

EXECUTIVE SUMMARY

Why was the audit undertaken?

In Delhi, responsibility for water supply, sewerage, sewage disposal and drainage system vests with the Delhi Jal Board (DJB). In view of the shortage in water supply and inadequacy of sewerage facilities in Delhi, a Performance Audit was conducted covering the period from 2017-18 to 2021-22 to assess whether: (i) consistent and reliable water supply to all residents of Delhi was ensured by DJB (ii) the sewerage facilities were available to all localities in Delhi and whether sewage was treated and disposed off efficiently to reduce the disposal of untreated sewage into water bodies and (iii) the DJB managed its resources in an efficient and effective manner.

What were the audit findings?

- For Delhi's projected population of approximately 28 million by March 2041, Delhi Jal Board (DJB) assessed requirement of 1680 million gallons per day (MGD) of water. The shortage in availability of raw water against the assessed requirement increased from 22 per cent (2017-18) to 24 per cent (2021-22) whereas the shortage in potable water against the assessed requirement increased from 24.2 per cent to 25.79 per cent. Main reason for the gap between demand and supply of water was inadequacy of raw water sources, its treatment capacity and failure to augment its supply.

(Paragraphs 2.1 and 2.3.1)

- Despite lapse of more than 29 years since signing of MoU, the work could not start to build Renuka, Lakhwar and Kishau dams in order to utilize untapped flow of the river during monsoon, thus aggravating the scarcity issues.

(Paragraph 2.3.1)

- The Government has not framed a Water Policy or constituted a Water Consultative Council to advise the Board on policy matters and for formulation of annual and five years plans etc.

(Paragraph 2.2)

- In the absence of the flow meters at Water Treatment Plants (WTPs), Reservoirs, water emergencies and borewells, the quantity of water treated at WTPs/extracted from borewells, transmitted to Reservoirs and supplied to consumers could not be measured accurately.

(Paragraph 2.4)

- During 2017-22, the transmission loss of water distributed from Under Ground Reservoirs (UGRs)/ Service Reservoirs (SRs) increased from 16 *per cent* to 21 *per cent*. The situation was further aggravated by inequitable supply of potable water at zonal level. The per capita availability of potable water was less than 20 GPCD in four zones and less than 40 gallon per capita per day (GPCD) in eight zones against the requirement of 60 GPCD.

(Paragraph 3.1)

- There was shortage of staff and equipment in DJB testing labs. Testing of water was not being done as per BIS norms. There was continued use of carcinogenic Polyelectrolytes at private-run Water Treatment Plants (WTPs) and recycling plants despite a memorandum banning their usage.

(Paragraph 2.5)

- Due to non-enactment of Delhi Water Board (Amendment) Bill, 2011, there was no authority under the Delhi Government or DJB which has powers to effectively plan to regulate, control and develop groundwater resources. Out of 16,234 samples of ground water tested, 8,933 samples (55 *per cent*) were found unfit for potable purposes.

(Paragraphs 2.6.1.1 and 2.6.1.2)

- Non-Revenue Water (NRW) component was in the range of 51 *per cent* to 53 *per cent* of the average quantity of the water supplied per day during the period 2017-22, except for the year 2019-20. The estimated amount of revenue not realised by DJB during the said period on account of NRW was ₹ 4,988 crore.

(Paragraph 3.3)

- The quantity of sewage generated, estimated on the basis of water supplied in Delhi, was 594 MGD, out of which, 545 MGD was treated by 35 Sewage Treatment Plants (STPs). Apart from this, as per a Delhi Pollution Control Committee (DPCC) Report of March 2022, 212.59 MGD sewerage generated by 1080 unauthorised colonies was dumped into storm water drains in untreated form.

(Paragraphs 4.1 and 4.2.1)

- Treated effluent released by 25 STPs into Yamuna did not meet the norms prescribed by DPCC. There was also no mechanism to monitor Faecal Coliform (FC) bacteria levels in the treated effluent.

(Paragraphs 4.3.2 and 4.3.3)

- There was lack of effective grievance redressal mechanism in DJB. In a case, for example, DJB had to pay ₹ 25 lakh to Central Pollution Control Board (CPCB) on account of penalty imposed by National Green Tribunal (NGT) for delay, which could have been avoided through early action.

(Paragraph 4.3.4)

- There were deficiencies in conceptualisation and planning stages in the selected projects of sewerage and water supply. This led to delay in rehabilitation of Chandrawal WTP and its command area and withdrawal of financing ₹ 2,243 crore by Asian Development Bank (ADB) for rehabilitation of Wazirabad WTP and its Command areas under Delhi Water Supply Improvement Investment Programme.

(Paragraph 5.1)

- Cases of irregularities at estimation, awarding and in execution of works were seen during audit showing violation of NIT conditions and provisions of CPWD Manual.

(Paragraphs 5.2, 5.3 and 5.4)

- DJB has submitted accounts for Statutory audit only up to the year 2021-22 and Separate Audit Reports (SARs) on them have opined that the accounts of DJB do not depict ‘a true and fair picture’ of the affairs of DJB.

(Paragraph 6.1)

- There were shortfalls in revenue receipts over budget ranging between 11.28 *per cent* and 41.71 *per cent*. DJB was unable to meet its revenue expenditure commitments from its revenue receipts. The excess expenditure over income incurred by DJB (except in 2020-21) was met from earnest money, security deposit withheld and unspent balance of capital funds. DJB incurred more than 50 *per cent* of its revenue expenditure on payment of salaries to its staff leaving the organization with lesser resources for development expenditure.

(Paragraph 6.2)

- The total outstanding loan of DJB and interest to be paid stood at ₹ 66,595 crore (March 2022).

(Paragraph 6.3.2)

- During 2021-22, DJB had billed only 371 MGD (40 *per cent*) of potable water produced. Further, out of 371 MGD, only 244 MGD (66 *per cent*) was billed based on meter readings.

(Paragraph 6.3.3)

- IT based Revenue Management System implemented to simplify payment and application procedures for all types of services was marred with functional deficiencies viz. delay in rollout, absence of validation checks and facility of reconciliation of revenue received, and non-digitalisation of records.

(Paragraph 6.4)

- There was a mismatch of 3057 staff in IFMS figures and the figures of Persons in position maintained in different wings of DJB.

(Paragraph 7.1)

- During 2017-18 to 2021-22 shortage of regular staff had continuously increased from 23.09 *per cent* to 32.12 *per cent*.

(Paragraph 7.2)

- There were cases of irregular appointments in DJB violating codal provisions coupled with inadequately planned trainings and failure in implementation of transfer policy.

(Paragraphs 7.4, 7.5 and 7.6)

What do we recommend?

1. Formulation of a water policy and perspective plan for ensuring adequacy of water commensurate with the trend of growth in population of Delhi.
2. Installation of regularly calibrated flow meters at inlet/outlet points of all WTPs, UGRs and Tube wells and conducting water audit to plug water loss and revenue leakage.
3. Strengthen quality testing laboratories to ensure water quality testing as per all the prescribed parameters.
4. Prescribing schedule for maintenance and upgradation of essential infrastructure for water and sewerage, including GPS trackers on water tankers.
5. Expedite collection of outstanding dues with emphasis on large and institutional consumers so as to improve financial position.
6. Immediate action to address the serious shortage of staff in DJB.
