



**GOVERNMENT OF THE PUNJAB
PLANNING & DEVELOPMENT BOARD
(URBAN DEVELOPMENT SECTION)**

WORKING PAPER FOR PDWP
(Part-A)

Dated: 10-04-2025

1. Issue	FEASIBILITY STUDY AND DETAILED DESIGN FOR AUGUMENTATION OF WATER SUPPLY TO RAWALPINDI CITY BASED UPON DADHOCHA DAM (PC-II)
2. Location	Rawalpindi
3. Sponsoring Agency	HUD & PHE Department
4. Executing Agency	WASA RWD
5. Proposed Cost	Rs. 48.031 Million
6. Source of Financing	Supplementary Scheme Approved by Cabinet ADP 2024-25 (GS No. 8006)
7. Period of Implementation	06 months

8. Brief Description of the Project:

Lai Nullah Basin has a catchment area of 234.9 Km². Water and Sanitation Agency (WASA), Rawalpindi, was established in 1992 and became fully operational in April 1998, taking over water supply and sewerage networks from the defunct RMC, covering 46 Union Councils of Rawal Town. It currently provides water supply to the Rawalpindi Municipal Corporation limits and 20 Union Councils of District Council, serving 1.75 million people. WASA sources water from surface and groundwater. Rawal Dam, the main surface water source, supplies 23 MGD despite an installed capacity of 28 MGD, with 13 MGD allocated to MES, NARC, and NIH. Khanpur Dam, the second source, has a total allocation of 14.6 MGD but provides only 6 MGD due to water shortages. Groundwater is extracted through 480 operational tube wells, supplying 35 MGD—over 60% of the total water supply. However, excessive extraction has severely depleted the water table, causing wells to dry up or produce turbid water. Existing sources cannot meet future demand, and Islamabad and Rawalpindi Cantonment Boards also face a water crisis, mainly relying on Simly and Khanpur Dams. With Rawal Dam aging (56 years old), the only viable solution is the construction of Dadhocha Dam on the Ling River (a tributary of River Sawan) to store stormwater and supply 35 MGD to WASA Rawalpindi. This project will ensure a reliable water supply and aid groundwater recharge.

The Small Dams Organization has initiated Dadhocha Dam's execution, administratively approved by the Punjab Government in 2018 at a cost of Rs. 6,027.71

million. A feasibility study for water treatment, transport, and distribution is planned. A prefeasibility study under PICIIP has identified a site for a water treatment plant and a conveyance route, requiring further investigation to finalize the project. Considering the dire need of the scheme, the matter was placed before the Cabinet. Accordingly, Cabinet has included the scheme in ADP 2024-25 during its meeting held 14-01-2025.

9. Justification of the Project

The technical expertise is not available with WASA to conduct the feasibility report and carryout detailed design. As per instruction of P&D Department, Government of the Punjab, project having cost Rs.750 million or above it is mandatory to engage consultant for feasibility study and detailed design. Therefore, the consultancy services would be required.

10. Objectives:

The objectives of the consultancy are to:

- i. To augment water for drinking purpose not only to present but also for future needs.
- ii. To address the scarcity of drinking water /municipal water.
- iii. To mitigate the problem of contaminated water being supplied to the peoples.
- iv. To improve the water supply conditions in overall WASA area
- v. Reduction in the O&M expenditure of WASA.
- vi. The overall environment of the city will be improved with the availability of sufficient water to the poor and low income peoples.
- vii. To devise effective measures for suitable quality control of water supply system from health consideration and pollution control.
- viii. To design a system to integrate various sources of water supply for alternate use in case of break down.

11. Tasks of the Consultant

- i. Data Collection & Review of Previous studies/reports.
- ii. Topographic Survey.
- iii. Geotechnical & Hydrogeological Investigation.
- iv. Feasibility study.
- v. Detailed design of different components.
- vi. Land acquisition and resettlement Plan.
- vii. Environmental & Social Economic Impact Study.
- viii. Project Proposal.
- ix. Finance and Economic Analysis

12. KEY PROFESSIONAL STAFF

Sr. No.	Designation	Proposed Rate	Qualification
1	Team Leader/Water supply Specialist	700,000	Master in public health engg/Environmental engg/drinking water supply with 15 years' experience) with at least 15 years' experience in design of water supply scheme based on surface water source)
2	Geologist	350,000	(B.Sc in Geology with 10 years or M.Sc in Geology with 07 years relevant experience in exploration of tube wells)
3	Geotechnical Engineer	350,000	(B.Sc in Civil Engg with 10 years or M.Sc in Geotech Engineering with 07 years' experience in the relevant field)
4	Structural Engineer	500,000	(B.Sc Civil Engg with 12 years or M.Sc Structural Engineering with 08 years' experience in the design of buildings and allied works for water and wastewater facilities)
5	Environmental specialist	500,000	(M.Sc in Environmental Engg/ science with 08 years relevant experience in water quality testing and preparation of EIA/IEE reports)
6	Financial/Economic Expert	350,000	(MBA in Finance and Management or M.Sc Economics with at least 10 years' experience in valuation of public sector projects)
7	Social Expert	300,000	(Masters in Social sciences with at least 10 years of experience in projects involving stakeholder consultation and review)
8	Mechanical Engineer	500,000	(B.Sc Mech Engg with 10 years or M.Sc in Mechanical Engineering with 07 years' experience in the design of water pumps and allied machineries)
9	Electrical Engineer	500,000	(B.Sc in Elect Engg with 10 years or M.Sc in Electronics with 07 years' experience in the design of control panels of water pumps and allied machineries and at least 3 year experience in design of SCADA System
10	Contract Management Specialist	350,000	(M.Sc in Contract Management with 10 years' experience in relevant field)
11	Water Treatment Plant Expert (International)	1,500,000	Master in relevant field with at least 10 years' experience in design of water treatment Plant).
12	Water Treatment Plant Expert (Local)	550,000) (M.Sc in Environment / Public Health Engineering with 10 years' experience in water treatment plants)
13	Chief Surveyor	200,000	(at least 15 years of experience in planning and execution of engineering surveys and mapping)

x. Cost Summary:**(Rs. in Million)**

S. No	Item	Amount Rs.
A	Staff Cost	34.000
B	Direct Cost	7.1
	PST	6.931
	Sub Total	48.031

(A): Staff Cost

S. No/ Activity	Designation	Man month	Monthly Rates Rs.	Amount Rs.
Key Staff				
1	Team Leader/Water supply Specialist	6	700,000	4,200,000
2	Geologist	1	350,000	350,000
3	Geotechnical Engineer	2	350,000	700,000
4	Structural Engineer	4	500,000	2,000,000
5	Environmental specialist	4	500,000	2,000,000
6	Financial/Economic Expert	4	350,000	1,400,000
7	Social Expert	2	300,000	600,000
8	Mechanical Engineer	4	500,000	2,000,000
9	Electrical Engineer	4	500,000	2,000,000
10	Contract Management Specialist	2	350,000	700,000
11	Water Treatment Plant Expert (International)	2	1,500,000	3,000,000
12	Water Treatment Plant Expert (Local)	5	550,000	2,750,000
13	Chief Surveyor	3	200,000	600,000
TECHNICAL/SUPPORT STAFF				
1	Junior Engineers (04 Nos.)	24	250,000	6,000,000
2	Quantity and other Surveyor (06 Nos.)	18	150,000	2,700,000
3	AUTOCAD/MIS Staff (04 Nos.)	20	150,000	3,000,000
5	Support staff/Drivers (03 Nos.)	18	40,000	
Total				34,000,000

(B): Direct Cost

S. No	Description	Units	Qty	Rates Rs.	Amount Rs.
1	Office rent, furnishing including utilities	Months	6	250,000	1,500,000
2	Communication - Telephone, Fax, Courier/Postage etc.	Months	6	33,000	200,000
3	Stationary, binding, printing and project consumable items	Months	6	33,000	200,000
4	Geotech & other Surveys including GIS maps etc.	L.S			3,000,000
5	Water quality tests and preparation of reports charges	L.S			1,000,000
6	Transportation & Vehicles POL etc.	Months	6	200,000	1,200,000
	Sub Total (B)				7,100,000

(PART-B)**xi. PRE-PDWP MEETING DECISIONS & COMPLIANCE:**

The project was discussed in the Pre-PDWP meeting held on 21.03.2025. Certain observations were raised by the P&D Board. Observations and replies of Department are juxtaposed as under:

Sr. No.	Observations of P&D Board	Replies of Department	Remarks
1) UD Section P&D Board			
	Justification for 04 No Man months for Environmental specialist and Financial/Economic Expert may be provided.	Environmental and financial experts are important positions to carry out the talks of the consultant. Therefore, the man months are justified.	Noted
	Provision for 02 No Man months for Contract Management Specialist to be deleted	the consultant shall prepare the bidding documents due to which 02 months of the contract specialist are being taken.	Noted
	Total Number of AUTOCAD/MIS Staff to be reduced from 04 Nos. to 02 Nos.	Agreed	Noted
	Computer operators/office assistance Numbers to be reduced from 03 Nos. to 02 Nos.	Agreed	Noted
	Support staff/Drivers to be reduced from 03 Nos. to 01 No.	Agreed	Noted
2) Consultancy Section P&D Board			
	Sponsors may provide justification of lump sum provision of Rs. 400,000/- per month for transportation & vehicle POL etc.	The provision is for 03 vehicles.	Noted
	Submissions of tender documents may also include in deliverable part of TORs.	Agreed	Noted
	Leak detection (from existing tube wells and distribution network) may also be carried out by consultant.	Work involve relates to construction of surface water treatment plant. Therefore, the said task cannot be added in scope of the consultant.	Noted
	Sponsors may delete need of support staff/ Drivers (03 Nos.) for consultancy assignment of 06 months period.	Agreed	Noted

16. RECOMMENDATIONS:

Project is placed before PDWP for consideration at a cost of **Rs.48.031 million.**