacteriological analysis.*

1.13.4 Availability of manpower in laboratories

Test check of two State, six district and 80 sub-district laboratories revealed that there was manpower shortage of 21 *per cent* in the State laboratories and 35 *per cent* shortage in both district and sub-district laboratories against the requirement as prescribed in UDWQMP (**Table 1.6)**.

Table 1.6: Status of availability of manpower in test-checked laboratories

Designation	Two state laboratories		Six district laboratories		80 sub-district laboratories	
	staff prescribed	staff available	staff prescribed	staff available	staff prescribed	staff available
Chief Chemist/ Chief Water Analyst	1 x 2 = 2	1	--	Not applicable	--	Not applicable
Sr. Chemist/ Sr. Water Analyst	1 x 2 = 2	2	--	Not applicable	--	Not applicable
Chemist/ Water Analyst	2 x 2 = 4	5	1 x 6 = 6	8	1 x 80 = 80	80
Microbiologist/ Bacteriologist	1 x 2 = 2	2	1 x 6 = 6	6	1 x 80 = 80	73
Laboratory Assistant	3 x 2 = 6	6	2 x 6 = 12	6	2 x 80= 160	78
Data Entry Operator	2 x 2 = 4	1	1 x 6 = 6	1	1 x 80 = 80	80
Lab Attendant	2 x 2 = 4	2	1 x 6 = 6	3	1 x 80 = 80	80
Sampling Assistant	2 x 2 = 4	3	2 x 6 = 12	7	2 x 80= 160	22
Total	**28**	**22**	**48**	**31**	**640**	**413**

(Source: Information supplied by the divisions)

Further, UDWQMP suggested that each laboratory should have at least one permanent post of Water Analyst/Chemist. However, Audit noticed that there was no permanent Analyst/ Chemist in any of the 88 test-checked laboratories. All the water Analysts/ Chemists were engaged on contractual basis.

The Department accepted the audit observation and stated (March 2025) that the issue of shortage of manpower had been taken up with due importance and the issue would be resolved as early as possible.

1.13.5 Performance of district laboratories

Para 10.1 of JJM Guidelines mandated that a minimum of five *per cent* of water samples tested in the district laboratories should be sent to the State laboratories for further testing. However, test check of six district laboratories revealed that there was shortfall in sending samples to the State laboratories ranging between 23 *per cent* and 85 *per cent* during 2019-24 as detailed in **Table-1.7**.

Table 1.7: Shortfall in sending samples to referral laboratories

Year	No. of district laboratories	Tests conducted by district laboratories	No. of samples required to be referred to state laboratories (5% of C)	No. of samples actually referred	Shortfall (*per cent*)
A	B	C	D	E	F
2019-20	06	12,214	611	472	139 (23)
2020-21	06	13,820	692	104	588 (85)
2021-22	06	13,760	687	214	473 (69)
2022-23	06	16,835	841	318	523 (62)
2023-24	06	20,673	1,033	332	701 (68)
TOTAL		**77,302**	**3,864**	**1,440**	

(Source: Information supplied by the PHED)

Test-checked divisions of PHED stated (July 2024- August 2024) that there were no clear instructions by the Department regarding referring samples to the State laboratories.

In addition to above, Para 10.1 of JJM Guidelines also mandates that the district laboratory would refer the positively tested water samples to the State laboratory immediately for further test to verify the test results of district laboratories. However, test check of six district laboratories revealed that between 89 *per cent* to 98 *per cent* of the positively tested samples were not sent to the State laboratories for verification (during 2019-24).

Thus, the accuracy of district laboratories with reference to the positively tested sample results could not be verified by the State laboratories to a large extent, in violation of JJM Guidelines.

The Department accepted the observation and stated (March 2025) that action has been taken to meet the shortfall of not sending samples from the district laboratories to the State one.

1.13.6 Performance of sub-district laboratories in water quality testing and monitoring

1.13.6.1 Achievement of targets of testing in sub-district laboratories

As per UDWQMP, annual target of a sub-district laboratory was to test 3,000 water samples. Test check of 80 sub-district laboratories in six selected districts[65] revealed that during 2019-24, there was shortfall in achievement of annual targets of testing ranging between six *per cent* to 39 *per cent* as detailed in **Table 1.8**.

Table 1.8: Shortfall in achievement of annual targets of testing of sub-district laboratories

(Tests in numbers)

Year	No. of sub-district laboratories	Target per year (B × 3,000)	Achievement	Shortfall (*per cent*)
A	B	C	D	E
2019-20	80	2,40,000	1,52,178	87,822 (37)
2020-21	80	2,40,000	1,47,010	92,990 (39)
2021-22	80	2,40,000	1,62,685	77,315 (32)
2022-23	80	2,40,000	1,83,363	56,637 (24)
2023-24	80	2,40,000	2,26,679	13,321 (6)
TOTAL	**400**	**12,00,000**	**8,71,915**	

(Source: Information supplied by the PHED)

It is evident from above table that water quality monitoring was hampered to some extent due to non-fulfillment of annual target.

The Department stated (March 2025) that inactiveness and absence of water facilitators of GPs were the main reason of shortfall in achieving the target. It further stated that recently an agency had been engaged for sample collection to overcome this kind of shortfall.

[65] *Jalpaiguri, Bankura, Purba Medinipur, Purba Bardhaman, Purulia, Murshidabad.*

1.13.6.2 Sending samples to district referral laboratories

Para 10.1 of JJM Guidelines mandates that the sub-district laboratory was to refer all the positively tested samples to district laboratory immediately for further test to cross verify. However, test check of 80 sub-district laboratories revealed that there was shortfall in sending positively tested samples to the district laboratories ranging from 98 *per cent* to 100 *per cent* during 2019-24 as detailed in **Table 1.9**.

Table 1.9: Shortfall in sending positively samples to district labs by sub-district labs

Year	No. of Sub-district laboratories	No. of positive samples detected by sub- district laboratories	No. of samples required to be referred to district laboratories	No. of samples actually referred	Shortfall (*per cent*)
2019-20	80	43,333	43,333	661	42,672 (98)
2020-21	80	37,412	37,412	135	37,277 (100)
2021-22	80	43,005	43,005	293	42,712 (99)
2022-23	80	38,139	38,139	308	37,831 (99)
2023-24	80	41,750	41,750	360	41,390 (100)
TOTAL		**2,03,639**	**2,03,639**	**1,757**	

(Source: Information supplied by the Division)

All the selected six divisions stated (July 2024-September 2024) that there was no clear instruction from the State for referring samples to the district laboratories. Thus, the performance of sub-district laboratories was not monitored and quality assurance and quality control in these laboratories was not ensured by the district laboratories.

The Department has accepted the audit observation and stated (March 2025) that action has already been taken to meet the shortfall as pointed out by Audit.

1.13.7 Water sample test by using FTKs

As per para 4.5 of JJM guidelines, Water Quality Surveillance was required to be undertaken by local community, GP/ VWSC by using Field Test Kits (FTKs).

1.13.7.1 Shortfall in water sample test using FTKs

DWQMS-October 2021 of Ministry of Jal Shakti stipulates that the FTKs used for examining physio-chemical contamination in water not only serve the purpose of initial screening of contamination but are also effective in generating community awareness about drinking water quality.

As per chapter 10 of JJM guidelines, five women from each village were required to be identified and trained for carrying out tests using FTKs by VWSC. Further, Standard Operating Procedure (SoP) advocates the roles and responsibilities at various levels of the State Government regarding water quality monitoring and management by ASHA workers using FTKs at ground level.

Test check of six selected divisions revealed that there was shortfall in conducting water sample tests by FTKs ranging from 30 to 100 *per cent* as detailed in **Table 1.10**.

Table 1.10: Shortfall in water sample test by using FTKs

Name of the Division	FTK procured	No. of test could be done (B X 50)[66]	No. of tests actually done	Shortfall in no. of tests conducted (*per cent*)
A	B	C	D	E
Jalpaiguri	968	48,400	11,455	36,945 (76)
Bankura	2,269	1,13,450	48,142	65,308 (58)
Purba Medinipur	2,907	1,45,350	1,13,592	31,758 (22)
Purba Bardhaman	2,943	1,47,150	69,895	77,255(52)
Purulia	1,366	68,300	9,450	58,850 (86)
Murshidabad	4,667	2,33,350	76,289	1,57,061 (67)
Total	**15,120**	**7,56,000**	**3,28,823**	

(Source: data provided by selected divisions)

Between 2021-22 and 2022-23, in the six test-checked districts, a total of 15,120 FTKs were procured, which could have facilitated 7,56,000 water sample tests during 2021-22 to 2023-24. However, despite the availability of FTKs, only a fraction of the tests was conducted, with a shortfall ranging from 22 *per cent* to 86 *per cent*. The primary reason for this shortfall was the non-identification and lack of training of five women by VWSCs from each village to carry out water sample testing using the FTKs.

Further, against the State requirement of 1,90,865 FTK users across 38,173 villages, only 47,075 ASHA Karmis were trained (identified) and engaged as of September 2024. In the six test-checked districts, shortage of FTK users ranged from 49 to 98 *per cent*, severely hampering surveillance efforts. As a result, large-scale under-utilisation of FTKs was noticed, and the actual extent of water contamination remained unassessed.

The Department accepted the observation and stated (March 2025) that preliminary discussions have been held to engage women from self-help groups for training in FTK-based testing.

1.13.7.2 Sending FTKs tested positive samples to nearest laboratories

As per Chapter 10 of JJM Guidelines, the water quality surveillance activities include use of FTKs at GP level to know the extent of contamination and refer the positively tested samples to the nearby water quality testing laboratory for confirmation. The cross verification is crucial to assess the accuracy of FTKs and the actual prevalence of water contamination.

However, test check of six selected divisions revealed that there was huge shortfall in sending FTK tested positive samples to the nearest laboratories for further testing to confirm the contamination levels as shown in **Table 1.11**.

[66] *With one FTK 50 water samples can be tested.*

Table 1.11: Shortfall in sending FTKs tested positive samples to nearest laboratories

Name of the division	No. of tests done	No. of case found positive (unsafe)	No. of positive case referred to the nearest district/ sub-district Lab (*per cent*)	Shortfall (*per cent*)
Jalpaiguri	3,044	643	Nil	100
	8,411	855	Nil	100
Bankura	20,238	1,618	Nil	100
	27,904	2,740	Nil	100
Purba Medinipur	30,298	2,399	2,150	10
	83,294	1,611	1,561	3
Purba Bardhaman	12,638	1,228	Nil	100
	57,257	2,300	Nil	100
Purulia	36	8	Nil	100
	9,414	1,031	Nil	100
Murshidabad	16,008	2,797	Nil	100
	60,281	4,729	Nil	100

(Source: Data provided by selected divisions)

The data indicates a significant lapse in the referral of positive water samples to the nearest laboratories for confirmation. In most divisions, except Purba Medinipur, none of the positive samples were sent for further testing. This highlights a systemic deficiency in verifying FTK results, undermining the accuracy of water quality monitoring and the assessment of actual contamination levels.

Selected Divisions stated (September 2024) that there was no clear instruction from PHED for referring positive samples to the nearest laboratories. Thus, it is evident that except one district, the positively tested samples of five districts were not sent for confirmation to any water quality testing laboratory, to assess the actual level of contamination.

The Department stated (March 2025) that initiative had already been taken to test the positive samples to nearest laboratories.

Recommendation 5: The Department may circulate specific directions for referral of water samples from lower level to higher level laboratories for further testing in compliance with JJM Guidelines.

1.13.8 Testing of all 13 basic water quality parameters

As per UDWQMP, 13 test parameters were required to be analysed in water testing laboratories of the State. However, test check of 86 laboratories of six selected districts and two State laboratories revealed that all the 13 parameters were not being tested in these laboratories as depicted in **Table 1.12**.

Table 1.12: Water quality parameters tested in 88 test-checked laboratories

Sl. No.	Parameter required to be tested	Number of laboratories tested the parameter	Number of laboratories not tested the parameter
1	Potential hydrogen (pH)	88	Nil
2	Turbidity	88	Nil
3	Total dissolved solid (TDS)	88	Nil
4	Total hardness	87	1
5	Alkalinity	87	1
6	Fluoride	28	60
7	Chloride	87	1
8	Sulphate	1	**87**
9	Nitrate	1	**87**
10	Arsenic	25	63
11	Iron	88	Nil
12	Total coliform	88	Nil
13	E. coli	87	1

(Source: Information supplied by test-checked divisions)

The above table indicates that while basic parameters such as pH, turbidity, TDS etc. were tested in all or most laboratories, however, critical contaminants like sulphate and nitrate were not being adequately tested. In particular, 87 out of 88 laboratories did not test for sulphate and nitrate.

Non-testing of nitrate poses a serious risk, as high nitrate levels in drinking water can cause blue baby syndrome in infants. Similarly, elevated sulphate levels can lead to *diarrhoea, dehydration, and gastrointestinal irritation*, especially to children and the elderly. The absence of such testing undermines the ability to detect and prevent significant health hazards, reducing the effectiveness of water quality surveillance in the State.

1.13.9 Deficiencies in chlorination

PHED instructed (2021) the Water Supply Divisions in the State to follow the Standard Operating Procedure (SoP) issued by the Department for undertaking chlorination practices.

This SoP issued by PHED *inter alia* advocated for:

i. Maintaining of disinfectant and chemical stock registers, besides a register for water quality tests, chlorination register etc.

ii. Equipping the pump operator with residual chlorine kits;

iii. Ensuring that disinfectants are stored in cool, dark and dry places inside the pump house;

iv. Ensuring that all staff who come in contact with chlorine receive basic training on the dangers of chlorine, how to handle and store it safely and basic first-aid measures etc.

Out of six selected districts, Audit conducted (September 2024) joint site visits of 20 pump houses (***Appendix-1.12***) in four selected blocks[67] of districts (*Jalpaiguri* and *Bankura*). During the joint site visits, Audit observed that:

i. Chlorine demand tests to determine the requirement of chlorine dosing were not carried out by any of the 20 pump houses.

ii. There should be in place one functional chlorination system and one stand-by chlorination system for uninterrupted chlorination of water supply. However, out of the 20 pump houses, there was only one chlorination system at 16 pump houses and in two pump houses, available stand-by chlorination systems were lying unserviceable for six months to one year.

iii. No chlorine measuring tools were available at any of the pump houses visited.

iv. Chlorination log books / registers were not maintained at 18 pump houses.

v. No chlorine testing kit was available at 15 of 20 pump houses and no residual chlorine tests were carried out for monitoring of residual chlorine value at these pump houses. In the remaining five pump houses, even though there were chlorine test kits, these were not being used and the residual chlorine values were being recorded in the registers on assumption basis. At one pump house[68], residual chlorine was tested (18 September 2024) in presence of Audit and the level of this was zero.

vi. No records regarding chlorine stock, consumption history, expiry details *etc*., were maintained and thereby, Audit could not gain assurance regarding legitimacy of chlorine supply and its consumption.

vii. Visitors book/register for recording visiting officials' instructions to the pump operators' / chlorine system operators' / agency personnel were not maintained in 15 out of 20 test-checked pump houses.

The inadequacy of chlorination was also evident from laboratory test results. In six test-checked districts, 1,35,902 water samples were tested during 2019-24, of which 1,23,358 were examined for residual chlorine. In 48,762 samples (39.53 *per cent*), no residual chlorine was detected, clearly indicating inadequate chlorine dosing. Further bacteriological tests conducted on 43,763 such samples revealed presence of coliform in 7,099 samples (16.22 *per cent*) and *E. coli* in 3,374 samples (7.71 *per cent*). These deficiencies posed significant health risks, contributing to incidence of waterborne diseases.

Audit analysis of data furnished by the Chief Medical Officers of Health of selected districts revealed that a significant number of persons continued to be affected by water-borne diseases such as dysentery, cholera, jaundice, *etc*., during 2019-24. As per records, over 15.60 lakh cases of dysentery and cholera and 9.07 lakh cases of other water-borne diseases were reported in these districts over the five-year period. Further, 78 deaths were also attributed to water-borne diseases during this period.

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[67] *Matiali and Kranti blocks of Jalpaiguri district and Simlapal and Bishnupur of Bankura district.*

[68] *CWR Pump house at Bhatra village of Bishnupur Block in Bankura district.*

The high incidence of water-borne diseases despite implementation of Jal Jeevan Mission indicates that adequate measures for ensuring potable water and proper disinfection at the consumer end were not effectively in place.

The Department stated (March 2025) that efforts were being made for proper chlorination and its regular monitoring.

Recommendation 6: Department may ensure proper chlorination of supplied water for maintaining minimum residual chlorine levels in drinking water so as to avoid bacteriological contamination.

1.14 Monitoring

There should be effective monitoring mechanisms in place to ensure functionality of tap connections, and availability of drinking water supply in adequate quantity, as well as of prescribed quality.

1.14.1 Monitoring by Third Party Inspection Agency

As per Chapter 6 of JJM Guidelines third party inspection and certification was mandatory before release of payments to contractors for all works executed under the JJM, to gain assurance of execution of quality work. The SWSM was to empanel Third Party Inspection Agencies (TPIAs) to check the quality of work executed by the agencies, quality of materials used for construction and quality of machinery installed in each of the scheme.

JJM was launched in the State in July 2020. However, TPIAs for 22 districts were engaged only in June 2022 and January 2023. Expenditure amounting to ₹4,811.07 crore was incurred under JJM in the State during 2019-22 for providing water to households. Thus, due to delay in engagement of TPIAs, payment of ₹4,811.07 crore was made without mandatory checking by TPIAs.

During joint physical verification by Audit (July 2024) along with Departmental officials poor quality of FHTCs works like rusting of newly installed taps, laying of pipelines over ground, non-attachment of taps with water connections to households *etc*., in three selected villages[69] where FHTC works were completed before engagement of TPIA, were noticed.

1.14.2 Use of technology in monitoring

As per Para 8.4 of JJM Guidelines, with the advent of smart technologies, it is possible to have centralised and continuous monitoring of water supply schemes in real-time, with the use of Internet of Things (IoT)[70], Geographic Information System (GIS) software, *etc*. Use of data analytics would enable analysis of data collected from rural areas and also allow the same to be used for various purposes by the utilities for smart management and better services.

Test check of records of six selected districts revealed that the work of installation of IoT system/devices in 106 schemes in three districts[71] were approved at an estimated cost of ₹ 26.51 crore by the State Level Scheme Sanctioning

[69] *Juranti Tea Garden, Yongttong Tea Garden, Jogesh Chandra Tea Garden.*

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

[71] *Murshidabad, Jalpaiguri and Bankura.*

Committee (SLSSC) during 2022-23. However, as of September 2024, no such IoT works were executed in any of the three districts. Thus, in absence of any IoT scheme, centralised and continuous monitoring on a real-time basis could not be made.

The Department stated (March 2025) that 853 IoT schemes costing ₹220.39 crore were sanctioned by SLSSC and would be taken up after commissioning of PWSSs. The reply of the Department is not tenable, since IoT-based monitoring is intended to function as an integral supervisory mechanism during execution as well as post-commissioning, to ensure quality assurance, accountability, and sustainability of service delivery.

Recommendation 7: The department may complete all sanctioned IoT based schemes at the earliest for real time monitoring of water supply schemes.

1.14.3 Integrated Management Information System

As per JJM Guidelines, a dedicated JJM- IMIS was set up by the Ministry of Jal Shakti, GoI to capture data related to JJM for concurrent monitoring. The JJM-IMIS *inter alia* was to be used for monitoring physical and financial progress of all JJM schemes. It was required to be ensured that data from States with respect to physical progress, expenditure, geo-tagging of assets, functionality status of projects etc., was captured on JJM-IMIS and kept in public domain. The executive committee of SWSM was to ensure that data related to physical and financial progress of JJM was regularly updated on the JJM-IMIS Portal, and validate the same.

However, Audit observed that there were discrepancies between JJM-IMIS data and the data furnish by the Divisions of selected districts as well as PHED. Some instances of such discrepancies noticed are detailed in **Table 1.13**.

Table 1.13: Discrepancy between JJM IMIS data and the data furnished by the audited units

Auditee units	Data as per JJM IMIS	Data as per the Audited units
PHED	Opening balance of central share for the State as on 01 April 2019 was ₹760.82 crore. (Report D1 of JJM-IMIS)	The Chief Engineer (Headquarters), PHED stated that opening balance of central share as on 01 April 2019 was ₹860.20 crore.
Northern Mechanical Division (PHED)	13 IoT schemes were approved by SLSSC in December 2022 at an estimated cost of ₹5.20 crore against which work orders were issued in 11 September 2023.	No work order in relation to IoT scheme was issued by the Division. Even no SLSSC meeting was held on 05 December 2022.
Bankura Mechanical Division (PHED)	Three IoT schemes were approved by SLSSC in November 2022 at an estimated cost ₹80.94 lakh against which work orders were issued in July and August 2023.	No work order was issued by the Division for IoT schemes.
	Work orders for 186 Mini PWS schemes approved by SLSSC with estimated cost of ₹71.59 crore against which work orders were issued in August 2022 and March 2023.	No work order was issued by the Division for the Mini PWS schemes.

Auditee units	Data as per JJM IMIS	Data as per the Audited units
Bankura Division (PHED)	225 Mini PWS schemes were taken up by Bankura Division.	431 Mini PWSS were taken up by the Division.
	48 FHTCs were provided in Har Ghar Jal declared Khapmayna village of Bankura district in August 2024.	Actual number of FHTCs provided in that village was 71.
Jalpaiguri Division (PHED)	1,203 FHTCs were provided in Har Ghar Jal Jogesh Chandra Tea Garden village of Jalpaiguri district on 16 June 2024.	Actual number of FHTCs provided in that village was 1,532 as on 20 October 2023.
Burdwan Division (PHED)	5,159 FHTCs provided under Rayan Water Supply Scheme in July 2024.	Actual number of FHTCs provided under Rayan PWSS was 4,394.
Tamluk Division, (PHED)	2,488 FHTCs provided in Habichak Water Supply Scheme of Purba Medinipur district in June 2024.	Actual number of FHTCs provided under Habichak Water Supply Scheme in June 2024 was 2,543.
PMU, WBPWSP (Purulia)	Expenditure booked in JJM-IMIS for "Left out Mouzas of Barabazar pipe water supply scheme" by PMU Purulia was ₹23.21 crore (February 2024).	Actual expenditure incurred by the unit for the same was ₹3.70 crore (February 2024)

From the **Table 1.13**, it may be seen that there were a number of discrepancies between JJM-IMIS data and PHED data.

The Department stated (March 2025) that now a State level approval was introduced in JJM-IMIS and every schemes entered by the Division is thoroughly checked at the State level to minimise the error. However, the Department remained silent on rectification of the data already entered in IMIS.

Recommendation 8: Department may put in place a proper mechanism for validation of data before hosting the same on the JJM-IMIS portal.

1.14.4 Social Audit

Paragraph 5.4 of JJM Guidelines requires the Gram Panchayats/ VWSCs to undertake social audit of JJM schemes. Social audit helps to identify deficiencies in a programme and provides an opportunity for timely corrections.

During the period 2019-24, ₹21,119.48 crore was spent on JJM by the State to provide potable water to households. Audit further observed that Social Audit was not conducted in any of the six test-checked districts by GPs. As a result, impact by promoting transparency, community participation and improving programme effectiveness could not be ensured. Accepting the Audit observation, the Department stated (March 2025) that henceforth GPs would be engaged to facilitate social audit.

Recommendation 9: The Department in collaboration with the Panchayat & Rural Development Department may encourage and facilitate GPs to conduct social audit of completed schemes.

1.15 Key stakeholders and Institutional Mechanism

Chapter 5 of JJM Guidelines elaborates on functions, roles and responsibilities of different organisations/bodies/offices. It envisages participation of relevant

agencies or stakeholders at the State/ District/ GP levels, in effective planning and implementation of drinking water services. Shortcomings noticed in the functioning/participation of key stakeholders are discussed in succeeding paragraphs.

1.15.1 State Water and Sanitation Mission

The Concept of State Water and Sanitation Mission (SWSM) was initiated for coordination, convergence and policy guidance. In the State, SWSM, headed by the Chief Secretary, was constituted in July 2004. After launch of JJM in the State in July 2020, PHED reconstituted (October 2020) SWSM for implementation of JJM in the State. It was to be headed by the Chief Secretary, GoWB as chairman and supported by 16 other members[72].

As per para 5.2 of the JJM Guidelines, the Apex Committee of SWSM was mandated to meet at least twice a year i.e. a minimum seven meetings were to be held during the period from October 2020 to March 2024. It was noted that the Committee conducted five meetings[73] (71 *per cent*) during this period.

Audit observed that SWSM was not performing its functions as detailed below:

i. No discussions were held regarding preparation/finalisation of SAP/ DAP in any of the meetings of the Apex committee.

ii. SWSM did not devolve powers to DWSM to accord administrative approval for intra-district and in-village infrastructure of water supply schemes. As a result, DWSM was unable to perform its functions as per JJM Guidelines.

iii. SWSM had not empowered GP/ sub-committee of GP for management of in-village infrastructures as per JJM guidelines.

iv. SWSM had not developed a O&M strategy and framed a policy on O&M of water supply schemes under JJM by GP/VWSC. As a result, schemes were not handed over to GPs/VWSC for O&M and PHED had to maintain the schemes from State fund.

v. SWSM had not framed any policy to check unauthorised /unmetered/ unaccounted connections to stop continued loss of revenue from users/ beneficiaries.

1.15.2 District Water and Sanitation Mission (DWSM)

A District Water and Sanitation Mission (DWSM), under the chairmanship of *Sabhadhipati* of *Zilla Praishad*, was to be constituted at the district level and was to function under the supervision, control and guidance of the *Zilla Parishad*. DWSM was responsible for overall implementation of JJM in a district. It was to convene monthly meetings to

i. consider and accord administrative approval of the in-village water supply infrastructure,

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[72] *Twelve Additional Chief Secretary/Principal Secretary/Secretary of different departments of GoWB, one representative from GoI and three experts/eminent persons.*

[73] *1st meeting on 17.11.2020, 2nd meeting on 15.03.2022, 3rd meeting on 25.07.2022, 4th meeting on 30.08.2022 and 5th meeting on 27.01.2024.*

ii. plan protection and preservation of village water sources, grey water management, preventing sources from getting polluted, *etc*.

Every year, for preparation of district annual action plan, views of people's representatives such as MP/ MLAs were to be solicited by DWSM.

PHED issued (October 2020) notification regarding re-constitution of all the 22 DWSMs[74] in October 2020. Audit observed following shortcomings in the functioning of DWSM:

i. Against targeted 41 monthly meetings of every DWSM, only two to 12 meetings were held in the selected six districts during the period from November 2020 to March 2024. Thus, there was huge shortfall (71 *per cent* to 95 *per cent*) in holding of meetings of DWSMs in the selected districts.

ii. DWSM was to ensure preparation of VAPs after taking stock of each village for FHTCs. DWSM was to approve the VAPs. On scrutiny of the VAPs of the 24 selected villages in six districts it was observed that VAPs were not approved by DWSMs.

iii. DWSM was to finalise a District Action Plan (DAP) to provide FHTC to every rural household by March 2024. Audit observed that DAPs were not prepared by DWSM of selected districts.

iv. DWSM was to provide administrative approval of in-village water supply schemes/ projects at district level as per the powers devolved by SWSM. Audit observed that SWSM did not devolve any such power to DWSM. As a result, DWSM was unable to approve in-village water supply schemes/ projects at district level. As a result, water supply schemes are being implemented by PHED without taking any feedback from district.

v. DWSMs could not developed any grievance redressal mechanism at GPs level to address water related problems as envisaged in the JJM Guidelines.

Thus, it was evident that DWSM were not given any administrative power to perform its functions as per JJM Guidelines and most of the functions of DWSM were performed centrally by PHED.

1.15.3 Village Water and Sanitation Committee

As per para 5.4 of JJM Guidelines, the community will play a lead role in planning, implementation, management, operation and maintenance of in-village water supply infrastructure thereby leading to FHTCs to every rural household through Village Water and Sanitation Committee (VWSC).

On scrutiny of records of working divisions in six selected districts, beneficiary survey in 24 selected villages and Focussed Group Discussion (FGD) in 21 GPs, it was observed that VWSCs were not involved in planning, designing, implementation and O&M of in-village water supply schemes as SWSM did not devolve powers to DWSM/VWSC to accord administrative approval for intra-district and all in-village infrastructure of water supply schemes all the in-village infrastructure was developed by PHED directly .

[74] *Sabhadhipati, Zilla Parishad as Chairman of DWSM, District Magistrate as Vice Chairman, Karmadhakshya, Janaswastha-O-Paribesh Sthayee Samity, Zilla Parishad as Member and other 14 members representing different departmental offices of the district.*

The Department stated (March 2025) that it was decided by the Government that PWSSs would be maintained by the Department. The reply is not tenable as PWSS should be maintained by GPs/VWSCs as per JJM guidelines.

Recommendation 10: Department should take steps to make the institutional arrangements (SWSM, DWSMs and VWSCs) functional as per JJM Guidelines.

1.16 Conclusion

The State could not achieve the JJM target of providing FHTCs to all rural households by March 2024. Targets of installation of FHTCs to all households by March 2024 remained largely unfulfilled, coverage in quality-affected and JE-AES districts was inadequate, and a significant proportion of schools and Anganwadi centres continued without assured potable water supply. Delays in project initiation, deficiencies in planning and DPR preparation, inadequate assessment of sources, and slow execution of augmentation works contributed to the shortfalls. Consequently, the objective of ensuring safe, adequate, and regular water supply to all rural households and institutions remained unachieved, leaving a large section of the population vulnerable to health risks.

Planning for JJM in the State was inadequate and not in line with the Scheme guidelines. Village Action Plans were delayed. District Action Plans were also not prepared, raising the risk that the State Action Plan was framed without reflecting village and district requirements.

Implementation of JJM works in the State suffered from major delays, poor planning, and weak execution. Only 14.73 *per cent* of sanctioned schemes were completed by December 2024, while retrofitting was undertaken without assessing adequacy of sources.

Post-operational management under JJM was deficient as completed schemes were not handed over to GPs/VWSCs, user charges were not collected, leading to poor upkeep.

Water quality monitoring under JJM was weak and the laboratories in the State lacked accreditation, infrastructure and manpower. Community surveillance through FTKs was also ineffective. Significant contamination by arsenic, fluoride, etc., coupled with poor chlorination practices, left rural households exposed to unsafe drinking water.

Monitoring under JJM was ineffective and Audit noted delays in engaging of TPIAs, besides lack of IoT-based monitoring, and absence of social audits that weakened transparency and accountability.