



**PERFORMANCE AUDIT REPORT ON
CONTRIBUTION OF WASA IN
DRINKING WATER SUPPLY,
RESERVOIR MAINTENANCE, SANITATION
& REVENUE COLLECTION
FINANCIAL YEARS 2018-19 to 2021-22
AUDIT YEAR 2022-23**

AUDITOR-GENERAL OF PAKISTAN

**SERVING THE NATION BY PROMOTING ACCOUNTABILITY, TRANSPARENCY
AND GOOD GOVERNANCE IN THE MANAGEMENT AND USE OF PUBLIC RESOURCES
FOR THE CITIZENS OF PAKISTAN**

PREFACE

The Auditor-General of Pakistan conducts audit under Articles 169 and 170 (2) of the Constitution of the Islamic Republic of Pakistan, 1973 read with Sections 8 and 12 of the Auditor General's (Functions, Powers, and Terms and Conditions of Service) Ordinance, 2001. The Performance Audit of 'Contribution of Water and Sanitation Agency (WASA) in drinking water supply, reservoir maintenance, sanitation and revenue collection' was carried out accordingly.

The Directorate General of Audit Works (Provincial), Sindh conducted the Performance Audit during May, 2023 with a view to report significant findings to the stakeholders. Audit examined the economy, efficiency, effectiveness, environment and equity factors associated with the operations of WASA. In addition, Audit also examined, on a test-check basis, whether the management complied with applicable laws, rules and regulations in the dispensation of its services. The Audit Report indicates specific actions that if taken, will assist the management in improving its core objectives. The observations included in this report have been finalized after discussion with the management. However, no Departmental Accounts Committee meeting was convened by the PAO.

The Performance Audit Report is submitted to the Governor of Sindh in pursuance of Article 171 of the Constitution of the Islamic Republic of Pakistan, 1973 for causing it to be laid before the Provincial Assembly of Sindh.

Islamabad
Dated:

(Muhammad Ajmal Gondal)
Auditor-General of Pakistan

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ABBREVIATIONS AND ACRONYMS

ADWWQL	Advanced Water and Wastewater Quality Laboratory
APP	Annual Procurement Plan
BER	Bid Evaluation Report
BLISS	Brick-lined Inverted Sewerage System
CPWA	Central Public Works Accounts Code
CSR	Composite Schedule of Rates
Cwt.	Hundredweight
DAC	Departmental Accounts Committee
DC	Deputy Commissioner
DGAWPS	Director General Audit Works Provincial Sindh
ECNEC	Executive Committee of National Economic Council
ESTP	Eastern & Southern Sewerage Treatment Plant
FBR	Federal Board of Revenue
FD	Finance Department
HDA	Hyderabad Development Authority
HR	Human Resource
INTOSAI	International Organization of Supreme Audit Institutions
KPIs	Key Performance Indicators
MB	Measurement Book
MD	Managing Director
MGD	Millions of Gallons per Day
MT	Metric Ton
NEQS	National Environmental Quality Standards
NOC	No Objection Certificate
PAC	Public Accounts Committee
PAO	Principal Accounting Officer
P&D	Planning and Development
PE	Polyethylene
PEC	Pakistan Engineering Council
PD	Project Director
P Rft.	Per Running Feet
PCRWR	Pakistan Council of Research in Water Resources.
PSDP	Public Sector Development Programme
RCC	Reinforced Concrete Cement
SBCA	Sindh Building Control Authority
SEPA	Sindh Environmental Protection Agency
S&GAD	Services and General Administration Department
SFR	Sindh Financial Rules
Sq. ft.	Square Feet
SITE	Sindh Industrial Trading Estate

SPPRA	Sindh Public Procurement Regulatory Authority
USPCAS-W	U.S-Pakistan Center for Advanced Studies in Water
WASA	Water & Sanitation Agency

EXECUTIVE SUMMARY

The Director General of Audit Works (Provincial), Sindh conducted the Performance Audit on ‘Contribution of WASA in drinking water supply, reservoir maintenance, sanitation and revenue collection’ during May, 2023. The main objectives of this audit were to assess the economy, efficiency, effectiveness, environment and equity in the dispensation of the services by the WASA. The audit was conducted in accordance with the INTOSAI Auditing Standards.

Audit was carried out to ascertain whether or not the expenditure was incurred with proper authorization and the same also conformed with the relevant laws, rules & regulations regarding the achievement of the core objectives. The Water and Sanitation Agency (WASA) comes under the administrative control of the Hyderabad Development Authority (HDA).

Key Audit Findings

The key audit findings are as under:

- i. Significant cost and time overrun making project uneconomical.
- ii. Defective/un-economical execution of civil works.
- iii. In-efficient revenue collection & payment mechanism.
- iv. Supply of drinking water without proper treatment.
- v. In-efficient functioning of water lagoons.
- vi. Non-functioning of treatment plants causing sewerage hazards.
- vii. Construction of lagoon on an encroached area.
- viii. Unequal water distribution due to demand and supply gap.
- ix. Un-fair billing to the consumers due to non-functioning of electromagnetic meters.

Recommendations

Following recommendations are proposed:

- i. Effective mechanism be developed to enhance capacity for equal distribution.
- ii. Completion of strategic sewerage project may be ensured to avoid further delay resulting cost and time overrun.
- iii. Implementation of proper mechanism for monitoring of civil works.
- iv. Ensure billing on actual consumption of water through electro-magnetic meters.
- v. Adoption of effective measures for water treatment in conformity with the National Environmental Quality standards (NEQS) in order to ensure the smooth supply of clean water.
- vi. Ensure the functioning of treatment plants to their full capacity and disposal of sewage into canals after proper treatment.
- vii. Effective and efficient recovery & payments mechanism be developed.
- viii. Effective usage & maintenance of water lagoons and removal of encroachments.
- ix. Strict compliance of SPPRA rules for economy and efficiency.
- x. Strict financial propriety be implemented in procurements.

1 INTRODUCTION & METHODOLOGY

1.1 Background

Hyderabad is the second largest city of Sindh province and seventh largest city of Pakistan¹, having a population of 2.432 million as per the census of 2023². Before 1977, the Public Health Engineering Department was responsible for providing water supply and sewerage services to Hyderabad. Afterwards, these services were dispensed by Hyderabad Municipal Corporation. In 1976, Hyderabad Development Authority was established after the enactment of Sindh Assembly Act No-XIII of 1976 with the mandate for the development, improvement and beautification of urban areas of Hyderabad.

Water and Sanitation Agency (WASA) was established under Section 13 of the HDA Act, 1976. WASA is an important entity responsible for supply of portable water in the urban areas of Hyderabad. It also manages the sewerage system within the city to ensure a hygienic environment. The collection of revenue for sustained economic viability is also the core function of the WASA. In order to meet the existing demand and supply gap, WASA introduced various development schemes to develop infrastructure for improved service delivery.

The performance audit of WASA is carried out to examine economy, efficiency, effectiveness, environment and equity factors in the dispensation of its core services such as hygiene supply of water and sanitation disposal after proper treatment into the canals, maintenance of sustainable infrastructure for water supply and sanitation, and realization of targeted revenue. Audit will examine and review the overall performance of WASA in terms of service delivery and its core functions.

¹ https://en.wikipedia.org/wiki/List_of_cities_in_Pakistan_by_population.

² <https://www.pbs.gov.pk/sites/default/files/population/2023/Sindh.pdf>.

Financial Resources

Year-wise allocation of funds

(Rs. in Million)

Financial Year(s)	Own Source Revenue		Expenditure	
	Revenue Targets	Realization	Budget Allocation	Expenditure
Expenditure from own sources				
2018-2019	2,168.028	820.472	2,167.528	820.472
2019-2020	2,126.000	1,482.000	2,126.000	1,482.000
2020-2021	2,823.000	1,493.000	2,823.000	1,493.000
2021-2022	2,718.108	1,062.136	1,843.222	1,062.136
Total	9,835.136	4,857.608	8,959.750	4,857.608

(Rs. in Million)

Financial Year(s)	Source of funds by GoS	Budget Releases	Expenditure
2018-2019	ADP funds released by GoS	772.875	772.875
2019-2020	ADP funds released by GoS	1,397.451	1,397.451
2020-2021	ADP funds released by GoS	659.494	659.494
2021-2022	ADP funds released by GoS	1,419.732	1,419.732
	Total	4,249.552	4,249.552

1.2 Audit Objectives

The main audit objectives are as follows:

- i. To assess the economy factor in the execution of schemes.
- ii. To review the efficiency of WASA in dispensation of its services.
- iii. To determine whether the available resources were utilized effectively for supply of clean water and disposal of sewage after proper treatment.
- iv. To assess the implementation of environment factor in service delivery.
- v. To check the equity factor in water supply and disposal of sanitation.
- vi. To assess the reasons behind the gap between demand and supply of water.
- vii. Whether the waste-water is treated before disposal into the canals/ river.
- viii. To examine rehabilitation activities of old structure.
- ix. To determine any community awareness program was initiated to conserve water and increase recovery.

- x. To analyze whether tariff/taxes are revised on annual basis.
- xi. To identify reasons for encroachment of WASA property.
- xii. To review the implementation of PSQCA, WHO, Sustainable Development Goals-2030 of the United Nations adopted by Pakistan and ISO standards in maintaining the quality of drinking water, reservoir maintenance, disposal and treatment of wastewater.
- xiii. To evaluate the implementation status of civil works in terms of cost and time overrun.
- xiv. To analyze gaps in the planning, implementation and monitoring stages of various schemes.

1.3 Scope and Limitation

The scope of the audit was to examine the performance of WASA in drinking water supply, reservoir maintenance, sewage services, sanitation and revenue collection. Audit covered the period from the Financial Years 2018-19 to 2021-22.

1.4 Audit Methodology

The audit methodology adopted was based on well-structured approach on the 5Es Framework - Economy, Efficiency, Effectiveness, Environment, and Equity. The methodology includes defining key performance indicators (KPIs), determining the rationale for selected KPIs, assessing performance against these KPIs and verifying the information through various data sources. Significant KPIs used to evaluate the performance of WASA were as follows:

Aspect	Key Performance Indicators (KPIs)
Economy	<ul style="list-style-type: none"> - Analysis of cost and time over-run. - Evaluation of contracts as per SPPRA rules, regulations and policies. - Defective execution of work.
Efficiency	<ul style="list-style-type: none"> - Existence of internal control mechanism. - Comparison of items, quantities, schedule of rates, rate analysis and bills. - Review of non-functional water supply schemes. - Efficient revenue collecting mechanism.
Effectiveness	<ul style="list-style-type: none"> - Supply of clean water to the target population as per national standards. - Expansion in WASA capacity as per population ratio. - Optimum utilization of available resources.
Environment	<ul style="list-style-type: none"> - Review of treatment to sewage prior to disposal. - Review of reasons behind non-functional treatment plants

Aspect	Key Performance Indicators (KPIs)
Equity	<ul style="list-style-type: none"> - Review of water supply policy to ensure equitable distribution of water. - Examine the functionality of electro-magnetic metering system.

Note: (Detailed KPIs are provided in the Annexure-J).

1.4.1 KPIs for 5Es

The selection of KPIs is based on two primary considerations:

1. Some KPIs are derived from the core functions, specific objectives and operational framework of WASA, such as clean supply of water and sustainable sanitation services, maintaining healthier environment and optimum utilization of resources.
2. Other KPIs follow WHO, PSQCA, PCRWR best practices, including adherence to SPPRA Rules and Regulations, Sindh Financial Rules, General Financial Rules (GFRs) as well as SDGs of the United Nations.

Methodology used to assess performance against the KPIs of 5Es involve following steps:

i. Data collection and documentary review

- **Financial record:** Budget, revenue collection, expenditure and financial statements.
- **Procurement & contract documents:** Evaluation of bidding processes, contract awards, and compliance with SPPRA rules and regulations.
- **Operational record:** Analysis of realized revenue, utilized funds, service delivery and compliance with regulatory standards.
- **Regulatory compliance reports:** Examination of documents, lab tests and audit reports.
- **Environmental compliance reports:** Examination of environment, hygiene and safety standards.
- **Market analysis reports:** Comparative analysis of set standards with hygiene supply of water.

ii. Interviews & stakeholder consultation:

- **Interviews** with key managerial hierarchy and technical and non-technical staff to understand organizational structure, internal controls, service delivery, financial decisions and procurement processes.

- **Feedback** in the shape of laboratory reports on water samples at the end-user level to evaluate quality of supplied water.

iii. Physical inspections & field visits:

- Physical inspections of water lagoons, water treatment plants and sewerage disposals.
- Review of operational capacity of sewage disposals and water treatment.
- Inspection of field laboratory of the Agency.

iv. Data validation & cross-verification:

- Cross-checking of procurement records with SPPRA website.
- Comparison of Agency's lab reports on water with independent laboratory.
- Reconciliation of financial transactions with vouchers, bank statements, cash book and SAP data.

Note: Details of data sources and verification methods are provided in the Annexure-K.

2 AUDIT FINDINGS

2.1 Economy & Efficiency

2.1.1 Economy

The observations in this category focus on factors in WASA that are directly related to the cost overruns, misallocation of resources and providing insights into financial management and budgetary control. Specially, acquisition of resources at the right cost, time, place, quantity and at right quality. The economy related observations are summarized as follows:

2.1.1.1 Cost-overrun due to delay in completion of the major development scheme – Rs. 2,592.110 million

According to the original PC-I of the scheme ‘Construction of Eastern and expansion of Southern sewerage treatment plant’, the work was to be completed in June, 2008 with the original cost of Rs. 915.300 million.

During the Performance Audit of WASA, it was observed that scheme for construction of Eastern & Expansion of Southern Sewerage Treatment Plant (ESTP) was approved under the President’s Hyderabad Development Package for the treatment of hazardous waste/disposal of sewage at Darya Khan. The scheme was started in 2007 and was planned to be completed in 2008. However, only work of erection tank, approach road and compound wall had been completed so far. Due to delay in execution of scheme, the management proposed revision in cost of the project from Rs. 915.300 million to Rs. 3,507.410 million with excess cost of Rs. 2,592.110 million. The location map of the scheme is attached as **Image-I**. Details are tabulated as follows:

[Rs. in Million]

Date of actual commencement	Stipulated date of completion	Original cost	Revised cost (Under revision)	Excess cost	Payment up to June 2022	Physical Progress
Construction of Eastern & Expansion of Southern Sewerage Treatment Plant (ESTP)						
October, 2007	June 2008	915.300	3,507.410	2,592.110	660.080	44%

Audit is of the view that due to failure in the timely completion of scheme, not only the estimated cost was increased, but the intended benefits for the public service were also not achieved which showed uneconomical and poor execution of the scheme.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit recommends prompt completion of the scheme besides, fixing of responsibility on the person(s) at fault.

[Para No. 01]

2.1.1.2 Defective/un-economical execution of civil works – Rs. 33.544 million

According to Para-2 (a) of the M/s. RCC Consultants letter No. RCC/WASA/3058/2020 dated 27-11-2020 and No.3088 dated 09-12-2020, “Columns over the piping gallery component tilted out of Plumb by 25 mm or more and needed to be dismantled without continuing further work on the component.” Further, according to Clause No.1.9.2, Volume-3 of 4 Part-3 of 3 of General Conditions of Contract, “Contractor should nominate a Project Manager (PM) with 15 years’ experience of construction management and 5 years of which should be in similar projects.”

During the Performance Audit of WASA, it was observed that the management executed work on the scheme wherein the following irregularities, having financial impact on economy of the project were noticed during the execution stage:

- An expenditure of Rs. 40.583 million was incurred for the construction of a clear water tank, piping gallery & control room. The consultant’s report revealed that columns over the piping gallery had tilted out of the plumb by 25 mm and needed dismantling. Thus, an expenditure of Rs. 33.544 million pertained to the defective portion on columns of piping gallery area out of total expenditure of Rs. 40.583 million was incurred. Details are provided in **Annexure-A.**
- Further, the consultant highlighted serious issues against the contractor’s performance in his report, which rendered him unqualified on the basis of engaging non-technical staff, which resulted in defective execution.

Audit is of the view that due to execution of the defective work, substantial amount of financial resources were wasted, rendering the scheme uneconomical because of inefficient contract management and project oversight.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit recommends conducting an inquiry into the matter besides, fixing of responsibility on the person(s) at fault.

[Para Nos. 8]

2.1.1.3 Extra expenditure due to change in the route of sewerage line – Rs. 29.058 million

According to Section 23 (1) of the Hyderabad Development Authority Act, 1976, “At any time after sanctioning of any scheme by government or authority but before its completion, the authority may alter it, with the approval of the government, if by the alteration the cost of the execution of the scheme is likely to increase by more than ten percent of such cost or fifty thousand rupees and without the approval of the government if, by such alteration, the cost of the execution of the scheme is not likely to exceed such limits.” Further, as per Section 23 (2) of *ibid*, “If the alteration under sub-section (1) involves the acquisition, otherwise then the agreement, of any land or in any manner adversely affects any property or interest of any local council, government agency, society, person or body of persons, the procedure laid down in sections 19 and 20 shall be followed for sanctioning of the alteration.”

During the Performance Audit of WASA for the Financial Year(s) 2018-2022, it was observed that originally 5 ft. wide drainage line was planned to be laid which was later on reduced to 3 ft. The original length of drainage line was also increased from 2,150 Rft. to 3,050 Rft. (900 Rft. increase). This alteration increased the cost of the scheme by Rs. 29.058 million. Further, the drainage line passes through the center of Qasimabad Sports Complex making the sports complex prone to potential damage. However, reasons of decreasing capacity of the drainage scheme, modification in route and approval of the competent forum were not available on record. Pictorial evidences are attached as **Images-II & III**. Details are provided in **Annexure-B**

Audit is of the view that route of the scheme was modified without any cogent justification and economical aspect in the execution of the scheme were ignored.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit seeks inquiry in the matter, besides fixing of responsibility on the persons(s) at fault.

[Para No. 9]

2.1.1.4 Use of costly item contrary to financial propriety – Rs. 11.690 million

According to the estimate of the scheme, approval was given against the item of work, “Providing & fixing in trench including fitting, jointing & testing etc. complete in all respect, the high-density polyethylene P.E Pipes (HDPE-100) for water supply conforming to ISO 4427/DIN-8074/8075 B.S 3580 & PSI 3051 PN-10 (PHS # F1, P # 26).”

During the Performance Audit of WASA, it was observed that the management utilized P.E pressure pipes of PN-10 specification up to the quantity of 6,960 @ Rs. 5,138 P. Rft. for new sewerage connections and PN-08 pipes up to the quantity of 5,040 @ Rs. 4,205 P. Rft. in the same scheme for existing sewerage connections without any cogent reasons for change of specification. The rate difference between PN-08 and PN-10 pipe was Rs. 933 P. Rft. Details are provided in **Annexure-C**.

Audit is of the view that cost of the scheme could have been decreased by utilizing PN-08 pipe in the entire scheme instead of PN-10 pipe which had a higher value in terms of economy. Consequently, an amount of Rs. 11.690 million was paid in excess, causing burden on the public exchequer.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit seeks justification in the matter.

[Para No. 19]

2.1.1.5 Unjustified utilization of rejected bricks – Rs. 2.341 million

According to the remarks incorporated in Para-2 (b) of the M/s. RCC Consultants letter No. RCC/WASA/3058/2020 dated 27-11-2020 and No.1618 Dated 09-12-2020 “The contractor used rejected bricks of less than class-III category.”

During the Performance Audit of WASA, it was observed that the work was approved in the estimate for laying pacca bricks of the Class-I category. Contrary to that 153,844 Nos. of rejected bricks less than the Class-III category were laid having financial impact of Rs. 2.341 million. Details are provided in **Annexure-D**.

Audit is of the view that rejected bricks were used which resulted in defective work, consequently compromising the quality of the work and un-economical utilization of resources.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit recommends conducting an inquiry into the matter, besides fixing of responsibility on the person(s) at fault.

[Para Nos. 18]

2.1.2 Efficiency

The observations in this category focus on inefficiency of WASA management in optimizing resource utilization, ensuring that operations are conducted with minimal waste and maximum output. These observations are mainly related to the proper allocation of resources and overall productivity of management processes. These insights provide a detailed evaluation of operational efficiency, workflow improvements and strategic decision-making to enhance service delivery and cost-effectiveness. The efficiency related observations are summarized as follows:

2.1.2.1 In-efficient revenue collection system – Rs. 4,136.171 million

According to Section 56 (1) of the Hyderabad Development Authority Act, 1976 “The authority may supply to a government agency, such quantity of water at such rate and subject to such terms and conditions as may be agreed upon between the authority and the government agency or in the case of disagreement between them as may be determined by the government within the limits of water resources available

with the authority.” Further, as per Section 65 of *ibid* “Any sum due to the authority or any agency or wrongly paid by the authority or an agency under this act, shall be recoverable as arrears of land revenue.”

During the Performance Audit of WASA, it was observed that the management failed to realize revenue of Rs. 4,136.171 million. Details are as follows:

a) Dues of water & sewerage charges against Provincial Government Departments – Rs. 4,116.406 million

The bills of Rs. 491.921 million were issued to the different departments of the Government of Sindh however, only recovered Rs. 98.462 million against the demand and failed to recover outstanding dues amounting to Rs. 4,116.406 million including previous year’s outstanding dues of Rs. 3,730.786 million on account of water and sewerage charges. Details are provided in **Annexure-E**.

b) Non-recovery of water connection application fee – Rs. 14.341 million

The management received 143,409 applications for new water and sewerage connections from different residential/commercial consumers however, application fee of Rs. 100/- on new connection was not recovered. Details are tabulated as follow:

[Rs. in Million]

Sr. No.	Financial Year	Commercial	Domestic	Total	Rate per form	Amount
	[Para No. 3]					
01	2018-2019	4,903	125,035	129,938	100	12.994
02	2019-2020	622	6,760	7,382	100	0.738
03	2020-2021	280	2,677	2,957	100	0.296
04	2021-2022	804	2,328	3,132	100	0.313
	Total	6,609	136,800	143,409		14.341

c) Outstanding dues from builders – Rs. 5.423 million

The management issued challans to the builders on account of NOCs, water connections and betterment charges for an amount of Rs. 12.877 million. However, failed to recover an outstanding amount of Rs. 5.423 million. Details are provided in **Annexure-F**.

d) Existence of unauthenticated receipts without entry in accounts

The management issued manual challans up to Sr. No.989 Booklet No. Nil through Taxation Department – WASA on account of ‘betterment charges’ in addition to the amount collected from the Regional Directorate of SBCA, Hyderabad. However, scrutiny of the record revealed that the management accounted for only 31 nos. of challans worth Rs. 26.925 million, out of which Rs. 21.501 million was recovered and Rs. 5.423 million remained outstanding. Hence, the revenue received against 958 challans was not accounted for in the books of account. Details are tabulated as follows:

[Rs. in Million]

Total No. of challans issued	No. of challans accounted for	Remaining missed challans	Amount of 31 challans	Amount realized from 31 challans	Outstanding balance
[Para No. 2]					
989	31	958	26.925	21.501	5.423

Audit is of the view that non-recovery of outstanding dues reflected existence of inefficient revenue management on the part of the WASA which resulted towards financial crisis of the Agency. The non-revision of tariff rates on annual basis and non-existence of effective awareness campaign system also contributed towards financial crises in WASA.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit recommends establishment of efficient revenue system and recovery of outstanding dues, besides fixing of responsibility on the person(s) at fault.

[Para Nos. 2, 3, 4 & 6]

2.1.2.2 Non-realization of budgetary targets – Rs. 2,266.466 million

According to Rule 28 of the General Financial Rules Volume-I, “No amount due to Government should be left outstanding without sufficient reason, and where any dues appear to be irrecoverable, the orders of the competent authority for their adjustment must be sought.”

During the Performance Audit of WASA, it was observed that the management targeted to collect revenue of Rs. 2,266.466 million on account of water and sewerage charges against existing connections however, the management realized only an average revenue of Rs. 1,147.352 million, showing 50.62% shortfall in targeted revenue in four years (2018-2022), despite organization has serious financial crisis. Details are tabulated as follows:

[Rs. in Million]

Sr. No.	Financial Year	No. of connections	Yearly revenue target	Actual recovery	Shortfall	(%)
01	2018-2019	130,840	1,490.238	740.119	750.119	49.66%
02	2019-2020	137,600	1,639.262	902.938	736.324	55.08%
03	2020-2021	140,277	1,970.840	1,026.732	944.108	52.10%
04	2021-2022	143,409	2,266.466	1,147.352	1,119.114	50.62%

Audit is of the view that non-realization of revenue targets reflected inefficiency on the part of the management, resulting in financial crisis of the organization.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit recommends putting in serious efforts for the realization of revenue to overcome the financial crises in the organization.

[Para No. 5]

2.1.2.3 Inefficient payments on account of secured advance against unverified supply order – Rs. 149.295 million

According to the standard form of bidding documents issued by SPPRA, “The contractor shall be entitled to receive a secured advance from the procuring agency against an indenture bond in P.W. Account Form-31 (F.R. Form No.2) in respect of non-perishable materials brought at the site but not yet incorporated in the permanent works and sum payable for such materials on site shall not exceed 75% of the landed cost of imported materials, of ex-factory/ex-warehouse price of locally manufactured or produced materials or market price of standard materials. A detailed account of advance must be kept in Part II of the running account bill. The secured advance may

be permitted only against materials/quantities anticipated to be consumed/utilized on the work within a period of 03 months from the date of issue of secured advance.”

During the Performance Audit of WASA, it was observed that the management made a secured advance payment amounting to Rs. 149.295 million against the supply of 3,700 Rft. 1,600 mm DN P.E Pipes in three instalments. The first instalment was paid on 13-09-2018 whereas, the excavation work for the pipe installation was executed in the 04th R.A. bill on 07-10-2019 as per measurement book No.953 Page No.07 & 14. Hence, the secured advance was granted against the items which were not utilized within the period of 03 months.

Further, the secured advance was granted on submission of unverified booking order form No. Nil dated 27-08-2018 of the manufacturer mentioning cash as a mode of payment to the company’s representative for the supply of 1600 mm DN P.E pipes without verification and confirmation of the booking order from the manufacturer. Details are tabulated as follows:

[Rs. in Million]

R.A Bill No. & Dated	Name of work & contractor	Qty.	Unit	Rate	Amount
1 st R.A bill Dated 13-09-2018	Providing, laying, jointing & testing of 60" dia P.E Water supply rising main from canal intake pumping station to pre-settlement lagoons including inter-connection and allied works, Hyderabad (M/s. Muhammad Iqbal Shaikh & Co.)	3,700	Rft.	16,140	59.718
				80,700	
02 nd R.A bill dated 19-02-2019		3,700	Rft.	12,912	47.774
				80,700	
03 rd R.A bill dated 29-08-2019		3,700	Rft.	11298	41.803
				80,700	
Total					149.295

Audit is of the view that undue benefit was extended to the contractor on account of secured advance without any justification and verification of the booking order from the manufacturer which reflected inefficient payment mechanism in the organization.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit recommends inquiry into the matter, besides fixing of responsibility on the person(s) at fault.

[Para No. 7]

2.1.2.4 Unjustified payment on account of steel without consumption – Rs. 51.790 million

According to Rule 209 (d) of the Central Public Works Accounts Code, “As all payments for work or supplies are based on the quantities recorded in the measurement book, it is incumbent upon the person taking the measurements to record the quantities clearly and accurately.”

During the Performance Audit of WASA, it was observed from the R.A bill that quantity of 880.429 tons (15,721.911 Cwt.) steel was consumed in item of RCC for the construction of 06 MGD Rapid Gravity Water Treatment Plant (Package-I), whereas as per the summary of carriage in R.A bill, the quantity of steel consumed was shown as 380.385 tons and remaining 176.575 tons steel was found dumped at site. Hence, the total quantity of steel supplied at the site by the contractor was 556.960 tons. This showed that consumption of 500.044 tons (880.429 – 380.385) steel was charged to RCC work having a value of Rs. 51.790 million without actual utilization. Details are provided in **Annexure-G**.

Audit is of the view that excess payments of materials without consumption/utilization as reflected from documentary evidence, shows inefficiency on the part of the management and undue favor to the contractor at the cost of the public exchequer.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit recommends recovery/adjustment of excess payment, besides fixing of responsibility on the person(s) at fault.

[Para No. 10]

2.2 Effectiveness

The observations in this category focus on the effectiveness of WASA management in achieving intended objectives and expected outcomes in providing

quality services in hygiene supply of water & sewerage disposal after proper treatment. These insights provide a comprehensive assessment of performance outcomes, customer satisfaction and effectiveness of strategic interventions to improve overall service reliability and sustainability. The effectiveness-related observations are summarized as follows:

2.2.1.1 Supply of polluted drinking water to the end-users of the Hyderabad city – Rs. 47.732 million

According to the SRO No.1063(1)/2010 issued by the Pakistan Environmental Protection Agency under clause 6 (1) (c) of the Act, 1997, “Pakistan Environmental Protection Agency with the approval of the Pakistan Environmental Protection Council, is pleased to establish the National Standards for drinking water quality.”

During the Performance Audit of WASA, it was observed that an expenditure of Rs. 47.732 million was incurred on procurement of chlorine and alum for water treatment to assess the quality of drinking water as per approved standards at the end user level. The audit team compared reports on the water samples generated by the laboratory of the WASA with the reports generated by ADWWQL at USPCAS-W, Mehran University, Jamshoro accredited by the SEPA. The results of the laboratory tests are as under:

Sr. No.	Locations of sample	Electrical Conductivity (EC)		Residual Chlorine		
		Sample limits	NEQS limits	Sample limits	NEQS limits	WHO Limits
	WASA Lab report					
01	River	416	-	0.5	0.2mg/l	0.2-0.5 mg/l
02	Lagoon	430-432		-	-	-
03	Filtration Plant	432-442		-	-	-
	Mehran University Lab					
01	SITE area	713	-	0	0.2mg/l	0.2-0.5 mg/l
02	GOR Colony	703		0		0.2-0.5 mg/l
03	Hussainabad	2620		0		0.2-0.5 mg/l
04	Revenue Colony Qasimabad	639		0		0.2-0.5 mg/l

The comparative analysis of both reports revealed following facts:

- The results from the independent laboratory reflected the presence of considerable salinity in the drinking water at the end-user level, due to which water became extremely electroconductive. The presence of the pollutants was due to the leakages in sewer lines and non-treatment of raw water from the plants. Whereas the report of the management’s administered filtration plant laboratory did not reflect such results.

- Further, the Residual Chlorine Test (RCT) from the sample areas revealed absence of Chlorine at the end-user level. However, presence of same was reflected in the test reports generated by the laboratory of the WASA. Audit is of the view that despite incurring a hefty expenditure on water purifying material, the performance of WASA in the supply of clean and safe drinking water has not been found satisfactory and effective as per the quality standards which could have contributed waterborne diseases in the consumers.

Audit is of the view that supply of water without proper treatment reflected ineffectiveness of the organization in respect of provision of clean water to the citizens.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit recommends inquiry in the matter besides fixing of responsibility on the person(s) at fault.

[Para No. 14]

2.2.1.2 Construction of lagoon (water reservoir) on an encroached area – Rs. 34.263 million

According to Rule-12 of the General Financial Rules, “A controlling officer see not only that the total expenditure is kept within the limit of the authorized appropriation but also that funds allotted to spending units are expended in the public interest and upon objects for which money was provided.”

During the Performance Audit of WASA, it was observed that one of the water lagoons designed for the pre-settlement of water was constructed encompassing a tomb on an encroached area. Due to construction of lagoon on an encroached area, lagoon could not be filled with water at its maximum capacity to avoid submerging of tomb which resulted into less provision of water to the local population. Pictorial evidence is attached as **Image-IV**. Details are provided in **Annexure-H**.

Audit is of the view that due to improper planning in site selection and obtaining subsequent approval of the scheme, the aspect to ensure the proper functioning of the lagoon was compromised and an expenditure of Rs. 34.263 million was made prone to wastage and hinders the supply of water to the local population.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit recommends providing justification for the negligence besides, fixing of responsibility on the person(s) at fault.

[Para No. 12]

2.2.1.3 In-effective functioning of water lagoons of the WASA

According to Para 6 of the Water Commission order sheet dated 23-01-2018, “New Treatment Plant was visited by the Commission in Jamshoro properly maintained with the lab, however lagoons needed de-silting and dragging. There were in all three water lagoons (water reservoirs), one of the water lagoons was being used as a fishing pond by the private persons. The M.D WASA shall ensure that private people should not use it as a fishing pond. No private person shall have access to the lagoons and if there is any encroachment, he will be held responsible.”

During the Performance Audit of WASA, it was observed that the management de-silted lagoons of the new water treatment plant at Jamshoro Road on the instructions of the Water Commission in 2018. However, during the site visit, it was noticed that de-silted earth was not removed from the embankments of the lagoons despite full payment to the contractor. Further, one of the lagoons was being used for fishing purposes since 2018 and no action by the management was taken despite the clear directives of the Water Commission in this regard. Pictorial evidences are attached as **Image-V**.

Audit is of the view that due to the non-handling of de-silted earth, the same was filled again in the lagoon which compromise its effectiveness. Further, due to illegal fishing activity, lagoon remained non-functional since long which compromised the quantity of water purification process.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit seeks justification in the matter and ensuring effective utilization & maintenance of water lagoons.

[Para No. 11]

2.3 Environment

The observations in this category focus impact of WASA activities on environment and ensuring sustainable water and sewerage services while minimizing ecological harm. These insights provide a detailed assessment of compliance with environmental regulations, pollution control measures, and resource conservation strategies. It also considers the long-term sustainability of water resources, waste management practices and the implementation of eco-friendly interventions to protect public health and natural ecosystems. The environment-related observations are summarized as follows:

2.3.1 Faulty planning causing pollution in irrigation system

According to the Water Commission Inquiry Report dated 25th February, 2017, “Hyderabad Development Authority started construction work on this plant in 1980s. The work continued for many years but ultimately the project was abandoned halfway through. The plant has an installed capacity of 2.5 MGD and it is supposed to treat the sewage of a portion of Qasimabad on the west side of Wadhu Wah. Currently, it is non-functional due to which the untreated sewage is being poured into River Indus downstream Kotri Barrage.”

During the Performance Audit of WASA, it was observed that the management had been disposing of a large quantity of sewage in Qasimabad Town into the irrigation canals through Wadhu-Wah and Fasadi-Wah due to the non-existence of a proper sewerage system. In this regard, recommendations had also been made by the Water Commission Report for plugging of untreated disposal points falling into irrigation network. Further, Executive Engineer, Kotri Barrage Division, vide letter dated 05-05-2023; also requested the agency for removal of drainage pipelines connected to Wadhu-Wah and Fasadi-Wah so that rehabilitation work of these two canals could be carried out however, no action had been taken. Pictorial evidences are attached as **Image-VI**.

Audit is of the view that due to the non-existence of an alternate sewerage disposal infrastructure; the fresh water streams were being utilized for sewage disposal,

which not only reflected poor planning and performance of the agency, but also polluted the irrigation system.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit seeks justification regarding faulty planning and immediate curtailment of dumping sewage in the irrigation system.

[Para No. 16]

2.3.2 Non-functioning of treatment plants causing sewage hazards

According to Para 7 of the Water Commission order sheet dated 23-01-2018, “The Secretary, Local Government shall also sit with the M.D WASA and shall streamline a working plan to collect all the municipal sewerage/waste from Hyderabad town, which is being drained out in Phuleli, Akram Wah and Piniari diverting it to the ponds behind Isra. It will reduce the heavy expenses which are being incurred by the government on treatment plant besides, such proposed plan will save the lives of the citizens who are made to drink contaminated water from aforesaid canals.”

During the Performance Audit of WASA, it was observed that the management was required to establish Eastern Sewerage Treatment Plant at Darya Khan and the expansion of the existing Southern Sewerage Treatment Plant before disposal of wastewater into Phuleli Canal. However, work on both plants had not been completed despite a lapse of 15 years. In addition, the agency operated two sewerage treatment plants in different locations which were also dysfunctional. Further, as per the correspondence of the Executive Engineer Upper Pinyari Division, Hyderabad dated 30-05-2023, sewerage was disposed in the Fuleli Canal from 15 different locations through pipelines and open nullahs which were also required to be plugged, but no such action has been taken. Consequently, 14,892.000 million gallons of sewage (equivalent to 23,041 cusecs) was disposed into the Old Phuleli Canal.

Audit is of the view that disposal of sewage in the irrigation system without treatment resulted in the supply of contaminated and hazardous water from the canals to Tando Muhammad Khan and Sujawal despite incurring an annual expenditure of Rs. 256.875 million against operation & maintenance of 03 sewerage treatment plants

and 130 pumping stations. This scenario manifests the inefficient performance of the management and contribution of WASA in polluting the water.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit recommends disposal of sewerage into canals after proper treatment besides, completion & operation of treatment plants at full capacity.

[Para Nos. 17]

2.4. Equity

2.4.1 Leave No One Behind (LNOB)

The observations in this category focus on critical analysis and overall impact of WASA activities in ensuring fair and inclusive access to water and sewerage services for all segments of society. These insights provide a detailed assessment of service distribution, affordability and accessibility, particularly for vulnerable and marginalized communities. The evaluation also considers fair allocation of resources, transparency in decision-making and responsiveness to consumer needs to promote social justice and equal opportunities in service provision. The Leave No One Behind (LNOB) related observations are summarized as follows:

2.4.1.1 Arbitrary water distribution without sound assessment of water needs of the citizens

According to the WASA administration, the demand and supply of water from the treatment plants is as under:

Population of District Hyderabad (Urban) (Census -2023)	Present filtered Water Supply capacity as per census, 2017	Demand of filtered Water Supply as per census, 2017	Shortfall as per census, 2017
2.432 million	60 MGD	73 MGD	13 MGD

During the Performance Audit of WASA, it was observed that with the rapid population increase since 2017, the agency has been supplying water on the basis of old census data of 2017. Currently, the agency is supplying 60 MGD of water, whereas the actual demand as per census 2017 was 73 MGD, thus reflecting a shortfall of 13

MGD whereas, no working on water demand on the basis of 2023 population was produced by them management.

Audit is of the view that the growing population, urbanization and industrialization have led to an abnormal increase in the demand for water, whereas the management had failed to fulfil the demand due to the non-development of the infrastructure. Thus, discretion by the WASA to supply the water on its own choices of the areas creates doubts on equal distribution of water and widened the gap between demand and supply of water.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit seeks justification in the matter, as it raises serious questions about the overall performance of the agency.

[Para No. 15]

2.4.1.2 Un-fair billing to the consumers due to non-functioning of electromagnetic meters

According to Rules-12 of the General Financial Rules, “A controlling officer shall see not only that the total expenditure is kept within the limit of the authorized appropriation but also that funds allotted to spending units are expended in the public interest and upon objects for which money was provided.”

Further, according to Clause (5) of the Memorandum of Understanding (MOU) dated 05th March, 2021 between M/s. SITE Ltd. Hyderabad and WASA, Hyderabad, “The WASA will supply water on priority with minimum quantity 3.5 MGD out of 5.0 MGD to SITE Ltd. for onward supply of water to the industries located in SITE area Hyderabad to the extent of requirement at the start point of 24” dia line laid by M/s. SITE Ltd. Hyderabad from filter plant to Fateh Chowk, SITE, Hyderabad and which measures through electromagnetic meter.”

During the Performance Audit of WASA, it was observed that the agency charged bills to consumers on an average hourly basis instead of actual consumption. The Audit noticed the following irregularities:

- i. Bills worth Rs. 2,266.466 million were charged to the consumers that were calculated on an average hourly basis of pipe dia at a fixed rate due to the non-functioning of electromagnetic meters, which were required to measure actual supplied water.
- ii. The meters were not found installed at the end-user level.
- iii. The sewerage bill was charged at the rate of 80% of the unverified quantity of supplied water.
- iv. As per the record of WASA, the outstanding amount against water and sewerage charges unto the M/s. SITE (Guarantee) Ltd. Hyderabad was Rs. 1,114.642 million. Whereas, the management issued a bill on account of only sewerage dues amounting to Rs. 9,719.424 million to M/s. SITE (Guarantee) Ltd. Hyderabad for the same period. As per the standard measurement of WASA, sewerage was required to be calculated at 80% of the water supplied for drinking. Hence, based on these sewerage charges raised, the due amount of water charges calculated by the Audit summed up to Rs. 12,149.280 million. This resulted in a total billing of Rs. 21,868.703 million for both water and sewerage, thus reflecting a shortfall/difference of Rs. 20,754.061 million in contrast to Rs. 1,114.642 million. Audit also noted that this entire billing was also made on an hourly basis assumption of water flow. Details are provided in **Annexure-I**.

Audit is of the view that raising bills on the self-conceived assumption, owing to the non-functioning of the electromagnetic meters, compromised the genuine recording of the actual liabilities causing loss of potential revenue.

The matter was reported to the management in July, 2023 however, no reply was received. Despite written request vide letters dated 11-08-2023, 18-09-2023, 25-09-2024, 06-03-2025 & 10-04-2025, DAC meeting was not convened by the PAO till finalization of this report.

Audit recommends initiating a proper billing mechanism through electromagnetic meters and reconciliation of the revenue record to avert further pilferage/loss.

[Para No. 13]

3 AUDIT FOLLOW-UP

The audit observations raised during the performance audit were issued to the management however, no reply was received against these observations. The Departmental Accounts Committee (DAC) meeting was not convened by the PAO despite repeated requests by this office till finalization of this report.

4 AUDIT IMPACT ASSESSMENT

The WASA maintains its day-to-day operations and carries out development activities through its own revenue collection earned from water and sewerage charges and ADP funds released by the government. However, there had been decrease in average collection of 50.62% of the targeted revenue resulting financial crisis in the Agency. Ineffective billing mechanism in the collection of utility charges resulted in shortfall in revenue collection. This caused hindrances in development of infrastructure, proper disposal of sewage in the irrigation system after treatment, non-maintenance of machinery and non-payment of salaries to the employees on time had resulted improper functioning of WASA.

Audit also assessed economy, efficiency, effectiveness, environment and equity factors in the Agency. The Agency failed to deliver its intended objectives of supply of clean water to the consumers and disposal of sewage after proper treatment into the canals which led to environmental degradation. It was also noted that principle of the economy was not observed in the execution of works. There had been cost overrun and defective execution of the works, payment of advances against unverified bills, unplanned modification in the routes of the sewer lines and deviation from the original scope of work to facilitate the private housing scheme, inefficient maintenance of water lagoons, encroachments on the government's property, improper billing to the consumers and weak monitoring mechanism is arbitrary and un-equal.

Performance Rating: Unsatisfactory.

Risk Rating of Agency: Moderate.

5 CONCLUSION

This report evaluates the performance of WASA in dispensation of its core services. Efforts were made to highlight major service delivery issues which include delay in completion of sewerage related development schemes, un-economical and defective execution of works, utilization of substandard material and modifications in the capacity and planned routes of sewerage schemes. Besides, negligence in supervision and failure of effective public awareness campaigns for proper payment of bills and economical consumption of water, non-existence of formal Master Plan, demand and supply gap of water supply and billing without electromagnetic meter were major issues in the Agency. Supply of water without proper treatment and disposal of untreated waste water in irrigation system contributed more towards inefficiency, encroachments and improper utilization of water reservoirs increased water shortage in the jurisdiction of the WASA. This Audit Report has tried to bring practical recommendations which aim at improving overall efficiency of the Agency. In this regard, the management should take serious efforts for timely completion of schemes as per planning. Hygiene water should be supplied to the consumers and waste water be disposed after proper treatment in the irrigation system. Moreover, encroached property be vacated for proper utilization, electromagnetic system be made functional for fair billing to the consumers. Finally, pro-active efforts be taken towards recovery of outstanding dues and generate more avenues to make WASA financially stable Agency.

6 RECOMMENDATIONS

Following are key proposed recommendations;

- i. The management should put in diligent efforts to achieve an optimum revenue target by conceiving an effective recovery mechanism.
- ii. The scheme should be completed within the time to avoid further cost and time overrun and responsibility should be fixed on the person(s) at fault.
- iii. To ensure financial propriety in execution of the schemes.
- iv. Work should be executed as per the standards specified in the PC-I.
 - v. Hygienic water should be supplied to the consumers after proper treatment.
- vi. To ensure proper maintenance of water lagoons and other assets.
- vii. Billing against water charges should be based on actual supply.
- viii. Efficient operational and administrative strategies may be formulated to ensure a round-the-clock supply of clean water.
- ix. Supply of water may be ensured after proper treatment and chlorination.
 - x. Waste water should be disposed-off after proper treatment.
- xi. Public awareness campaigns should be initiated for the conservation of water resources and the adoption of best hygienic practices.

7. ACKNOWLEDGEMENT

We wish to express our gratitude to the management and staff of WASA for the assistance and cooperation extended to the auditors during this assignment.

8. ANNEXURES

Annexure-A

2.1.1.2 Defective/un-economical execution of civil works – Rs. 33.544 million

[Rs. in Million]

IPC No.18th dated 27-05-2022 ‘Construction of 6 MGD Rapid Gravity Filter Water Treatment Plant at Hussainabad, Hyderabad (Package-I)’ (M/s. Muhammad Iqbal Shaikh & Co.)					
Items utilized in Piping Gallery Columns	BOQ Qty.	Qty. executed	Unit	Rate	Amount
Item No. 6: Excavation in foundation of building, bridges and other structures etc.	147	280.5	Cft.	5	0.001
Item No. 7: Cement Concrete Plain	4,315	6,335.27	Cft.	150	0.950
Item No. 8: RCC	48,052	45,227.192	Cft.	395	17.865
Item No. 9: Steel	2837.19	2,539.254	P. Cwt.	5,800	14.728
Total					33.544

Annexure-B

2.1.1.3 Uneconomical execution due to modification in the route of sewer line – Rs. 29.058 million

[Rs. in Million]

W.O No. & Date	Name of work & contractor	Name of component	Cost	Original Length (Rft.)	Per Rft. cost	Increased Rft.	Increased Cost
121 Dated 30-01-2018	Sewerage system of Phase-III works, Taluka Qasimabad, Hyderabad (Package-V) (M/s. Aaqib Builders Engineers & Contractors)	Construction of brick lined RCC covered BLISS (N-19 to N-22) from near right side bypass Bachal Soomro Goth and proposed Western BLISS N22	69.417	2,150	32,287.01	900	29.058
Total			69.417				29.058

Annexure-C

2.1.1.4 Use of costly item contrary to financial propriety – Rs. 11.690 million

[Rs. in Million]

Bill No. & Date	Name of work & contractor	Name of component	Qty. executed (P. Rft.)	Rate	Premium	Rebate	Net bid amount of component	Expected savings (PN10 - PN8)
05 th Dated 14-06-2022	Providing, laying, jointing & testing 20" P.E rising main from LD-I Pumping Station to SSTP construction of Sump Well, providing fixing pump set at LD-I Pumping Station, Unit No.4, Latifabad, Hyderabad (M/s. Tanzeer Construction Co.)	Providing & fixing in trench including fitting, jointing & testing etc. complete in all respect the high-density polyethylene P.E Pipes (HDPE-100) for water supply conforming ISO 4427/DIN-8074/8075 B.S 3580 & PSI 3051 PN-10 (PHS # F1, P # 26)	6,960	5,138	12%	27.55%	29.017	11.689
		Providing & fixing in trench including fitting, jointing & testing etc. complete in all respect high-density polyethylene P.E Pipes (HDPE-100) for water supply conforming ISO 4427/DIN-8074/8075 B.S 3580 & PSI 3051 PN-08 (PHS # F1, P # 26)	5,040	4,205	12%	-27%	17.327	
		Total						11.689

Annexure-D

2.1.1.5 Unjustified utilization of rejected bricks – Rs. 2.341 million

[Rs. in Million]

Bill No. & Date	Name of Work & Contractor	Name of component	Name of item	Qty. executed	Unit	Rate	Amount
18 th R.A bill Dated 27-05-2022 (IPC No.22)	Construction of 06 MGD Rapid Gravity Water Treatment Plant & Water Supply main network at Hussainabad (Package-01) (M/s. Muhammad Iqbal Shaikh & Co.)	Work No.03: Construction clear water tank, Piping gallery & Control Room	Pacca brick work: 1 st Floor	2,682.01	P. Cft.	210	0.563
			Pacca brick work: 2 nd Floor	149.463	P. Cft.	220	0.033
		Work No.05: Construction of Alum mixing tank, Alum stock room, Alum pump room, Office block, Rest House & Plumbing work	Pacca brick work in foundation & plinth	997.520	P. Cft.	180	0.179
			Pacca brick work in ground floor in cement sand mortar	1,584.250	P. Cft.	200	0.317
			Extra labour for pacca brick work: First Floor	2,339.790	P. Cft.	210	0.491
			Extra labour for pacca brick work: Second Floor	2,130.540	P. Cft.	220	0.469
		Work No.06: Construction of sludge tank & sludge Pump House	Pacca brick work in ground floor in cement sand mortar	816.000	P. Cft.	200	0.163
		Work No.07: Construction of Hypo chlorination Room, Generator Room, Electric Sub-Station, Transformer Room & VCB Room	Pacca brick work in ground floor in cement sand mortar	696.260	P. Cft.	180	0.125
		Total	11,395.833				2.341

Annexure-E

2.1.2.1 a) Dues of water & sewerage charges against Provincial Government Departments – Rs. 4,116.406 million

[Rs. in Million]

Sr. No.	Name of departments	No. of bulk connections	Opening dues	Yearly demand	Payment received	Outstanding dues as on June, 22
	[Para No. 6]					
1	Health Department	12	242.414	80.854	35.712	287.556
2	Education Department	10	92.899	22.424	14.586	92.899
3	Home Department	39	366.838	121.723	14.492	474.069
4	PHED	1	10.894	1.948	0	12.843
5	Works & Services Department	7	266.590	28.458	2.787	292.261
6	Sindh Sports Board	2	47.814	5.133	0	52.946
	Sub-Total		1027.449	260.541	67.577	1,212.575
7	Sindh Workers Welfare Board	1	393.074	2.573	30.884	364.763
8	Local Government Department	3	2,310.262	228.805	0	2,539.067
	Sub-Total		2,703.336	231.379	30.884	2,903.831
	Total		3,730.786	491.921	98.462	4,116.406

Annexure-F

2.1.2.1 c) Outstanding dues from builders – Rs. 5.423 million

[Rs. in Million]

Sr. No.	Area/ Plan	Name of project	Date of issue of challan	No. of connections	Total	Amount received	Outstanding balance
[Para No. 4]							
01	9660 sq: yards with covered area 490168.53 Sq: ft / 2B+G+8	M/s. Saima Downtown Residency	19-02-2022	01	7.005	2.866	4.138
02	2666.66 sq yards with covered area 215060.77 Sq: ft / 2B+G+8	M/s. Shams Builders & Developers	10-05-2022	01	4.825	4.325	0.500
03	600 sq: yards with covered area 26,879 Sq: ft / B+G+4	M/s. Haji Muhammad Akram	29-05-2022	01	1.047	0.261	0.785
Total					12.877	7.452	5.423

Annexure-G

2.1.2.4 In-efficient payment on account of steel without consumption – Rs. 51.790 million

[Rs. in Million]

R.A Bill No. & Dated	Name of Work & Contractor	Name of work	Qty. executed (P. Cwt.)	Rate	Amount	Qty. paid in tons	Qty. of steel actually consumed as per carriage	Qty. of steel available at site as per carriage	Total supplied Qty. at site as per carriage	Payment on excess Qty. P. Ton without consumption	Excess payment (P. Cwt.)
17 th Dated 27-05-22	Construction of 06 MGD Rapid Gravity Water Treatment Plant & Water Supply main network at Hussainabad (Package-01) (M/s. Muhammad Iqbal Shaikh & Co.)	Work No.01: Construction of Clarifiers, Flocculators Automatic Sludge System	6,467.608	5,800	37.512	880.429	380.385	176.575	556.960	500.044	51.790
		Work No.02: Construction of Filter Beds, Distribution of channel & Staircase	4,731.093	5,800	27.440						
		Work No.03: Construction clear water tank, Piping gallery & Control Room	2,539.254	5,800	14.728						
		Work No.04: Construction of hydraulic jump	486.236	5,800	2.820						
		Work No.05: Construction of Alum mixing tank, Alum stock room, Alum pump room, Office block, Rest House & Plumbing work	989.580	5,800	5.739						
		Work No.06: Construction of sludge tank & sludge Pump House	469.005	5,800	2.720						
		Work No.07: Construction of Hypo chlorination Room, Generator Room, Electric Sub-station, Transformer Room & VCB Room	39.135	5,800	0.227						
	Total	15,721.911		91.187							51.790
		880.429 Tons									

Annexure-H

2.2.1.2 Construction of lagoon on an encroached area – Rs. 34.263 million

[Rs. in Million]

Bill No. & Date	Name of work & contractor	Name of component	Name of items	Total Work executed
18 th R.A bill Dated 27-05-2022 (IPC No.22)	Construction of 06 MGD Rapid Gravity Water Treatment Plant & Water Supply main network at Hussainabad (Package-01) (M/s. Muhammad Iqbal Shaikh & Co.)	Work No.03: Construction of clear water tank	T/1: Excavation for tanks and reservoirs in soft soil	0.099
			T/2: Excavation for tanks and reservoirs in soft soil	0.509
			T/4: Additional Lift of 3 feet	0.109
			T/6: Excavation in foundation of buildings and bridges	0.001
			T/7: Cement concrete plain Ration 1:4:8	0.950
			T/8: RCC	17.865
			T/9: Fabrication of mild steel	14.728
			Total	34.263

Annexure-I

2.4.1.2 Un-fair billing to the consumers due to non-functioning of electromagnetic meters

Sr. No.	Name of Filter Plants	Capacity	No. of connections	Yearly demand	AIR Para No.
01	New Filter Plant	30 MGD	143,409	2,266,466,000	15
02	Old Filter Plant	10 MGD			
03	Hala Naka Filter Plant	08 MGD			
04	Preetabad Filter Plant	08 MGD			
05	Latifabad Unit No.4 Filter Plant	04 MGD			
	Total capacity	06 MGD	Total	2,266,466,000	
Sr. No.	Head of account			Outstanding dues	AIR Para No.
01	Water charges 100% of sewerage charges			12,149,279,663	18
02	Sewerage charges 80% of water charges			9,719,423,730	
	Total			21,868,703,393	

Audit Methodology

Aspects	KPIs	Quantifiable Metric	Means of verification
Economy	Analysis of cost and time over-run.	Percentage of procurement conducted through open tenders vs. direct procurement	Procurement related record, bid evaluation reports, (comparison of actual vs budgeted expenses)
	Evaluation of contracts as per SPPRA rules, regulations and policies.	Adherence to SPPR rules and regulations	Procurement and bidding documents
	Defective execution of work	Application of financial propriety	BOQs, estimates & RA bills
Efficiency	Existence of internal control mechanism.	Proper utilization of available resources	Procurement records, stock registers, monitoring reports
	Comparison of items, quantities, schedule of rates, rate analysis and bills.	allocated funds utilized effectively	BOQs, estimates & RA bills
	Increase in revenue realization	Year-wise comparison	Financial records, budget reports
	Review of non-functional water supply schemes.		Filed visits, monitoring reports
Effectiveness	Ensuring sufficient supply of hygiene water and disposal of sewerage after proper treatment	Authenticated reports and field visits	Laboratory reports, field visits and site inspections
	Expansion in WASA capacity as per population ratio.	Overall comparison of available resources	Filed visits, monitoring reports
	Optimum utilization of available resources	Revenue realization and service delivery	Financial statement, published reports
	Review of reasons behind non-functional treatment plants	Optimum utilization of available resources	Disposals & treatment plants
	Review of treatment to sewage prior to disposal	Compliance with environmental guidelines of SEPA	Waste management records, inspection reports
Equity	Review of water supply policy to ensure equitable distribution of water	Number of disposals and treatment plants	Infrastructure development reports, site visits
	Examine the functionality of electro-magnetic metering system	Capacity and status of these electro-magnetic meters	Water purification plants, lagoons & storage tanks

Annexure-K

Key sources of data & means of verification:

The following primary and secondary sources were used for audit verification:

Sources of data	Means of verification
Financial statements & Budget documents	- Verification with SAP data
Procurement & contract records	- Compliance check with SPPRA Rules - Cross-verification of NITs
Operational reports	- Comparison of revenue targets - Analysis of revenue receipts and expenditure statements
Regulatory compliance reports	- Examination of financial documents - Authentication of water quality through laboratory reports
Site visits & physical inspections	- Field inspection and site visits of reservoirs, disposal and treatment plants
Stakeholder interviews	- Interviews with officials of the Agency

IMAGES

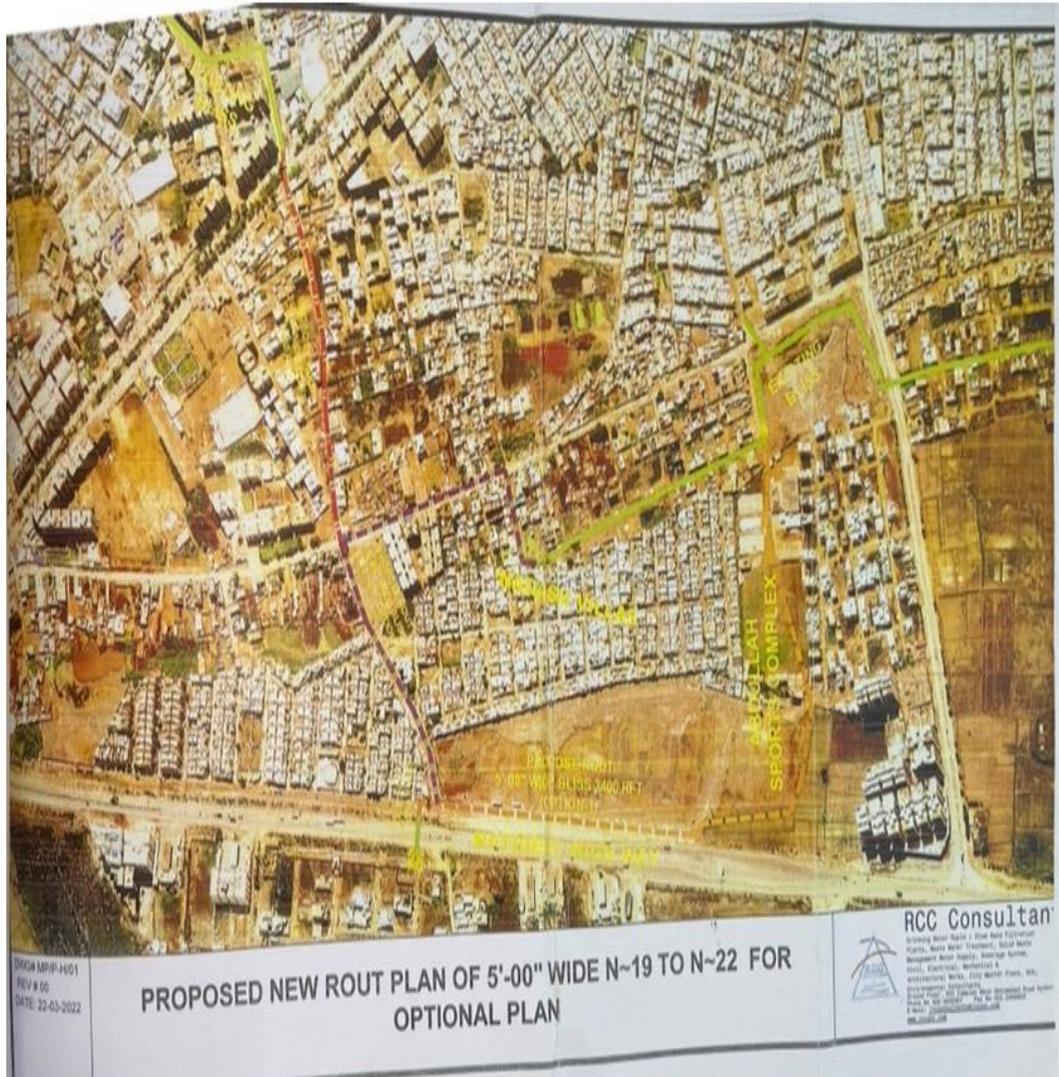
Image-I

**2.1.1.1 Cost-overflow due to delay in completion of the major development scheme
– Rs. 2,592.110 million**



2.1.1.3 Extra expenditure due to change in the route of sewerage line – Rs. 29.058 million

Original route with options



2.1.1.3 Extra expenditure due to change in the route of sewerage line – Rs. 29.058 million

Modified route with options

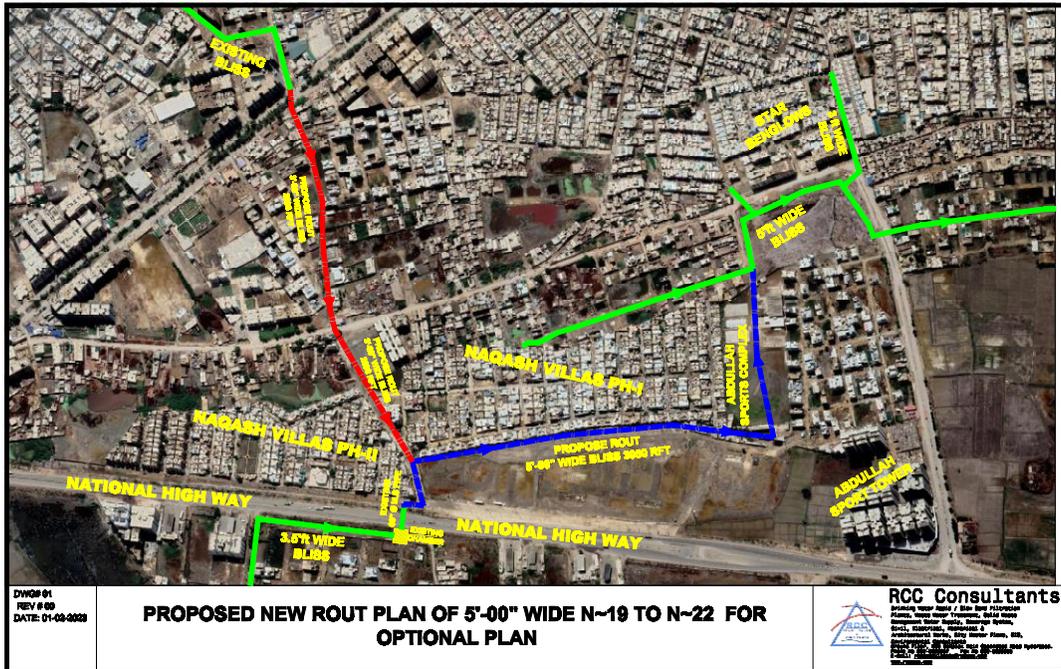


Image-IV

2.2.1.2 Construction of lagoon (water reservoir) on an encroached area – Rs. 34.263 million



2.2.1.3 In-effective functioning of water lagoons of the WASA

Ariel View of Lagoons



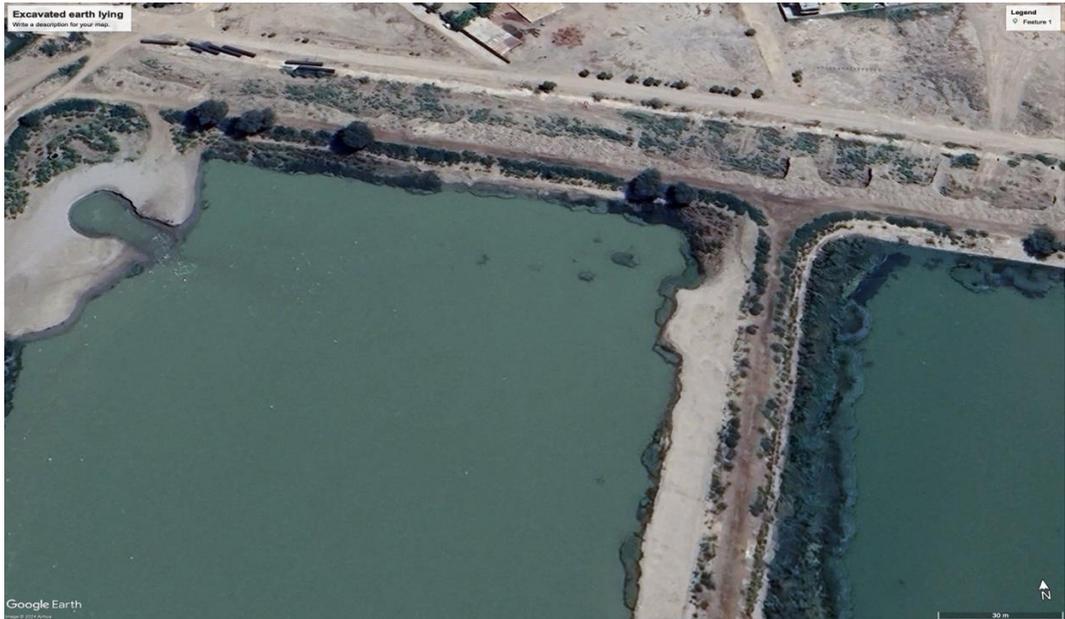
Excavated Earth lying undressed (May, 2023)



Partially executed work dressing of earthwork (May, 2023)



Stone pitching partially executed (November, 2023)



2.3.1 Faulty planning causing pollution in irrigation system

Sewerage Disposal in Wadhu Wah, Bismillah City (Location-I)



Sewerage Disposal in Wadhu Wah, Prince Town (Location-II)



Sewerage Disposal in Wadhu Wah, Near Sufi Hotel (Location-III)



Sewerage Disposal in Wadhu Wah, Near Naseem Nagar (Location-IV)

